

MINE
ACTION
REVIEW

CLEARING CLUSTER MUNITION REMNANTS 2019

*A REPORT BY MINE ACTION REVIEW FOR THE NINTH MEETING OF
STATES PARTIES TO THE CONVENTION ON CLUSTER MUNITIONS*

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Other information

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FOREWORD

We warmly welcome the global results for 2018 in the clearance of cluster munition remnants – the highest ever recorded by Mine Action Review. Clearance of 128 square kilometres of hazardous area and the associated destruction of more than 135,000 unexploded submunitions is a tremendous achievement. This shows what can be done when all parties commit to challenging and improving the status quo. In many countries, remarkable efforts are being made to rid the world of these dangerous explosive remnants of war. The innovation of Cluster Munition Remnant Survey (CMRS) in South-east Asia, used to tackle legacy contamination, is a good example of affected nations exploring new approaches to addressing a decades-long problem, moving towards evidence-based survey and clearance, enabling states to build a realistic picture of actual contamination.

But it is also important to highlight that progress in implementing international law on cluster munitions is uneven. Some states have been duly striving to destroy remnants “as soon as possible”, as the Convention on Cluster Munitions (CCM) requires. In others, efforts have fallen well short. Based on the experiences of the Anti-Personnel Mine Ban Convention (APMBC), the states that negotiated the CCM in 2008 were clear that only those states that were the most heavily contaminated, such as the Lao People’s Democratic Republic, should need – and be granted – an extension to their clearance deadlines.

The Fourth Review Conference of the APMBC will take place shortly in Oslo. This should be a springboard not just for increased mine clearance but also for faster progress across the entire mine action sector. The Second CCM Review Conference is itself being convened next year. This must be a moment at which we are able to celebrate success and plan for even greater success in the future. All affected states parties must take meaningful efforts to understand clearly the extent of cluster munition remnant contamination, if they have

not yet done so, and must put in place concrete plans to address the contamination as soon as possible and by their Article 4 deadline. This is entirely achievable for all but the most heavily contaminated states. A failure to do so is a failure in leadership, above all else.

Strong leadership also includes making gender and diversity integral components of an effective mine action programme, including one addressing cluster munition remnants. This year’s ‘Clearing Cluster Munition Remnants’ country reports include Mine Action Review’s new set of strengthened criteria to assess national programme performance, including a separate criterion on gender for the first time. Findings from the new criterion on gender have drawn out what we have felt in the sector for years: that the mine action community has significant work to do to improve its understanding and approach to gender. Mine Action Review was forced to drop diversity from the gender criterion, as there was simply insufficient data available to analyse this. We need to be honest about how much work is still needed with respect to integrating a gender-sensitive perspective to mine action and the approach must be to focus on meaningful change, not tokenism and targets. The fact of the APMBC and CCM Review Conferences falling back-to-back in 2019 and 2020 offers an excellent opportunity for honest reflection, to further the discussion on gender and diversity, and to take action to improve.

By working together, we can and we will do better. States and operators working in concert to survey and clear areas of contamination in an efficient and targeted manner, and supported by the requisite management and analysis of information, illustrate what innovation and coordination can accomplish. We will certainly continue to do our part to destroy submunitions as quickly and as safely as possible to assist states to comply with their obligations under the CCM and international human rights law. We call on all states – parties and non-parties to the Convention alike – to do the same.

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CLEARING CLUSTER MUNITION REMNANTS

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OVERVIEW

SUMMARY

Impressive progress has been achieved in implementing the Convention on Cluster Munitions (CCM) since it entered into force on 1 August 2010. Clearance operations around the world have destroyed at least 844,000 unexploded submunitions over the course of the last nine years, saving countless lives and limbs. More than 638km² of valuable land has been returned to communities, enabling resettlement, reconstruction, and development to occur. In 2018 alone, more than 128km² of cluster munition-contaminated area was released through clearance, with the destruction of over 135,000 submunitions. This total is the highest ever recorded for a single year's clearance, bettering by nearly 35% the previous high set in 2017 (95km²).

Survey and clearance since 2010 have resulted in eight states parties being removed from the list of those affected by cluster munition remnants¹ (CMR): Colombia, the Republic of Congo, Grenada, Guinea-Bissau, Mauritania, Mozambique, Norway, and Zambia; as well as one state not party, Thailand. As a consequence, of the CCM's 106 states parties today, only 12 remain contaminated. Each has a legally binding obligation under Article 4 of the Convention to clear all CMR from territory under its jurisdiction or control as soon as possible, but not later than ten years from the date on which it became a state party.

This is not to deny the challenges and disappointments that the Convention and its adherents have endured. For among the 12 affected states parties, only Afghanistan, Croatia, and Montenegro are expected to meet their Article 4 deadlines for clearance (1 February 2022 for Afghanistan and 1 August 2020 for Croatia and Montenegro). Bosnia and Herzegovina, Germany, Iraq, the Lao People's Democratic Republic [Lao PDR], and Lebanon will not. Moreover, four states parties with CMR on their territory did not conduct any clearance of cluster munition-contaminated area in 2018: Chad, Chile, Somalia, and the United Kingdom. Based on current progress they are not on track to meet their respective Article 4 deadlines. Their compliance with their obligations under international law to survey, plan for clearance, and destroy CMR in cluster munition-contaminated areas is highly questionable.

Four years on from the First Review Conference of the CCM, it is evident that many affected states parties are not living up to the commitments made in the Dubrovnik Action Plan. In the action plan, states parties committed to begin implementing Article 4-compliant national clearance strategies and plans within one year of the First Review Conference in 2015; and to achieve "clarity" on the location, scope, and extent of CMR in areas under each affected state party's jurisdiction or control within two years of that Conference. With the Second Review Conference in 2020 looming large, there is still time to remedy the situation. States parties, if they act quickly, can come to the Second Review Conference ready and able to report progress in these two key aspects of Article 4 implementation and in compliance with their legal obligations and firm political commitments.

The year 2019 has seen the first requests for extensions to the treaty clearance deadline. The Ninth Meeting of States Parties has been asked by Germany and Lao PDR to approve a five-year extension to their Article 4 deadlines of 1 August 2020. While – given the massive contamination on its territory – the request by Lao PDR was both foreseen and justified; the same cannot be said of Germany. This state party, the world's third richest nation by nominal gross domestic product (GDP), continues to be a generous donor to mine action worldwide, but has achieved only a small amount of clearance since announcing its discovery of cluster munition-contaminated area in 2011. It may even be the case that it will not complete clearance within the five-year extension, the maximum period allowed under the CCM for an individual request. This serves as a salutary lesson – and important reminder – to other states parties not to delay efforts to begin releasing contaminated area, and to start survey and clearance operations as soon as possible, as required by the treaty.

Croatia and Montenegro also have an Article 4 deadline of 1 August 2020, but have not submitted an extension request to the Ninth Meeting of States Parties because each expects to complete CMR clearance before the deadline. If, however, either state fails to complete CMR clearance by 1 August 2020, and has not had an extension request approved at the Ninth Meeting of States Parties in September 2019, it would be in violation of Article 4.

Among the 14 signatories to the CCM, only Angola and the Democratic Republic of Congo (DR Congo) are thought to be affected, and in both the extent of contamination is light. Signatory state Uganda completed clearance in 2008, the year of the CCM's adoption at the diplomatic conference in Dublin. A further 13 states not party to the CCM have cluster munition-contaminated areas on their territory: Azerbaijan, Cambodia, Georgia, Iran, Libya, Serbia, South Sudan, Sudan, Syria, Tajikistan, Ukraine, Vietnam, and Yemen. Thailand reported completing clearance in 2011. Over the past decade, though, Libya, Syria, Ukraine, and Yemen have all seen new CMR use – and resultant contamination – on their territory.

Kosovo, Nagorno-Karabakh, and Western Sahara complete the global picture of contamination, which amounts to 27 states and these 3 other areas. Nagorno-Karabakh also saw new use in 2016, adding to pre-existing CMR contamination. With sufficient funding and capacity, Kosovo could complete clearance by 2024: 13 years after the United Nations prematurely declared that the war against mines and cluster munitions had already been won.

In 2018, the greatest area of clearance occurred in Cambodia for the first time. Reported output of more than 39km² represents a 68% increase on the figure for 2017. Vietnam also recorded a huge increase in clearance output: up more than 50% compared to 2017 to a total of more than 26km². In Lao PDR, the

world's most heavily contaminated state, clearance output (based on operator data) was at least 36km², up from 33km² the previous year. In a further welcome development, Lao PDR formally began a long-awaited national baseline survey of CMR contamination in 2018. This will help the country to estimate the extent of

the problem far more accurately. Given the extent of contamination, though, decades of clearance certainly lie ahead for Cambodia, Lao PDR, and Vietnam, the legacy of indiscriminate United States (US) bombing during the Vietnam War.

STATES THAT HAVE COMPLETED CMR CLEARANCE

The table below lists the nine states that have reported completion of all clearance of CMR since 2010 (the year of entry into force of the Convention on Cluster Munitions). Of course, individual submunitions may continue to be found even after major battle area clearance operations have ended, and states need to ensure that a national or sub-regional survey and clearance capacity exists to address any contamination that is subsequently discovered. To its credit, Croatia, which expects to complete clearance before 1 August 2020, has begun planning for a residual clearance capacity.

In addition, prior to entry into force of the CCM, state party Albania reported completion (in 2009) while, as noted above, signatory state Uganda did likewise (in 2008). Croatia and Montenegro should complete clearance by the middle of 2020 and join this list of affected states parties that have fulfilled their Article 4 obligations.

Table 1: States completing CMR survey and clearance since 2010

State	Year of completion
Colombia	2017
Mozambique	2016
Mauritania	2013
Norway	2013
Grenada	2012
Republic of Congo	2012
Guinea-Bissau	2012
Thailand*	2011
Zambia	2010
Total	9 states

* State not party to the CCM

GLOBAL CONTAMINATION

As at 1 July 2019, 27 states and 3 other areas were confirmed or strongly suspected to have areas containing CMR on their territory (see Table 2). This is unchanged from Mine Action Review's report last

year. There is no reliable estimate for global CMR contamination, although the total affected area certainly exceeds 2,500km².

Table 2: Global CMR contamination (at 1 July 2019)

States parties	Signatory states	States not party	Other areas
Afghanistan	Angola	Azerbaijan*	Kosovo
Bosnia and Herzegovina	DR Congo	Cambodia	Nagorno-Karabakh
Chad		Georgia*	Western Sahara
Chile		Iran	
Croatia		Libya	
Germany		Serbia	
Iraq		South Sudan	
Lao PDR		Sudan	
Lebanon		Syria	
Montenegro		Tajikistan	
Somalia		Ukraine	
United Kingdom**		Vietnam	
		Yemen	
12 states parties	2 signatory states	13 states not party	3 other areas

* Clearance believed complete in areas under government control.

** Argentina may also be considered CMR contaminated by virtue of its assertion of sovereignty over the Falkland Islands/Malvinas. The United Kingdom also claims sovereignty over the Islands and exercises control over them.

EXTENT OF CONTAMINATION

In many affected states, contamination is limited and the problem is manageable within a few months or years. Lao PDR and Vietnam, however, are massively contaminated (defined as covering more than 1,000km² of land), while heavy contamination exists in Cambodia and Iraq (covering more than 100km² and potentially as high as 500km² in the case of Cambodia).

Most other states are far less affected, although in several cases the extent is simply unknown or, as yet, unclear. Furthermore, flawed earlier survey in a number of contexts, such as Lebanon, mean that, despite

ongoing clearance, the estimated total contamination has not reduced proportionally, in part due to previously unknown contamination continuing to be identified.

Table 3 summarises what is known or reasonably believed about the actual extent of CMR contamination in affected states and other areas. It is therefore an assessment by Mine Action Review based on available evidence, as opposed to the claims of governments or mine action programmes, which are sometimes unsubstantiated or improbable.

Table 3: Extent of CMR contamination in affected states and other areas*

Massive (>1,000km ²)	Heavy (100–1,000km ²)	Medium (5–99km ²)	Light (<5km ²) or unclear
Lao PDR	Cambodia	Azerbaijan**	Afghanistan
Vietnam	Iraq	Chile	Angola
		Germany	Bosnia and Herzegovina
		Lebanon	Chad
		Libya	Croatia
		South Sudan	DR Congo
		Syria	Georgia
		Ukraine	Iran
		Yemen	Montenegro
		Kosovo	Serbia
		Nagorno-Karabakh	Somalia
			Sudan
			Tajikistan
			United Kingdom***
			Western Sahara
2 states	2 states	9 states and 2 other areas	14 states and 1 other area

* States parties to the CCM are in bold. ** In areas not under government control.

*** Argentina may also be considered CMR contaminated by virtue of its assertion of sovereignty over the Falkland Islands/Malvinas. The United Kingdom also claims sovereignty over the Islands and exercises control over them.

CLEARANCE IN 2018

In 2018, a total of more than 135,000 submunitions were destroyed by clearance and technical survey around the world from over 128km² of contaminated area. This does not capture all global clearance because much is not publicly reported, for instance in Syria, Ukraine, or Vietnam by national operators. Table 4 (overleaf) summarises the outputs of major CMR clearance operations in 2018 with a comparison to output in 2017.

Table 4: Major recorded CMR clearance in 2018 compared to 2017

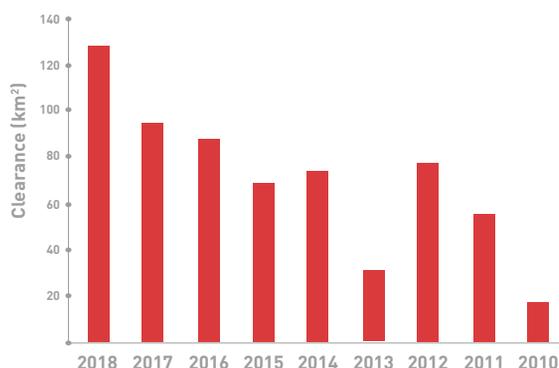
State* or other area	Clearance in 2018 (km ²)	Submunitions destroyed in 2018**	Clearance in 2017 (km ²)	Change in area cleared in 2018 (km ²)
Cambodia	39.6	13,616	23.5	+ 16.1
Lao PDR	36.2	90,798	33	+ 3.2
Vietnam	26.3	12,520	16.7	+ 9.6
Iraq	7.2	3,647	4.7	+ 2.5
South Sudan	5.1	4,710	1.0	+ 4.1
Western Sahara	4.8	833	6.1	- 1.3
Afghanistan	4.2	307	2.8	+ 1.4
Kosovo	1.2	221	0.9	+ 0.3
Lebanon	1.2	3,583	1.4	- 0.2
Croatia	0.9	578	1.0	- 0.1
Germany	0.8	1,542	0.5	+ 0.3
Yemen	0	79	***2.0	- 2.0
Nagorno-Karabakh	0	29	1.1	- 1.1
Other combined	0.8	3,316	0.7	+ 0.1
Totals	128.3	135,779	95.4	+ 32.9

* CCM states parties are in bold. ** Includes submunitions destroyed during technical survey and EOD spot tasks.

*** Area estimated from battle area clearance total.

In 2010 to 2018, total CMR clearance amounted to more than 638km² of area, with the destruction of at least 844,000 submunitions. Progress by year is reflected in Figure 1.

Figure 1: Clearance in 2010 to 2018 (km²)



SURVEY AND CLEARANCE METHODOLOGIES

Unexploded submunitions, the mainstay of the CMR threat, are located in cluster munition strike zones. Such contamination, whether delivered by ground-based systems or from the air, has a footprint (the area covered by the submunitions when they hit the ground). The size of a footprint from one cluster munition strike depends on a range of factors (e.g. the type and age of the cluster munition used, the method of delivery, soil conditions, vegetation, and terrain fluctuations), but normally does not exceed a length of 300 metres and a width of 200 metres.

The survey of cluster munition-contaminated area is usually simpler than is the case for mined area. Where, for example, it is known that no mines are present, surveyors may be allowed to enter the suspected area without wearing full personal protective equipment in order to identify unexploded submunitions lying on the surface. Moreover, unlike mines, all submunitions contain a high amount of metal, making their detection more straightforward, with fewer false positive signals. Informal or emergency clearance without careful recording of individual submunitions that have been removed, may, though, distort the footprint. Multiple overlapping footprints may impede accurate identification of each of the footprints.

Bombing data has proven fairly accurate in some contexts but less accurate or even non-existent in others. A particular methodology has been developed by leading operators for identifying and confirming contamination that results from cluster munitions whose use dates back decades. The Cluster Munition Remnants Survey (CMRS) is being employed in Cambodia, Lao PDR, and Vietnam. A modified form has recently been employed also in Iraq and Kosovo, and is being considered in Tajikistan.

Where the centre of a cluster munition strike can be identified, clearance should begin from that point and continue outwards to a set fade-out distance. Unexploded submunitions should generally be destroyed *in situ* either by detonation or deflagration (rapid burning of the explosive content without detonation), although other clearance techniques exist.²

TREATY DEADLINES FOR CLEARANCE

In accordance with Article 4 of the CCM (see Annex 1), each state party has a deadline of 10 years to complete CMR survey and clearance once the treaty enters into force for it. Table 5 summarises progress towards these deadlines, the first of which expires on 1 August 2020. Among CCM states parties, only Afghanistan and Croatia are on track to meet their treaty deadlines, although Montenegro believes it will also (just) meet its Article 4 deadline. Progress in far too many states parties has been sluggish at best.

Indeed, there may even be states parties that are in breach of their international legal obligation to clear CMR “as soon as possible”, most notably Chad and Chile, neither of which has conducted CMR clearance over the past five years. The United Kingdom still needs to analyse its cluster munition bombing data, and, as and where required, conduct survey and clearance of hazardous areas in which submunitions are suspected to remain and which have not yet been released through mine clearance efforts: to date, it has not even acknowledged its legal obligations under Article 4 of the CCM.

Table 5: Progress by affected states parties in implementing Article 4 of the CCM

State Party	CCM deadline	Status of progress	Implementation priorities
Croatia	1 August 2020	On track to meet deadline.	Complete clearance in line with national action plan.
Lao PDR	1 August 2020	Will not meet deadline. Has requested five-year extension.	National baseline survey of contamination and concurrent clearance.
Germany	1 August 2020	Will not meet deadline. Has requested five-year extension.	Clearance as soon as possible.
Montenegro	1 August 2020	May just meet deadline.	Clearance as soon as possible.
United Kingdom	1 November 2020	Not on track to meet deadline/ unclear.	Verification of areas where cluster munitions were targeted still needed.
Bosnia and Herzegovina	1 March 2021	Not on track to meet deadline.	Strategic plan for clearance as soon as possible.
Lebanon	1 May 2021	Not on track to meet deadline.	New strategic plan for survey and clearance as soon as possible.
Chile	1 June 2021	Not on track to meet deadline. Possibly in violation of Article 4.	Begin clearance as soon as possible.
Afghanistan	1 March 2022	On track to meet deadline.	Plan to complete clearance.
Chad	1 September 2023	Not on track to meet deadline. Possibly in violation of Article 4.	Targeted survey to determine baseline of CMR contamination.
Iraq	1 November 2023	Not on track to meet deadline. Will need extension given extent of contamination.	National baseline survey and strategic plan for clearance.
Somalia	1 March 2026	Not on track to meet deadline/ unclear.	Targeted survey to determine baseline of CMR contamination.

ARTICLE 4 EXTENSIONS

The first two extension requests to Article 4 deadlines were submitted in 2019. Both Germany and Lao PDR requested five-year extensions to their deadline (1 August 2020), the maximum period allowed under Article 4(5) of the CCM. Thus far, albeit on the basis of limited experience, the process for reviewing draft extension requests has not been as inclusive as that undertaken under the auspices of the 1997 Anti-Personnel Mine Ban Convention (APMBC). The Implementation Support Unit is encouraged to ensure that all relevant mine action stakeholders have the opportunity, and in a timely fashion, to contribute comments on draft requests.

OTHER ARTICLE 4 OBLIGATIONS

Article 4 of the CCM obligates each state party, as soon as possible, to identify any CMR threat in territory under its jurisdiction or control, “making every effort to identify all cluster munition contaminated areas”. Only Afghanistan, Croatia, Germany, and Montenegro have established reasonably accurate baselines of the extent of their CMR contamination. Any affected state party is further required to develop a national plan to implement its obligations to survey and clear all CMR. As at 1 July 2019, Croatia, Germany, and Montenegro were the only states parties with a clear time-bound and costed plan for fulfilment of its Article 4 obligations.

DUBROVNIK ACTION PLAN COMMITMENTS

Over four years since the First Review Conference of the CCM, and the year before the Second Review Conference, too many affected states parties have yet to implement the clearance-related actions they committed to in the 2015 Dubrovnik Action Plan.

Action 3 of the 2015 Dubrovnik Action Plan, adopted at the First Review Conference of the CCM, concerns “clearance and risk reduction education”. Eight linked commitments addressed, respectively: assessing the extent of the problem; protecting people from harm;

the development of a resourced plan; the importance of being inclusive when developing the response; management of information for analysis, decision-making, and reporting; the provision of support, assistance, and cooperation; application of practice development; and promoting and expanding cooperation.

The Dubrovnik Action Plan is intended to serve as a tool to monitor progress, with some actions designed as milestones to ensure timely implementation. Specific undertakings included to begin implementing Article 4-compliant national clearance strategies and plans *within one year of the First Review Conference in 2015*; and to achieve “clarity” on the location, scope, and extent of CMR in areas under each affected state party’s jurisdiction or control *within two years of that Conference*. As noted above, however, several states parties had still to meet either undertaking four years after the adoption of the Dubrovnik Action Plan and with the Second Review Conference rapidly approaching.

There is still time for states parties to demonstrate meaningful commitment to Article 4 implementation, by developing national clearance strategies and plans for addressing CMR, to present at the Second Review Conference in 2020. Likewise, states parties still have time before the Second Review Conference to gain greater clarity on the location, scope and extent of CMR contamination, or at least to put in place concrete plans to do so. Failure by affected states parties to have taken meaningful efforts in these regards by next year’s Review Conference will be monitored and judged accordingly.

CLEARANCE OBLIGATIONS FOR STATES NOT PARTY AND OTHER AREAS

While signatory states and states not party to the CCM do not have specific clearance deadlines, their obligations under international human rights law to protect life mean that they are required to survey, mark, and clear CMR as soon as possible. All affected states not party are encouraged to set ambitious, but realistic targets to complete clearance of CMR-contaminated areas to meet these legal duties.

PROGRAMME PERFORMANCE

The quality of programmes for the survey and clearance of CMR varies widely among states and territories. To help affected states parties and their partners focus their capacity building and technical assistance efforts on areas of weakness, a performance scoring system is used by Mine Action Review. Seven areas with a particularly strong influence on the effectiveness and efficiency of a CMR survey and clearance programme are assessed, as explained in Table 6.

The new criteria were developed as part of a five-year review of the Mine Action Review project and in view of the Fourth Review Conference of the APMBC in 2019 and the Second Review Conference of the CCM in 2020. The new criteria were developed in consultation with the Mine Action Review’s Advisory Board Members (The HALO Trust, MAG, and NPA), and with input from the Geneva Centre for Humanitarian Demining (GICHD) and the Gender and Mine Action Programme (GMAP, now a programme of the GICHD). As the criteria have been comprehensively overhauled this year, comparisons with earlier assessments by Mine Action Review of programme performance are not meaningful.

The introduction of a separate criterion on Gender reflects the importance of the need for affected states parties to integrate a gender perspective in their survey and clearance programmes. The goal is for gender to be successfully mainstreamed throughout mine action programmes, but the sector is still a long way from achieving this. Therefore, rather than incorporating gender into the other six criterion, Mine Action Review elected to make it its own criterion.

Gender perspectives should, of course, be considered alongside the intersectionality of other key factors including disability, age, race, religion, ethnicity, sexual orientation, and socio-economic status. However, the scope and resources of Mine Action Review’s research are limited and therefore we have focused on gender. That said, the new gender criterion did initially include diversity considerations, but due to the lack of information received from national authorities and operators in this regard, we have only been able to assess gender, based on information available. We hope that quality and depth of information provided on gender and diversity improves year-on-year, to enable better analysis and hopefully reflect much-needed progress.

Table 6: Programme performance criteria and factors

Criterion	Key factors affecting scoring
<p>UNDERSTANDING OF CONTAMINATION (20% of overall score)</p>	<ol style="list-style-type: none"> Has a national baseline of CMR contamination been established and is it up to date and accurate? If no national baseline, or only a partial or inaccurate baseline, exists, is survey and/or re-survey being conducted or is it planned? Are CMR-contaminated areas disaggregated from areas with other types of explosive devices (e.g. other explosive remnants of war or mines)? Is CMR contamination classified into suspected hazardous areas (SHAs) and confirmed hazardous areas (CHAs), based on whether there is indirect or direct evidence of CMR respectively? Is there a high ratio of CHAs to SHAs?
<p>NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)</p>	<ol style="list-style-type: none"> Is there a national entity, such as a national mine action authority, overseeing mine action? Is there a national mine action centre coordinating operations? Are the roles and responsibilities in mine action clear and coherent within the national programme? Is the mine action centre adequately staffed and skilled? Are clearance operators involved in key decision-making processes? Does national legislation, or other suitable administrative measures, effectively underpin the mine action programme? Have the authorities created an enabling environment for mine action? Has the government facilitated the receipt and efficient use of international assistance? Is there political will for timely and efficient Article 4 implementation? Does the affected state contribute national resources to support the mine action centre and/or survey and clearance of CMR-contaminated areas? Does the affected state party have a resource mobilisation strategy in place for Article 4 implementation?
<p>GENDER (10% of overall score)</p>	<ol style="list-style-type: none"> Does the national mine action programme have a gender policy and implementation plan? Do the main mine action operators have one? Is gender mainstreamed in the national mine action strategy and national mine action standards? Are all groups affected by CMR contamination, including women and children, consulted during survey and community liaison activities? Are survey and community liaison teams inclusive and gender balanced, to facilitate access and participation by all groups, including women and children? Are relevant mine action data disaggregated by sex and age? Is gender taken into account in the prioritisation, planning, and tasking of survey and clearance activities? Is there equal access to employment for qualified women and men in survey and clearance teams, including for managerial/supervisory positions?

Criterion	Key factors affecting scoring
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	<ol style="list-style-type: none"> 1. Is there a national information management system in place (e.g. IMSMA), and is the data accurate and reliable? 2. Are data collection forms consistent and do they enable collection of the necessary data? 3. Is data in the information management system disaggregated by type of contamination and method of land release? 4. Is the data in the information management system accessible to all operators? 5. Are ongoing efforts being made to ensure or improve the quality of data in the mine action database? 6. Does the affected state party to the CCM submit accurate and timely annual Article 7 reports on Article 4 progress? 7. Are Article 4 extension requests of a high-quality and submitted in a timely manner? 8. Is the reported survey and clearance data accurate and disaggregated by type of contamination (i.e. CMR from other ERW and landmines) and method of land release? 9. Does the affected state party report on progress in Article 4 implementation at the intersessional meetings and meetings of states parties, and is reporting accurate and consistent between reporting periods?
PLANNING AND TASKING (10% of overall score)	<ol style="list-style-type: none"> 1. Is there a national mine action strategy in place and does it include realistic goals for land release? 2. Is there a realistic annual workplan in place for land release? 3. Are there agreed and specified criteria for prioritisation of tasks? 4. Are key stakeholders meaningfully consulted in planning and prioritisation? 5. Is clearance of CMR tasked in accordance with agreed prioritisation? 6. Are task dossiers issued in a timely and effective manner? 7. Where relevant, is there a plan for dealing with residual risk and liability? Is it realistic and sustainable?
LAND RELEASE SYSTEM (20% of overall score)	<ol style="list-style-type: none"> 1. Does the affected state have national mine action standards in place for land release? 2. Do the standards enable or impede efficient evidence-based survey and clearance? 3. Are national standards reflected in standing operating procedures (SOPs)? 4. Are standards and SOPs periodically reviewed against IMAS and international best practice, in consultation with clearance operators? 5. Is there an effective and efficient: i) non-technical survey capacity, ii) technical survey capacity, iii) clearance capacity in the programme? Does this include national capacity? 6. Are areas being cleared that prove to have no CMR contamination? 7. Where relevant, is there national survey and clearance capacity in place to address CMR discovered after the release of CMR-contaminated areas or post completion? 8. Is there an appropriate range of demining assets (manual, mechanical, and animal detection systems) integrated into land release operations? 9. Is there an effective quality management system in place for survey and clearance operations? 10. Where an accident has occurred within a mine action programme was there an effective investigation? Were lessons learned shared between operators?
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	<ol style="list-style-type: none"> 1. Is the affected state seeking to clear all CMR from territory under its jurisdiction or control, including contamination along national borders, in and around military installations, and in hard to access areas? 2. Have national mine action authorities set a target date for the completion of CMR clearance and is this within the state party's Article 4 deadline? 3. Is the target date for completion realistic based on existing capacity? 4. Is the target date sufficiently ambitious? 5. What were the outputs of survey and clearance of CMR-contaminated area in 2018, and were they greater or lesser than the previous year and why? 6. Are survey and clearance outputs in line with plans and Article 4 obligations? 7. Is the affected state on track to meet the target completion date and/or Article 4 deadline?

The country-specific assessments of the seven criteria, which should be viewed alongside the Recommendations for Action, are intended as an implementation tool, offered in the spirit of openness and constructive dialogue, to assist states parties to identify and overcome challenges and fulfil their Article 4 obligations as efficiently and effectively as possible.

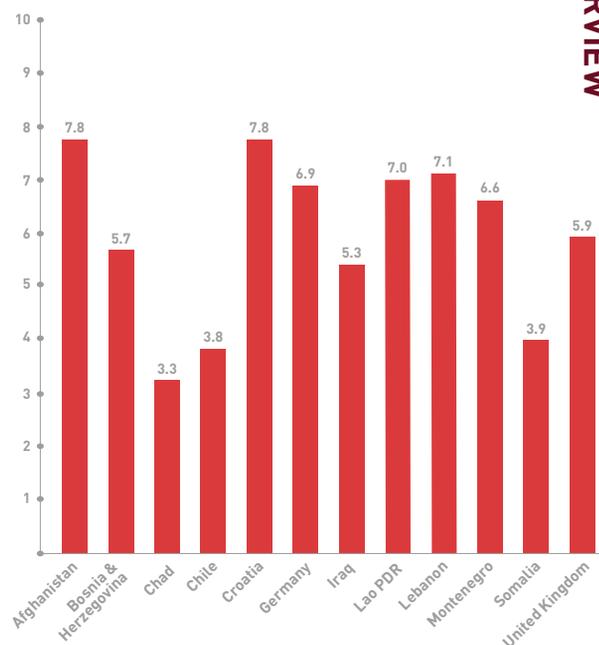
A score of between 0 and 10 is accorded for each of the seven criteria (three of which carry a higher weighting) and an average performance score calculated. Average scores of 8.0 or above are considered “very good”, 7.0–7.9 is ranked “good”, 5.0–6.9 is ranked “average”, 4.0–4.9 is ranked “poor”, while 0–3.9 ranks as “very poor”.

Figure 2 provides the scoring of all CCM states parties for the performance of their CMR survey and clearance programmes in 2018. The obligations under Article 4 apply equally to all states parties and the same set of criteria are applied by Mine Action Review to assess the performance of all affected states parties with Article 4 obligations, irrespective of the extent of the CMR or factors such as national GDP. That said, there is a big disparity in wealth between the affected states parties and their national financial capacity for land release varies.

For operations in 2018, four states parties attained a rating of Good: Afghanistan, Croatia, Lao PDR, and Lebanon. Afghanistan, which is making impressive progress in its Article 4 implementation and Croatia, which is on the cusp of completing clearance, both enjoyed the joint highest score: 7.8. Bosnia and Herzegovina, Germany, Iraq, Montenegro, and United Kingdom were all ranked as Average. Chad, Chile and Somalia were ranked as Very Poor, with Chad scoring lowest of all states parties (3.3).

While Kosovo is not recognised as a state by the depositary to the CCM (the UN Secretary-General), had its performance been assessed it would have ranked highly, reflecting the progress it has made in strengthening its mine action programme in recent years.

Figure 2: Performance Scoring of States Parties to the CCM (for 2018)



Reporting on gender-related issues, which were included in the performance scoring for the first time this year, demonstrated the poor state of gender equality in many states and mine action organisations. There was, however, good evidence of efforts being made to consult women during survey activities and to disaggregate relevant mine action data by sex and age.

COUNTRY COALITIONS FOR CMR CLEARANCE

Moving forward, there may be a place for collaborative “country coalitions” to support cluster munition clearance and enhance efficient land release. A “Mine Action Forum” has been established in Lebanon in close partnership between the Lebanon Mine Action Centre (LMAC) and Norway, providing an informal platform for LMAC to pursue dialogue and collaboration with donors, clearance operators, and partner organisations, and to discuss priorities and needs in cluster munition and mine survey and clearance at the national level. It is an example of what a “Country Coalition” under the CCM could look like, but in the case of Lebanon it was agreed the forum should be broadened to include landmines, and not just focus on CMR. The Lebanon model is worthy of study to see whether it could be employed in other CMR-contaminated states.

1 Unexploded submunitions and bomblets, failed cluster munitions, and abandoned cluster munitions.

2 See, e.g., Geneva International Centre for Humanitarian Demining (GICHD), *A Guide to Cluster Munitions*, Third Edition, Geneva, May 2016, pp. 92–93.

STATES PARTIES

The background of the page is composed of several overlapping, angular shapes in two shades of red: a vibrant, medium red and a darker, more muted red. These shapes create a complex, layered geometric pattern that fills the entire page. The shapes are primarily triangles and quadrilaterals, some pointing upwards and others downwards, creating a sense of depth and movement. The overall effect is a modern, abstract design that serves as a backdrop for the text.

AFGHANISTAN



CLEARING CLUSTER MUNITION REMNANTS 2019

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 MARCH 2022
ON TRACK TO MEET DEADLINE

KEY DATA

CLUSTER MUNITION
CONTAMINATION: LIGHT

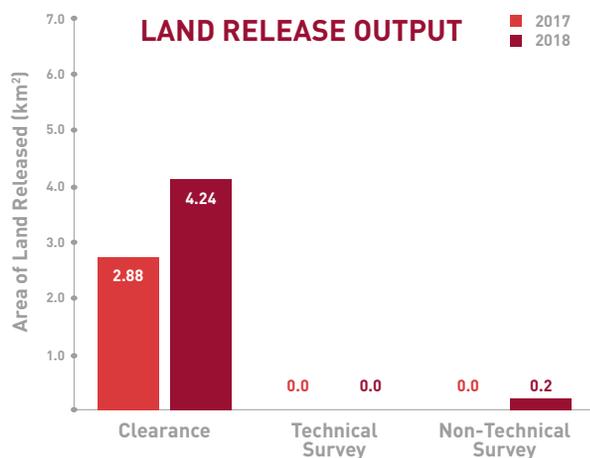
4.1 km²

SUBMUNITION
CLEARANCE IN 2018

4.24 km²

SUBMUNITIONS
DESTROYED IN 2018

307



KEY DEVELOPMENTS

Resurvey identified previously unrecorded areas of cluster munition remnant (CMR) contamination but increased funding for tackling cluster munition hazards saw significant acceleration in the amount of contaminated land released by clearance.

RECOMMENDATIONS FOR ACTION

- Afghanistan should ensure funding, including from national sources, to achieve the earliest possible completion of its known cluster munition contamination.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CONTAMINATION (20% of overall score)	9	Afghanistan has a limited number of contaminated areas well-defined by survey and is aware that further scattered contamination exists in currently undefined locations.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	8	The Mine Action Programme of Afghanistan (MAPA) completed transition to full national management in 2018 but the programme is totally dependent on international donor funding.
GENDER (10% of overall score)	6	Gender is being mainstreamed within the constraints of a very conservative religious culture. The year 2018 saw the first all-women mine clearance team in action, with further clearance by an expanded all-women team planned in 2019.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	8	The IMSMA database at the Directorate of Mine Action Coordination (DMAC) is rated among the best in the world, providing comprehensive, disaggregated data though reportedly subject to some delays in the uploading of reports. There were some inaccuracies and inconsistencies in Afghanistan's CCM Article 7 report for 2018.
PLANNING AND TASKING (10% of overall score)	8	DMAC has in place a plan for clearance of all cluster munition-contaminated areas which is in the process of being implemented.
LAND RELEASE SYSTEM (20% of overall score)	7	DMAC has well-established land release standards, though there may be a case for more technical survey of hazardous areas.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	8	After receiving increased funding in 2018, clearance of CMR-affected land increased by 50% in 2018 compared to the previous year, putting Afghanistan on track to meet its Article 4 deadline.
Average score	7.8	Overall programme performance: GOOD

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Afghan National Disaster Management Authority (ANDMA)
- Directorate of Mine Action Coordination (DMAC)

NATIONAL OPERATORS

- Afghan Technical Consultants (ATC)
- Agency for Rehabilitation and Energy Conservation in Afghanistan (AREA)
- Demining Agency for Afghanistan (DAFA)
- Mine Clearance Planning Agency (MCPA)
- Mine Detection Centre
- Organisation for Mine Clearance and Afghan Rehabilitation (OMAR)

INTERNATIONAL OPERATORS

- Danish Demining Group (DDG)
- HALO Trust
- Swiss Foundation for Mine Action (FSD)

OTHER ACTORS

- United Nations Mine Action Service (UNMAS)
- Norwegian People's Aid (NPA)

UNDERSTANDING OF CMR CONTAMINATION

Afghanistan says that at the end of 2018 it had nine CMR-contaminated areas covering a total of 4,122,534m², of which 65% was located in one province, Nangarhar, in the east of the country.¹ The total included 1.6km² of contamination added to the database after resurvey of two battle areas confirmed the presence of submunitions.²

Table 1: CMR contamination (at end 2018)

Province	CHAs	Area (m ²)
Baghlan	1	64,531
Nangarhar	3	2,680,103
Takhar	5	1,377,900
Totals	9	4,122,534

All the identified sites are affected by remnants of the 1,228 cluster munitions containing some 248,056 BLU-97B submunitions dropped by the United States between October 2001 and early 2002. Operators conducting demining and battle area clearance tasks also report encountering scattered Soviet-era cluster munitions dropped during the decade-long war in the 1980s.³

Cluster munition remnants make up only a small part of Afghanistan's extensive explosive remnants of war (ERW) contamination, which includes a wide range of other unexploded ordnance. There are also hundreds of square kilometres of anti-personnel and anti-vehicle mine contamination, including mines of an improvised nature (see Mine Action Review's *Clearing the Mines* report on Afghanistan for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Afghanistan's National Disaster Management Committee fulfils the role of a mine action authority acting through the Afghan National Disaster Management Authority (ANDMA). The Mine Action Programme of Afghanistan (MAPA) is led by the Directorate of Mine Action Coordination (DMAC), a department of ANDMA. From its headquarters in Kabul and seven regional offices, DMAC manages and coordinates the work of national and international implementing partners. DMAC provides strategic planning and annual workplans, sets priorities and standards, accredits operators, conducts quality assurance, manages the mine action database, and conducts resource mobilisation.⁴

Afghanistan issued a decree in September 2019 adding an annex to the existing Law on Firearms Ammunitions and Explosive Materials, which includes cluster munitions in a ban on the use, acquisition, trading and

stockpiling of weapons, ammunition, and explosive items without a requisite licence.⁵

Since 2012, the MAPA has transitioned from being a project of the UN Mine Action Service (UNMAS) to national management, a process completed with the transfer of the last positions from UNMAS to DMAC in June 2018. Afghanistan, in partnership with the Geneva International Centre for Humanitarian Demining (GICHD), convenes all stakeholders periodically in Geneva, to discuss progress. UNMAS continued to provide technical support in planning, advocacy, resource mobilisation, and managing funding provided through the Voluntary Trust Fund.⁶ Norwegian People's Aid (NPA) was funded by the US Department of State to monitor performance of all implementing partners receiving US funding.⁷

GENDER

The MAPA includes mainstreaming gender and diversity as one of the four goals of its 2016–20 strategic plan but is still in the process of developing steps and capacity for implementing it within the constraints of Afghanistan's deeply conservative religious society. The year 2018 saw the first all-women mine clearance team in action in Bamyan province, with further clearance by an expanded all-women team planned in 2019.⁸

DMAC advises implementing partners (IPs) to consider including women in community liaison and risk education teams to ensure access to all members of the community and a gender department has prepared a checklist of actions to ensure consultation with all parts of the community. To address cultural sensitivities, some IPs are employing couples in risk education and community liaison roles as well as in office-based roles and DMAC reports data is sex and age disaggregated.⁹

INFORMATION MANAGEMENT AND REPORTING

DMAC operates an IMSMA NG Version 6 database but in 2018 started preparations for an upgrade to IMSMA Core. DMAC was still in the process of migrating legacy data to IMSMA; as part of a continuous effort to increase efficiency, duplicates of historical data were deleted from the database.¹⁰ Operators endorse the accessibility and accuracy of data but reported the database experienced some significant delays in uploading completion reports into the database.¹¹

Afghanistan submits comprehensive Article 7 reports, although there were some inconsistencies in its Article 7 report for 2018 (see endnotes 2 and 22). It provides regular updates on the progress of survey and clearance at intersessionals and meetings of states parties. Afghanistan's Anti-Personnel Mine Ban Convention (APMBC) Article 5 extension request in 2012, prepared in consultation with and endorsed by Afghan implementing partners, was regarded as a model providing a comprehensive overview of all aspects of the country's ERW challenge.

PLANNING AND TASKING

DMAC's strategic plan for 2016–20 sets out four basic aims¹² but identifies implementation of its APMBC Article 5 Extension request as an "overarching goal". Afghanistan's extension request, drawn up with participation of implementing partners, provided for completing clearance of all known mine and ERW contamination by the requested deadline of 2023. This remains a benchmark against which DMAC measures progress, but a shortfall in donor funding and deteriorating security will ensure that deadline will not be achieved for mines.

DMAC also sets annual workplans for the sector. Priorities in the workplan for Afghan year 1398 (2019–20) include reducing civilian casualties, building capacity for tackling abandoned improvised mines, strengthening the quality management system, setting up a research and development unit to explore the application of new technologies, investigating new tools and methods for survey, finalising a policy on liability, and setting up a database to record details of all trained deminers.¹³

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Afghanistan has comprehensive national mine action standards that are International Mine Action Standard (IMAS)-compatible and subject to regular review. CMR survey and clearance are addressed in AMAS 06.02 (Battle Area Clearance). In March 2019, Afghanistan became the first mine action programme to adopt a standard for clearance of improvised mines.¹⁴

OPERATORS

Most operators encounter some residual CMR contamination in the course of clearing mine and battle area tasks but a single IP, Demining Agency for Afghanistan (DAFA), conducted the clearance of all CMR tasks in 2018.¹⁵

OPERATIONAL TOOLS

Only manual clearance of ERW, including CMR, is conducted in Afghanistan.

DEMINER SAFETY

No accidents occurred in cluster munition clearance in 2018. Insecurity, however, posed a major challenge to the sector. Six deminers were killed and a further eighteen injured as a result of security incidents in 2018, which also resulted in loss of equipment and damage to vehicles.¹⁶

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

After several years in which no CMR clearance occurred (see Table 2 overleaf), DMAC circulated a proposal to donors at the end of 2016 to complete clearance of 17 remaining tasks at a cost of \$1.85 million. It completed ten of those tasks in 2018, eight of them through manual clearance. Two tasks were added to the database in 2018 as a result of survey leaving nine to be cleared to complete the clearance of Afghanistan's cluster munition hazards.¹⁷

LAND RELEASE OUTPUT IN 2018

The MAPA released a total of 4,403,448m² of cluster munitions-affected areas in 2018, the overwhelming majority as a result of full clearance. There may, therefore, be a role for additional technical survey of hazardous areas to improve land release efficiency. Resurvey of some areas resulted in the addition of 1.6km² of contamination to the database of CMR-affected areas.¹⁸

SURVEY IN 2018

Afghanistan's CMR-contaminated areas were defined by survey so further survey is not routine. Re-survey by DAFA in 2018 resulted in cancellation of 160,000m². At the same time, non-technical survey of two battle area tasks in the Pachir Agam District of Nangarhar province in 2018 identified CMR contamination resulting in the addition of two tasks totalling 1.6km² to the database.¹⁹

Table 2: Area cancelled by non-technical survey in 2018²⁰

Province	Operator	Area cancelled (m ²)
Paktya	DAFA	160,000
Total		160,000

CLEARANCE IN 2018

DAFA cleared a total of 4.2km² in three provinces (see Table 3), destroying 217 submunitions, a 5% increase over CMR areas cleared the previous year and double the number of items destroyed.²¹

DMAC reported another 66 CMR were destroyed in spot EOD tasks in 2018.²² DDG said it destroyed 24 CMR among 1,292 items of ordnance destroyed in spot tasks in 2018.²³ DMAC said almost all submunitions destroyed in spot tasks were Soviet-made AO-2 items; two were US BLU-97s.²⁴

DMAC expected that out of a total of nine remaining CMR tasks, eight tasks in Takhar, Baghlan, and Nangarhar would be cleared by ATC and DAFA in 2019 with funding from the United States and other countries provided through the Voluntary Trust Fund.²⁵

Table 3: Clearance of CMR-contaminated area in 2018²⁶

Operator	Province	Areas released	Area cleared (m ²)	Submunitions destroyed*	Other UXO destroyed*
DAFA	Nangarhar	1	1,219,611	18	346
DAFA	Paktya	3	1,202,957	130	46
DAFA	Takhar	5	1,820,880	69	384
Totals		9	4,243,448	217	776

* Items destroyed during clearance of CMR tasks

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR AFGHANISTAN: 1 MARCH 2012

ARTICLE 4 DEADLINE: 1 MARCH 2022

ON TRACK TO MEET DEADLINE: YES

The acceleration of clearance of CMR contamination in the past two years has put Afghanistan well on course to complete clearance of known CMR hazards by its Article 4 deadline. DMAC expected eight of the nine remaining tasks to be cleared by September 2019 leaving one task covering 884,000m² in Nangarhar province to be tackled in the remaining 18 months.

Despite escalating levels of conflict in Afghanistan, DMAC reported all nine tasks were in areas considered accessible. It considered the only potential obstacle to completion would be lack of funding, which had not been obtained for the remaining Nangarhar task as of April 2019.²⁷

Table 4: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (km ²)
2018	4.2
2017	2.8
2016	0
2015	0
2014	0
Total	7.0

-
- 1 Email from Abdul Qudos Ziaee, Head of Operations Department, DMAC, 3 April 2019.
 - 2 DMAC said contamination data in Afghanistan's Article 7 Report for 2018 (5,063,958m²) included some areas already cleared and would be amended. Email from Abdul Qudos Ziaee, DMAC, 9 July 2019.
 - 3 Email from DMAC, 11 April 2018; Statement of Afghanistan, CCM intersessional meetings (Clearance and Risk Education Session), Geneva, 15 April 2013.
 - 4 Email from Mohammad Wakil Jamshidi, Chief of Staff, UNMAS/DMAC, 16 May 2017.
 - 5 CCM Article 7 Report (for 2018), Form A.
 - 6 Interview with Patrick Fruchet, UNMAS, Geneva, 5 February 2019.
 - 7 Email from Vanja Sirica, Country Director, NPA, 25 April 2018.
 - 8 Emails from Abdul Qudos Ziaee, DMAC, 3 April 2019; and Daniel Bertoli, Head of Programme, DDG Afghanistan, 15 April 2019.
 - 9 Emails from Abdul Qudos Ziaee, DMAC, 3 April 2019; and Mir Mohamed, Executive Operations Manager, MCPA, 17 April 2019.
 - 10 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 11 Interviews with mine action operators, Geneva, March 2019.
 - 12 The four goals are to: 1) facilitate development; 2) integrate mine action into other sectors such as health, education, agriculture and economic development; 3) prevent and mitigate the effects of landmines through clearance, risk education, victim assistance, advocacy and stockpile destruction; and 4) mainstream gender and diversity.
 - 13 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 14 Statement by Mohammed Shafiq, GICHD workshop, Geneva, 26 March 2019.
 - 15 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 16 Ibid.
 - 17 Emails from Abdul Qudos Ziaee, DMAC, 3 and 16 April 2019.
 - 18 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 19 Emails from Abdul Qudos Ziaee, DMAC, 3 and 16 April 2019.
 - 20 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 21 Ibid.
 - 22 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 23 Email from Daniel Bertoli, DDG Afghanistan, 15 April 2019.
 - 24 Email from Abdul Qudos Ziaee, DMAC, 16 April 2019.
 - 25 Email from Abdul Qudos Ziaee, DMAC, 3 April 2019.
 - 26 DMAC reported that clearance recorded in Afghanistan's Article 7 Report for 2018, Form F, (1,957,233m²) left out some cleared areas and would be amended. Emails from Abdul Qudos Ziaee, DMAC, 3 April and 9 July.
 - 27 Email from Abdul Qudos Ziaee, DMAC, 16 April 2019.

BOSNIA AND HERZEGOVINA

MINE ACTION REVIEW

CLEARING CLUSTER MUNITION REMNANTS 2019

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 MARCH 2021
NOT ON TRACK TO MEET DEADLINE

KEY DATA

CLUSTER MUNITION CONTAMINATION: MEDIUM

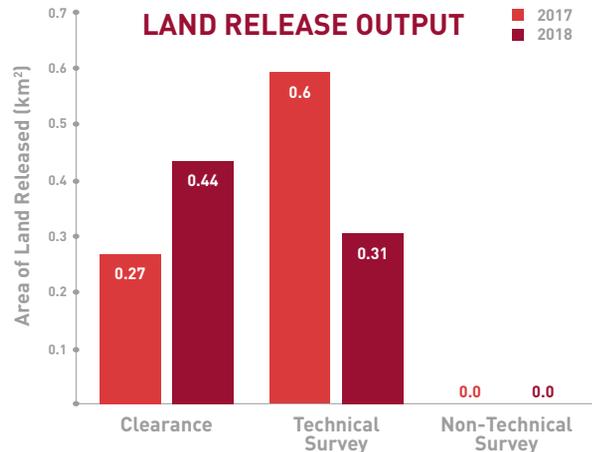
6.3KM²

SUBMUNITION CLEARANCE IN 2018

0.44KM²

SUBMUNITIONS DESTROYED IN 2018

1,009



KEY DEVELOPMENTS

In 2018, Bosnia and Herzegovina (BiH) finalised a new national mine action strategy for 2018–25, which was subsequently adopted in January 2019. While the new strategy addresses all contamination, including cluster munition remnants (CMR), BiH has still to elaborate a plan and associated timeframe for completion of CMR clearance. Norwegian People's Aid (NPA), however, reported having a strategy in place to release CMR-contaminated areas together with the BiH Armed Forces and the entity Civil Protections. But CMR clearance output in 2018 was small, as in previous years, putting into serious doubt whether BiH will meet its March 2021 Convention on Cluster Munitions (CCM) Article 4 clearance deadline.

RECOMMENDATIONS FOR ACTION

- BiH should accelerate clearance of CMR immediately to fulfil its CCM Article 4 obligations in advance of its treaty deadline.
- BiH should adopt, without further delay, the amended demining law drafted in 2017.
- In both its CCM reporting and strategic planning, the Bosnia and Herzegovina Mine Action Centre (BHMAC) should clearly separate out contamination resulting from the use of individual submunitions fired from modified rifles from that resulting from the ordinary use of cluster munitions. The former do not fall within the definition of a cluster munition covered by the CCM, and, as such, are not governed by the treaty clearance obligations.
- BHMAC should report more accurately and consistently on the extent of CMR contamination, including using the classification of suspected hazardous area (SHA) and confirmed hazardous area (CHA) in a manner consistent with the International Mine Action Standards (IMAS).
- BiH should implement the recommendations of both the 2015 United Nations Development Programme (UNDP) Mine Action Governance and Management Assessment, and the 2016 performance audit report of the Audit Office of the Institutions of BiH.¹ In particular, BiH should continue reforming and strengthening the governance and management of the mine action programme.

- BHMAC should ensure that sufficient clearance capacity is deployed, taking into consideration all organisations accredited to conduct CMR clearance, to enable BiH to complete clearance by its deadline of March 2021.
- BHMAC should strive to improve better gender balance in the sector, at the least by meeting the target of 40% female staff set by the 2003 Law on Gender Equality.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	5	BiH's national baseline of CMR contamination is not classified into confirmed hazardous area (CHA) and suspected hazardous area (SHA). In addition, it includes 2.1km ² of contamination from individually fired submunitions, which does not fall under the provisions of the CCM. Furthermore, according to NPA, data relating to SHAs contaminated with CMR is unreliable, posing a further challenge for BHMAC.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	7	National ownership of mine action in BiH falls under the responsibility of the Demining Commission and BHMAC. Governance and management of the mine action programme could be strengthened and reformed. BiH also published a separate Financial Plan for Implementation of the BiH mine action strategy for 2018–25, though the Plan only appears to cover survey and clearance of mines and not CMR. As at April 2019, the amended demining law was still awaiting parliamentary adoption.
GENDER (10% of overall score)	6	BiH's National Mine Action Strategy 2018–2025 supports the 2003 Law on Gender Equality in BiH, and BHMAC has stated that under its leadership, relevant actors will include gender in all phases of all mine action activities. Survey and community liaison teams are said to be gender inclusive, with women and children are consulted during their activities. Mine action data is disaggregated by sex and age. However, of BHMAC's 107 operations staff in the field, only 10 were women.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	6	There is scope to improve the accuracy and consistency of BHMAC's mine action data and information management system, which should also be made consistent with the International Mine Action Standards (IMAS). BHMAC is in the process of developing a new database. BiH did not deliver or submit a statement on CCM Article 4 implementation at the Meeting of States Parties in September 2018.
PLANNING AND TASKING (10% of overall score)	6	BiH adopted its National Mine Action Strategy 2018–2025 in January 2019, which foresees fulfilment of Article 4 by 1 March 2021. While NPA reports that it has a completion plan for CMR contamination (releasing areas together with the BiH Armed Forces and entity Civil Protections), BHMAC itself has not released a workplan with milestones through to completion. Fulfilling Article 4 clearance obligations by BiH's 2021 deadline risks being overshadowed by mine clearance; mine contamination covers a far greater area.
LAND RELEASE SYSTEM (20% of overall score)	6	BHMAC has in place national standards and standing operating procedures (SOPs) for survey and clearance of CMR, which are adapted to the local threat and context. However, occasionally areas are being fully cleared that are found not to be contaminated, pointing to the need for evidence-based survey prior to clearance.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	5	Only 1.3km ² of CMR-contaminated area has been cleared over the last five years, raising serious doubts about whether BiH will meet its Article 4 deadline despite the NPA completion strategy with the BiH Armed Forces and the civil protection to finish CMR clearance by the deadline.
Average score	5.7	Overall programme performance: AVERAGE

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- The Demining Commission (representatives from three ministries (Civil Affairs, Security, and Defence) elected to represent BiH's three main ethnic groups (Bosniaks, Croats, and Serbs))
- Bosnia and Herzegovina Mine Action Centre (BHMAC)

NATIONAL OPERATORS

- Armed Forces of BiH
- BHMAC
- Civil Protection Administration of Republic of Srpska
- Federal Administration of Civil Protection

INTERNATIONAL OPERATORS

- NPA

OTHER ACTORS

- Geneva International Centre for Humanitarian Demining (GICHD)
- United Nations Development Programme (UNDP)

UNDERSTANDING OF CMR CONTAMINATION

As at the end of 2018, BiH reported a total of 6.3km² of CMR-contaminated area (see Table 1), with no disaggregation of CMR-contaminated area into CHA and SHA.²

This compares to reported contamination as at the end of 2017 of 6.47km².³ The difference between the contamination as at end 2017, compared to contamination as at end 2018, is explained by the 0.75km² of land released through technical survey and clearance in 2018 being offset by discovery during clearance of 0.58km² of additional, previously unrecorded, CMR contamination, which impacted BiH's underlying baseline of contamination.⁴

Table 1: CMR contamination by canton (at end 2018)⁵

Canton	Area (km ²)
Unsko-Sanski	0.08
Tuzlanski	0.68
Zenicko-Dobojski	2.10
Central Bosnia Canton	1.73
Neretva	0.04
Sarajevo	0.37
Canton 10	0.35
Total Federation BiH	5.35
Total Republika Srpska	0.95
TOTAL	6.30

Of the total CMR-contaminated area, 2.1km² is the result of individually launched KB-1 submunitions fired from modified AK-47 rifles.⁶ This was previously reported as 2.7km²,⁷ but non-technical survey reduced the area in question to 2.1km². When used in this way, individual KB-1 submunitions are not defined as a cluster munition under the CCM, and, as such, the treaty clearance

obligations do not apply to this contamination.⁸ Therefore, this 2.1km² of contamination is not subject to the clearance obligations under Article 4 of the CCM.⁹ However, despite BHMIC being aware of this issue and including reference to it in its National Mine Action Strategy 2018–2025,¹⁰ in its Article 7 transparency reporting for 2017, BiH did not remove contamination resulting from the use of individual submunitions fired from modified rifles from the total cluster munition-contaminated area under its Article 4 obligation.¹¹ As at 29 May 2019, BiH had not yet submitted its Article 7 report for 2018.

A total of 4.47km² of reported CMR contamination is in areas which also contain mines.¹² This includes the area of contamination resulting from the firing of individual submunitions.

CMR contamination dates back to the conflicts of 1992–95 related to the break-up of the Socialist Federal Republic of Yugoslavia.¹³ A survey and initial general assessment of cluster munition contamination was jointly conducted by BHMIC and Norwegian People's Aid (NPA) in 2011, which estimated the total area containing CMR at more than 12km², scattered across 140 areas. This estimate was subsequently revised upwards to 14.6km² following the start of land release operations in 2012.¹⁴ Of this, around 5km² was deemed actually contaminated and marked for clearance.¹⁵

Sixty communities have been identified as affected with submunitions, of which thirty-one are also affected by mines.¹⁶

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

BiH is also contaminated by unexploded ordnance (UXO) other than unexploded submunitions and by anti-personnel and anti-vehicle mines (see Mine Action Review's *Clearing the Mines* report on BiH for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The Demining Commission, under the BiH Ministry of Civil Affairs, supervises the state-wide BHMIC and represents BiH in its relations with the international community on mine-related issues.¹⁷ The Demining Commission is composed of representatives from three ministries (Civil Affairs, Defence, and Security) elected to represent BiH's three main ethnic groups (Bosniaks, Croats, and Serbs).¹⁸ Whereas the Minister for Civil Affairs remains ultimately responsible for mine action, the Demining Commission is the strategic body responsible for setting mine action policy, and it proposes the appointment of BHMIC senior staff, for approval by the Council of Ministers.¹⁹ The existing Demining Commission representatives were re-elected for a further two years (October 2017 to October 2019).²⁰

One problem posed by the structure of the Demining Commission is that each of the three represented ministries has separate portfolios in their respective ministries; and their work on the Demining Commission is only part-time in addition to their other responsibilities.²¹ Furthermore, according to the 2016 audit office report, "The Commission has not developed a methodology on how to monitor the work of the BHMIC".²²

BHMIC, established by a 2002 Decree of the Council of Ministers, is responsible for regulating mine action and implementing BiH's demining plan, including accreditation of all mine action organisations.²³ BHMIC operates from its headquarters in Sarajevo, and two main offices in Sarajevo and Banja Luka, and eight regional offices (Banja Luka, Bihac Brčko, Mostar, Pale, Sarajevo, Travnik, and Tuzla).²⁴

Since 2008, efforts have been made to adopt new mine action legislation in BiH with a view to creating a stable platform for mine action funding by the government and local authorities. BiH demining authorities are following the 2015 recommendation of the Council of Ministers to amend the existing law, instead of adopting a new law,²⁵ and a working group which consisted of representatives from the Ministry of Civil Affairs, the Demining Commission, BHMAC, the Armed Forces, and the entity Civil Protections, created a first draft of the amended demining law.²⁶ However, as at April 2019 the amended text from 2017 was still awaiting parliamentary adoption.²⁷ As the Geneva International Centre for Humanitarian Demining (GICHD) has observed: “In order to be able to fulfil its international obligations in timely fashion, relevant authorities of BiH need to be able to make decisions more quickly and to foster an environment in which operations are not hindered.”²⁸

BHMAC is funded by the common institutions of BiH and other institutions at state level.²⁹ BiH national state funding also supports survey and clearance of CMR. Operations of the BiH Armed Forces are supported by the state budget of BiH, while the Government of the Federation of BiH finances the operations of Federal Administration of Civil Protection.³⁰

After a 10-year hiatus, Board of Donor meetings resumed in September 2015.³¹ As the Board of Donors is one of the few platforms where international actors meet formally under law, international donors in BiH welcomed the resumption of the meetings, which provide a forum for improved coordination and communication with the national authorities.³² However,

as at April 2019, the last Board of Donor meeting had taken place in Sarajevo in November 2017.³³ BiH’s new National Mine Action Strategy 2018–2025 specifies that at least two such meetings should be organised every year.³⁴

In October 2016, expert working groups (EWGs), which used to meet until 2009, were reinitiated.³⁵ The BiH Armed Forces and clearance operators think regular EWG meetings are of benefit to the mine action sector in BiH.³⁶ As at April 2019, the last EWG meeting had taken place in March 2019.³⁷

BiH’s second goal, in its National Mine Action Strategy 2018–2025, is that the “Mine action programme in BH is promoted on both national and international level to increase its visibility and improve liability, commitment and support of the state”, and the strategy includes operational goals linked to this strategic goal.³⁸ As committed to in its strategy, BiH published a separate financial plan for implementation of the BiH mine action strategy for 2018–25. The plan sees BiH commit a national budget of 4.5 million BAM (over US\$2.5 million) per annum for the Armed Forces and 5.945 million BAM (US\$3.4 million) per annum for BHMAC, for 2019 and 2020; which is forecast to then increase to a total of 21.55 million BAM (over US\$12.3 million, at current exchange rates) per annum in 2021–25.³⁹ This national funding is in addition to forecast international funding, which is also budgeted in BiH’s financial plan.⁴⁰ However, the vast majority of overall funding budgeted in the plan is used for survey and clearance operations relating to anti-personnel mines, and the plan does not specify what proportion of funding is intended for CMR operations.

GENDER

BiH’s National Mine Action Strategy 2018–2025 specifies that “Under the leadership of BHMAC, relevant actors will include gender and diversity into all phases of planning, realisation and follow-up of all mine activities....”⁴¹ The mine action strategy considered and supported the 2003 Law on Gender Equality in BiH, which includes equal treatment of the genders and equality of opportunity, and prohibits direct and indirect discrimination on the grounds of gender. The Law on Gender Equality determines that equal representation of men and women exists when the percentage of either gender in bodies at all levels in BiH (state, entity, cantonal, and municipality level) is at least 40%. BiH’s national mine action strategy also considered the 2017 Gender Equality Action Plan.⁴² However, as at April 2019, out of BHMAC’s 171 employees, only 42 were women (25%). Of BHMAC’s 107 operations staff in the field, 10 were women (9%).⁴³

BHMAC reported that it has a gender and diversity policy and that BHMAC upholds the Law on Gender Equality and routinely includes it in the development of strategies and standards.⁴⁴

Likewise, NPA reported that it promotes gender equality in all aspects of its programme activities in BiH. Mixed gender representation is an obligation for NPA teams conducting community liaison and risk education.⁴⁵ NPA reported that the overall gender split of its staff as at April 2019 was 98 male employees and 10 female (9%).⁴⁶ NPA reported that it is driving to achieve a gender balance, and that the programme encourages the employment of women, including into managerial and operational staff positions. Four managerial positions in the NPA BiH programme are held by women.⁴⁷

All groups affected by CMR, including women and children, are reported to be consulted during survey and community liaison activities by both BHMAC and NPA, and survey and community liaison teams are inclusive with a view to facilitating this. BHMAC and NPA also reported that relevant mine action data is disaggregated by sex and age.⁴⁸

INFORMATION MANAGEMENT AND REPORTING

As at April 2019, BHMAC was using its own information management system, the Bosnia and Herzegovina Mine Action Information System (BHMAIS).⁴⁹ However, BHMAC does not report accurately or consistently on CMR contamination by SHAs and CHAs, in a manner consistent with IMAS. In addition, there are frequent inaccuracies in BHMAC reporting on land release.

Information in BHMAC's information management system is made available to clearance operators.⁵⁰ However, NPA reported that data relating to CMR SHAs was being reviewed, with its support, and that BHMAC data on CMR-contaminated areas was neither accurate nor up to date.⁵¹

The first goal of BiH's National Mine Action Strategy 2018–2025 is that, "Procedures of quality information management ensure the collection, storage, analysis and dissemination of relevant information, as well as their use of effective and efficient planning, priority setting, tasking and the conduct of mine action", and the strategy includes operational goals linked to this strategic goal.⁵²

BHMAC, with the support of UNDP and financing from the EU, plans to create a new web-based database to replace the existing system and increase accessibility and transparency of mine action data. The project, entitled "Mine Action Governance and Management Project", will "aim to influence policy and build the capacity to instil greater organisational openness and adaptability to new methodologies."⁵³ According to the GICHD, the UNDP-supported project to improve information management through the development of a web-based database will bring better accessibility and transparency of data.⁵⁴ The joint development of the database (IMSMA Core) began in 2019 and was ongoing as at June 2019; it was expected to be completed by the beginning of 2020.⁵⁵

BiH did not deliver a clearance statement on Article 4 implementation at the CCM Eighth Meeting of States Parties in Geneva in September 2019. As at the beginning of July, BiH had still to submit its Article 7 report for 2018.

PLANNING AND TASKING

In 2017, BiH developed a new national mine action strategy for 2018–25, with support from the GICHD, which addresses all contamination, including CMR. The strategy was formally adopted in January 2019.⁵⁶ In strategic goal three of the strategy, on survey and clearance, BHMAC commits to complete Article 4 clearance obligations by 2021.⁵⁷ However, BHMAC has provided no detailed workplan on how it intends to implement this.

The previous BiH Mine Action Strategy for 2009–19 guided mine action in BiH, but did not mention CMR clearance specifically. Two planned revisions to the strategy did include reference to CMR clearance, but were not approved by the Council of Ministers.⁵⁸ In 2016, BHMAC, in consultation with the GICHD, started the third revision process. This time, BiH, with support from the GICHD, and participation from government ministries, clearance operators and other stakeholders, produced an entirely new national mine action strategy for the period through to projected completion of mine and CMR clearance (2018–25).⁵⁹

The strategy plans for completion of anti-personnel mine clearance by the end of 2025, which represents by far the greater challenge in BiH. The new 2018–25 strategy also plans for completion of CMR clearance by March 2021, in line with BiH's CCM Article 4 deadline. However, the strategy does not contain an action plan or concrete milestones towards completion of CMR clearance.⁶⁰ The strategy is due to be revised in 2020 and 2023, to consider progress and adjust for any changes in context.⁶¹ The strategy also includes a section on management of residual contamination, which specifies that BiH is obliged to create a strategy for the management of residual contamination by 2022.⁶²

According to BHMAC, there was an operational plan for 2018, in which NPA, the Armed Forces BiH, and Federal Protection Administration were planned to work in cluster munition-contaminated area in 13 municipalities: Čapljina, Cazin, Glamoč, Hadžići, Jajce, Kladanj, Ključ, Livno, Maglaj, Olovo, Tešanj, Tuzla, and Zenica.⁶³ However, no CMR-contaminated land was reported as having been released by the Federal Protection Administration in 2018.⁶⁴ BiH achieved roughly 75% of its planned 1km² land release output in 2018 for CMR-contaminated area.⁶⁵

NPA has reported having a land release plan/completion strategy for areas contaminated with CMR in BiH. In addition to NPA technical survey and clearance of CMR-contaminated areas, it will also support the BiH Armed Forces by providing eight magnetic locators for manual operations. This will enable the Demining Battalion to deploy an additional team for cluster munition clearance to add to its existing two teams. NPA, the BiH Armed Forces, and entity Civil Protections will work towards completion of CMR clearance by March 2021. This completion initiative has already received support from the Norwegian Ministry of Foreign Affairs, the Swiss Government, and Norwegian cooperative COOP Norge SA.⁶⁶

According to BHMAC, cluster munition-contaminated areas are prioritised for clearance based on agreement with local communities and municipalities.⁶⁷

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

In 2016, the Demining Commission formally adopted three revised chapters of the national mine action standards (NMAS) on land release, non-technical survey, and technical survey, drafted in cooperation with EU technical assistance through the Land Release pilot project, UNDP, and the GICHD.⁶⁸ The Demining Commission adopted new standards for CMR at the beginning of 2017.⁶⁹

In 2015, BHMIC adopted a new national standing operating procedure (SOP) for non-technical survey of areas suspected to contain CMR, based on NPA's own SOP.⁷⁰ In October 2016, BHMIC made updates and improvements to national SOPs for CMR clearance and technical survey, also based on NPA's SOPs.⁷¹ In April 2018, the new SOP for non-technical survey was adopted by the Demining Commission.⁷² As at April 2019, BHMIC reported that it was currently developing new standards and SOPs in accordance with IMAS.⁷³

BHMIC reported that survey or resurvey of hazardous areas suspected to contain CMR is conducted as standard, as part of all land release operations.⁷⁴ According to NPA, national mine action standards in BiH are suitably adapted to the local threat and context, and enable efficient evidence-based survey and clearance of CMR.⁷⁵

OPERATORS

Land release operations on CMR-contaminated area in 2018 were conducted by non-governmental organisation NPA and the BiH Armed Forces. BHMIC was not, however, able to provide the total number of personnel that conducted technical survey and clearance during the year.⁷⁶ Unlike in previous years, no cluster munition-contaminated area was reported to have been released by the Federal Administration of Civil Protection in 2018.⁷⁷

As at June 2018, the Armed Forces of BiH, the Federal Administration of Civil Protection, the Civil Protection of the Republic of Srpska, NPA, and national NGO, PRO VITA, were all accredited and equipped to conduct CMR survey and clearance.⁷⁸

Two of the thirty-four BiH Armed Forces' ten-strong demining teams (eight deminers, plus a team leader and a medic) are specialised in CMR clearance.⁷⁹ As at June 2019, both these teams were deployed.⁸⁰

BHMIC asserts that the BiH Armed Forces and the Federal Administration of Civil Protection are equipped with necessary demining equipment and capable, trained personnel for CMR clearance.⁸¹ However, both have suffered from logistical challenges and equipment

deficits in the past, which prevent them from working at full capacity.⁸² For example, the BiH Armed Forces require ongoing support from external partners, such as NPA, to secure personal protective equipment, batteries for detectors, and fuel for demining machinery, since the Army's own complex procurement system often cannot deliver such items in time.⁸³ Furthermore, deminers in the BiH Armed Forces are forced to stop demining at the age of 38 (this upper limit, until recently, had been 35). This results in experienced deminers being forced to retire at a very early age and results in a high turnover of personnel.⁸⁴

In 2018, NPA deployed two manual teams (each with six deminers and one team leader), for technical survey and clearance operations of CMR-contaminated area in BiH. NPA expected capacity to remain constant in 2019,⁸⁵ when it planned to conduct technical survey and clearance on seven CMR tasks and to release approximately 600,000m². In winter, NPA conducts tasks in the southern parts of BiH; while in the summer, it works in the mountains.⁸⁶ In addition, NPA is supporting capacity development of the Armed Forces demining battalion and the two entity civil protections, through training and technical advice, operational support, and the provision of mine detection dogs, metal detectors, demining machinery, and other equipment.⁸⁷

Mines Advisory Group (MAG) received operational accreditation in April 2017, and began demining in May 2017, but is engaged in landmine survey and clearance only.

OPERATIONAL TOOLS

All CMR-contaminated area released in 2018 was through manual technical survey and clearance. No animal detection systems or mechanical assets were used in CMR survey or clearance operations in BiH in 2018.⁸⁸ This is despite the fact that in 2017, BiH announced that technical survey and CMR clearance would also be conducted with the use of special detection dogs (SDDs), through NPA.⁸⁹

Successful results from a 2014 pilot project using SDDs for technical survey and clearance of CMR-contaminated areas, implemented by NPA,⁹⁰ led to BHMIC updating the relevant NMAS to include the use of dogs in targeted technical survey of CMR.⁹¹ NPA submitted SOPs for SDDs to BHMIC for approval. As at June 2019, BHMIC was making necessary amendments to the existing standards, which it will then submit to the Demining Commission for approval. NPA strongly recommends the use of detection dogs in technical survey (both targeted and systematic investigation), with the aim of increasing the efficiency and pace of the release of land contaminated with mines, CMR, and other ERW.⁹²

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

A total of 0.75km² of CMR contaminated was released in 2018, of which nearly 0.44km² was cleared and just under 0.31km² was reduced by technical survey. During technical survey and clearance, a total of 1,009 submunitions were destroyed. No land was cancelled by non-technical survey in 2018.⁹³

During land release operations in 2018, an additional 0.58km² of previously unrecorded CMR contamination was identified.⁹⁴

SURVEY IN 2018

In 2018, just over 0.31km² of CMR-contaminated area was reduced by technical survey (see Table 2). This represents a decrease on the 0.6km² reduced by technical survey in 2017.⁹⁵ No area was cancelled by non-technical survey in 2018.

Of the 313,037m² reduced by technical survey in 2018, 190,681m² was reduced by NPA (in Neretva Canton and in Republika Srpska) and 122,356m² by the BiH Armed Forces (in Central Bosnia and Sarajevo Canton).⁹⁶

Table 2: Release by technical survey in 2018⁹⁷

Canton	Area reduced (m ²)
Central Bosnia	23,757
Neretva	67,854
Sarajevo	98,599
Total Federation BiH	190,210
Total Republika Srpska	122,827
TOTAL	313,037

CLEARANCE IN 2018

In 2018, nearly 0.44km² of CMR contaminated was cleared by NPA and the BiH Armed Forces, with the destruction of 1,009 submunitions, of which 274,548m² was in the Federation of BiH and 163,236m² in Republika Srpska (see Table 3).

Clearance output in 2018 was therefore a slight increase on the 0.27km² cleared in 2017.⁹⁸ Unlike in previous years, however, no CMR-contaminated area was reported to have been cleared by the Federal Administration of Civil Protection in 2018.⁹⁹

Of the 437,784m² released by clearance in 2018, 312,736m² was cleared by NPA (in Neretva Canton and in the Republika Srpska) and 125,048m² by the BiH Armed Forces (in Central Bosnia and Sarajevo Canton).¹⁰⁰

BHMAC reported that one cluster munition-contaminated area, totalling 33,000m², was cleared in 2018, which proved to have contained no CMR.¹⁰¹

Table 3: Clearance of CMR-contaminated area in 2018¹⁰²

Canton	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
Central Bosnia	33,000	0	0
Neretva	149,500	25	7
Sarajevo	92,048	892	0
Total Federation BiH	274,548	917	7
Total Republika Srpska	163,236	92	7
Totals	437,784	1,009	14

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR BIH: 1 MARCH 2011

ARTICLE 4 DEADLINE: 1 MARCH 2021

ON TRACK TO MEET ARTICLE 4 DEADLINE: NO

Under Article 4 of the CCM, BiH is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 March 2021. BiH is not on track to meet this deadline. However, BHMAC reports that it respects its CCM Article 4 deadline¹⁰³ and BiH's National Mine Action Strategy 2018–2025 states that "the key actors believe BiH can fulfil this obligation by the end of the deadline."¹⁰⁴

BHMAC and NPA reported a target of 1km² for CMR technical survey and clearance operations in 2018;¹⁰⁵ 250,000m² for non-technical survey and targeted investigation in partnership with BHMAC; and 250,000m² as direct operational support (mechanical ground preparation) to the demining battalion of the BiH Armed Forces.¹⁰⁶ The actual amount of CMR-contaminated area released by technical survey and clearance in 2018, was 750,821m², and no land was released through non-technical survey, meaning BiH achieved only 75% of planned 2018 land release output.

While BHMAC has stated previously that it does not expect any obstacles in meeting its Article 4 deadline of 1 March 2021,¹⁰⁷ the fact that only a little over 1km² of CMR-contaminated land has been cleared in the last five years (see Table 4) is cause for concern and suggests that BiH may not meet its Article 4 deadline.

Table 4: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (km ²)
2018	0.44
2017	0.27
2016	0.10
2015	0.23
2014	0.26
Total	1.30

Furthermore, according to NPA, inaccuracy of data relating to SHAs contaminated with CMR poses a challenge for BHMAC,¹⁰⁸ complicating land release planning.

However, despite slow and inadequate national land release output over the last five years, NPA still believes its completion strategy for CMR-contaminated areas will enable BiH to meet its Article 4 deadline for CMR clearance of March 2021.¹⁰⁹

- 1 UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015; and Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", No. 01-02-03-10-16-1-1101/16, October 2016, p. 22.
- 2 Email from Ljiljana Ilić, Interpreter, BHMAC, 24 April 2019.
- 3 CCM Article 7 Report (for 2017), Form F.
- 4 Email from Ljiljana Ilić, BHMAC, 24 April 2019.
- 5 Ibid.
- 6 Ibid.
- 7 BiH, National Mine Action Strategy 2018–2025, p. 26.
- 8 According to Article 2(2) of the CCM, "Cluster munition" means a conventional munition that is designed to disperse or release explosive submunitions each weighing less than 20 kilograms, and includes those explosive submunitions" [emphasis added].
- 9 The definition of a cluster munition in Article 2 of the CCM refers to "a conventional munition that is designed to disperse or release explosive submunitions".
- 10 BiH, National Mine Action Strategy 2018–2025, p. 26.
- 11 CCM Article 7 Report (for 2017), Form F.
- 12 Email from Ljiljana Ilić, BHMAC, 22 June 2018.
- 13 BHMAC website, "Mine Action Report in BiH for 2015 approved by the BH Ministry Council", 16 May 2016.
- 14 Statements of BiH, First CCM Review Conference, Dubrovnik, 9 September 2015; and High-level Segment, First CCM Review Conference, 7 September 2015.
- 15 Statement of BiH, High-level Segment, First CCM Review Conference, Dubrovnik, 7 September 2015.
- 16 Email from Ljiljana Ilić, BHMAC, 22 June 2018.
- 17 BHMAC Organisational chart, accessed 28 May 2017 at: <http://bit.ly/2Ycj4xl>.
- 18 The principle of organising BiH state-level bodies along ethnic lines came under scrutiny following the 2009 judgment of the European Court of Human Rights in the *Sejdić and Finci* case that the rights of two Bosnians of Roma and Jewish descent had been violated by being denied the opportunity to run for high-level elected office because they were not of the major ethnic groups. European Court of Human Rights, *Sejdić and Finci v. Bosnia and Herzegovina*, Judgment, 22 December 2009; UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015, p. 22; and BiH, National Mine Action Strategy 2018–2025, pp. 8–9.
- 19 UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015, p. 22.
- 20 Emails from Ljiljana Ilić, BHMAC, 26 June 2018; and Suad Bajlak, UNDP, 27 June 2018.
- 21 UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015, p. 22; and Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", No. 01-02-03-10-16-1-1101/16, 4 November 2016, p. 22.
- 22 Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", 4 November 2016, p. 8.
- 23 Bosnia and Herzegovina Official Gazette, Sarajevo, 17 March 2002.
- 24 BiH, National Mine Action Strategy 2018–2025, p. 8.
- 25 Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", 4 November 2016, p. 23.
- 26 Statement of BiH, APMBC Intersessional meetings, Geneva, 8 June 2017.
- 27 Email from Ljiljana Ilić, BHMAC, 24 April 2019.
- 28 Statement of GICHD, APMBC Intersessional meetings, Geneva, 7 June 2018.

- 29 Emails from Goran Zdrate, BHMIC, 17 May 2017; and Ljiljana Ilić, BHMIC, 24 April 2019.
- 30 Ibid.; and email from Fotini Antonopoulou, EU, 23 July 2018.
- 31 Interview with Tarik Serak, BHMIC, Sarajevo, 10 May 2017; and emails from Fotini Antonopoulou, EU, 19 June 2017; and Suad Baljak, UNDP, 15 June 2017; and UNDP BiH, "Mine Action Board of Donors Meeting", 31 March 2016, at: <http://bit.ly/300f4lp>.
- 32 Interviews with Haris Lokvancic, Advisor on Political Affairs, Programme Officer – Human Security/Justice, Swiss Embassy, Sarajevo, 9 May 2017; Fotini Antonopoulou, EU, Sarajevo, 10 May 2017; and Lt.-Col. Martin Herrmann, Defence Attaché to Bosnia and Herzegovina and Kosovo, German Embassy, Sarajevo, 10 May 2017.
- 33 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 34 BiH, National Mine Action Strategy 2018–2025, p. 20.
- 35 Interview with Tarik Serak, BHMIC, Sarajevo, 10 May 2017.
- 36 Interview with Blažen Kovač, Ministry of Defence, and Chair of the Demining Commission, Sarajevo, 10 May 2017; and email from Kathy Keary, Country Director, Mines Advisory Group (MAG), 31 August 2018.
- 37 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 38 BiH, National Mine Action Strategy 2018–2025, pp. 1 and 19–20.
- 39 BiH, Financial Plan for Implementation of the BiH Mine Action Strategy 2018–25, pp. 6–7.
- 40 Ibid.
- 41 BiH, National Mine Action Strategy 2018–2025, p. 14.
- 42 Ibid.
- 43 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 44 Ibid.
- 45 Email from Goran Šehić, Deputy Programme Manager, NPA, 25 February 2019.
- 46 Ibid.
- 47 Email from Jonas Zachrisson, Country Director, NPA, 5 June 2019.
- 48 Emails from Ljiljana Ilić, BHMIC, 24 April 2019; and Goran Šehić, NPA, 25 February 2019; and BiH, National Mine Action Strategy 2018–2025, p. 52.
- 49 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 50 Email from Goran Šehić, NPA, 25 February 2019.
- 51 Ibid.
- 52 BiH, National Mine Action Strategy 2018–2025, pp. 1 and 16–18.
- 53 "BiH Statement on Interim Request for Extension to the Deadline for Fulfilling Obligations as per Article 5" [APMBC], Geneva, 7 June 2018; and 2018 APMBC Article 5 deadline Extension Request, pp. 7 and 23.
- 54 Statement of GICHD, APMBC Intersessional meetings, Geneva, 7 June 2018.
- 55 Emails from Ljiljana Ilić, BHMIC, 24 April 2019; and Suad Baljak, UNDP, 10 June 2019.
- 56 BHMIC website, "Bosnia and Herzegovina Mine Action Strategy 2019–2025 adopted by the Council of Ministers", available at: <https://bit.ly/2VnPNdj>
- 57 BiH, National Mine Action Strategy 2018–2025, p. 26.
- 58 Statements of BiH, APMBC Thirteenth Meeting of States Parties, Geneva, 5 December 2013 and APMBC Fourteenth Meeting of States Parties, Geneva, 18 December 2015; BHMIC, "Revision of Mine Action Strategy in Bosnia and Herzegovina 2009–2019 (First Revision 2012)", 14 March 2013; UNDP, "Draft Mine Action Governance and Management Assessment for Bosnia and Herzegovina", 13 May 2015, p. 17; Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", p. 25; and emails from Tarik Serak, BHMIC, 26 May 2016; and Goran Zdrate, BHMIC, 17 May 2017.
- 59 Interview with Åsa Massleberg, Advisor, Strategic Management, GICHD, Geneva, 9 March 2017; emails from Goran Zdrate, BHMIC, 17 May 2017; and Anna-Lena Schluchter, containing information from Åsa Massleberg, GICHD, 20 and 29 June 2017; Statement of BiH, APMBC Intersessional meetings, Geneva, 8 June 2017; BHMIC website, "From 7 till 11 November a workshop on National Mine Action Strategy and prioritisation is being held", 7 November 2016, and "Workshop on 'Revision of Mine Action Strategy 2009–2019' held in Sarajevo", 17 February 2017.
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- 61 Ibid., p. 34.
- 62 Ibid., p. 33.
- 63 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 64 Ibid.
- 65 Ibid.
- 66 Email from Goran Šehić, NPA, 25 February 2019.
- 67 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 68 BHMIC, "Report on Mine Action in BiH for 2016", February 2017, p. 18; and Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", No. 01-02-03-10-16-1-1101/16, October 2016, p. 26; BHMIC, "Adoption of three new chapters of Mine Action Standard for land release, the new approach for solving the mine problem", 28 January 2016; and email from Fotini Antonopoulou, EU, 18 September 2017.
- 69 Interview with Saša Obradovic, BHMIC, Sarajevo, 10 May 2017.
- 70 Emails from Darvin Lisica, NPA, 11 August 2015, and Tarik Serak, BHMIC, 26 May 2016; and Statement of BiH, First CCM Review Conference, Dubrovnik, 9 September 2015.
- 71 Email from Goran Šehić, NPA, 25 February 2019.
- 72 Email from Suad Baljak, UNDP, 10 June 2019.
- 73 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 74 Ibid.
- 75 Email from Goran Šehić, NPA, 25 February 2019.
- 76 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 77 Ibid.
- 78 Email from Suad Baljak, UNDP, 27 June 2018.
- 79 Interview with Blažen Kovač, Ministry of Defence, Chair of the Demining Commission, Sarajevo, 10 May 2017; and email from Fotini Antonopoulou, EU, 23 July 2018.
- 80 Email from Ljiljana Ilić, BHMIC, 14 June 2019.
- 81 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 82 UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015, p. 29; and interviews with Darvin Lisica, NPA, Sarajevo, 8 May 2017; Haris Lokvancic, Swiss Embassy, Sarajevo, 9 May 2017; and Tarik Serak, BHMIC, Sarajevo, 10 May 2017.
- 83 Interview with Lt.-Col. Dzevad Zenunovic, Demining Battalion of the Armed Forces of BiH, Sarajevo, 10 May 2017; and email from Goran Šehić, NPA, 30 March 2018.
- 84 Interview with Lt.-Col. Dzevad Zenunovic, Demining Battalion of the Armed Forces of BiH, Sarajevo, 10 May 2017.
- 85 Email from Goran Šehić, NPA, 25 February 2019.
- 86 Ibid.
- 87 Ibid.
- 88 Emails from Ljiljana Ilić, BHMIC, 24 April 2019; and Goran Šehić, NPA, 25 February 2019.
- 89 Statement of BiH, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.
- 90 Email from Amela Balic, NPA Bosnia, 15 April 2015.
- 91 Email from Goran Zdrate, BHMIC, 17 May 2017.
- 92 Email from Jonas Zachrisson, NPA, 5 June 2019.
- 93 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 94 Ibid.
- 95 CCM Article 7 Report (for 2017), Form F. Information on BiH's Article 7 report is, however, a little unclear, stating in supplementary information, that "Technical survey and cluster munition were reduced and clearance through 15 tasks 863,066m², were 632 pieces of submunition and 26 pieces of ERW." BHMIC subsequently confirmed that 863,066m² refers to the total land released through clearance and technical survey, and that of this, 267,772m² was released through clearance and 595,294m² through technical survey. Email from Ljiljana Ilić, BHMIC, 26 June 2018.
- 96 Ibid. There was a very small discrepancy in the amount of NPA reported as reduced in Neretva Canton (67,600m²) compared to the 67,854m² reported for NPA by BHMIC. Email from Goran Šehić, NPA, 25 February 2019.
- 97 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 98 CCM Article 7 Report (for 2017), Form F; and email from Ljiljana Ilić, BHMIC, 22 June 2018.
- 99 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 100 Ibid.; and email from Goran Šehić, NPA, 25 February 2019.
- 101 Email from Ljiljana Ilić, BHMIC, 24 April 2019.
- 102 Ibid.
- 103 Ibid.

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- 104 BiH, National Mine Action Strategy 2018–2025, p. 11.
- 105 Emails from Goran Šehić, NPA, 30 March 2018; and Ljiljana Ilić, BHMAC, 24 April 2019.
- 106 Emails from Goran Šehić, NPA, 30 March 2018; and Jonas Zachrisson, NPA, 5 June 2019.
- 107 Email from Goran Zdrate, BHMAC, 17 May 2017.
- 108 Email from Goran Šehić, NPA, 25 February 2019.
- 109 Ibid.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 SEPTEMBER 2023
NOT ON TRACK TO MEET DEADLINE

KEY DATA

**CLUSTER MUNITION
CONTAMINATION:
UNKNOWN, PROBABLY LIGHT**

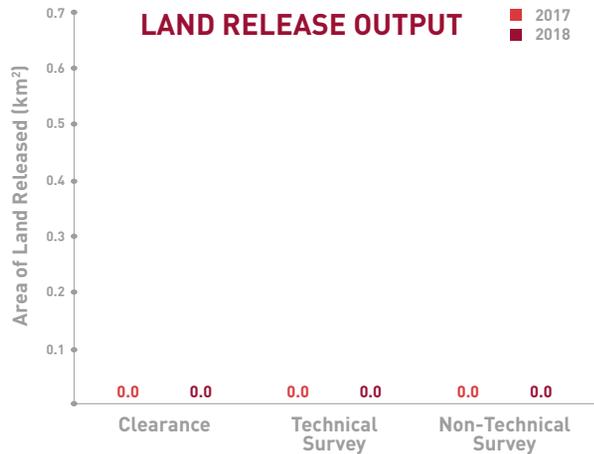
SUBMUNITION
CLEARANCE IN 2018

0 KM²

SUBMUNITIONS
DESTROYED IN 2018

0

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

A European Union (EU)-funded project supported survey and clearance of explosive remnants of war (ERW) and work to improve the national mine action database but no activity focused on cluster munition remnants (CMR) took place.

RECOMMENDATIONS FOR ACTION

- Chad should draw up a workplan providing for survey of ERW, including cluster munitions, particularly in the Borkou and Tibesti regions.
- Chad should introduce national standards specific to survey and clearance of cluster munitions.
- The Haut Commissariat National de Déminage (HCND) should report at least annually on mine action sector activities.
- Chad's Ministry of Economy and Planning should develop a resource mobilisation strategy for the mine action sector.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	3	Chad suspects cluster munition remnants (CMR) remain but has not conducted survey and cannot yet identify any hazardous areas.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	3	One of the world's poorest countries, Chad has committed little funding to mine action.
GENDER (10% of overall score)	4	National plans have made no reference to gender but women are employed in a number of roles, mainly in risk education and victim assistance.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	3	Lack of information management skills and funding shortages have limited needed data repair and database improvement.
PLANNING AND TASKING (10% of overall score)	3	The HCND has no plans for CMR survey or clearance.
LAND RELEASE SYSTEM (20% of overall score)	5	Chad has International Mine Action Standards (IMAS)-compatible national standards but none specific to CMR survey or clearance.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	2	No CMR clearance has been conducted in the past five years.
Average score	3.3	Overall programme performance: VERY POOR

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Haut Commissariat National de Déminage (HCND)

NATIONAL OPERATORS

- HCND

INTERNATIONAL OPERATORS

- Humanity and Inclusion (HI)
- Mines Advisory Group (MAG)
- Swiss Foundation for Mine Action (FSD)

OTHER ACTORS

- None

UNDERSTANDING OF CMR CONTAMINATION

The extent of Chad's CMR contamination is unknown. Some cluster bomb containers spotted in the Wouda area of Borkou in March 2019¹ were the first items reported since 2015. In that year, Mine Advisory Group (MAG) identified and destroyed a limited number of CMR, including two empty RBK-250-275 cluster bomb containers in the Tibesti region and an AO-1-SCh submunition in the Borkou region.² In January 2015, four children (three girls and one boy) were reportedly injured after handling a submunition in Faya Largeau.³

Unexploded submunitions and cluster munition containers dating from Libya's conflicts with Chad between 1978 and 1987 were found in the three northern provinces of Borkou, Ennedi, and Tibesti; in the Biltine department in Wadi Fira region in the north-east; and east of the capital, N'Djamena. MAG found unexploded Soviet anti-tank PTAB-1.5 submunitions in 2011 during survey in an area close to Faya Largeau.⁴

Chad stated in 2012 that while the precise extent of CMR contamination was not known, it was certain cluster munitions had been used in the Fada region and highly likely they had been used in other parts of the north.⁵ Chad also reported that, after Libyan troops withdrew in 1987, members of the French Sixth Engineers Regiment found and destroyed CMR around former Libyan positions and it suspected there was additional contamination in the Tibesti region.⁶

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Chad has more than 100km² of mine and ERW contamination resulting from the 1973 Libyan invasion and more than 30 years of internal conflict (see Mine Action Review's *Clearing the Mines* report on Chad for further information on the mine problem).⁷

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Chad's mine action programme is coordinated by the HCND which comes under the Ministry of Economy and Development Planning.⁸ The National Demining Centre (Centre National de Déminage, CND), which earlier conducted clearance operations, appears to have been dissolved. In July 2017, nine years after the government first ordered HCND to restructure, a new government decree reduced the number of personnel by more than half from 744 to 329. At the end of 2018, it had 324 staff.⁹

The HCND is responsible for preparing a national demining strategy, annual workplans, and proposing a budget to support them.¹⁰ Chad's mine action programme does not currently have a national mine action strategy. Government funding for mine action is limited to payment of salaries for national staff.¹¹ Threats by former deminers over non-payment of salaries prevented some planned survey and clearance activities from proceeding in 2018.¹²

The EU is the principal source of international funding for mine action in Chad. A two-year EU-funded project (Projet d'appui au secteur du déminage au Tchad, PADEMIN) involving capacity development for HCND and survey and clearance of mines and ERW in the Boukou, Ennedi, and Tibesti (BET) region ended in 2016.¹³ In September 2017, the EU agreed to support a new four-year mine action project, PRODECO, from 2017 to 2021 at a projected cost of €23 million providing for survey and clearance by international operators Humanity and Inclusion (HI) and MAG in the BET region and for further training and capacity building for HCND by the Swiss Foundation for Mine Action (FSD), including in information management.¹⁴

GENDER

National plans set out in Chad's Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline Extension Request of April 2019 make no reference to gender but the HCND and international partners report gender issues are "taken into account" and that women are employed in mine action in a number of administrative and technical roles. HCND reported in May 2019 that one female member of staff who was already explosive ordnance disposal (EOD) Level 2 qualified was undergoing training for EOD Level 3.¹⁵

INFORMATION MANAGEMENT AND REPORTING

The HCND operates an Information Management System for Mine Action (IMSMA) database but acknowledges the quality of much of the information is poor and it lacks technical skills. Under the EU-funded PRODECO project, FSD is building HCND capacity, particularly in information management, and is helping to clean up the IMSMA database. The HCND acquired internet access in September 2018, facilitating communication and reporting by implementing partners.¹⁶

PLANNING AND TASKING

Chad does not have a strategic plan for cluster munitions. A national mine action plan for 2014–19, prepared with United Nations Development Programme (UNDP) support, notes that Chad adhered to the CCM but does not detail plans to clear CMR.¹⁷

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Chad has national mine action standards that are International Mine Action Standard (IMAS)-compliant but has no CMR-specific standards.

OPERATORS

The HCND is Chad's biggest operator. International NGOs operating in 2018 included FSD, HI, and MAG, but none was active in cluster munitions survey or clearance in 2018.

OPERATIONAL TOOLS

Only manual clearance is conducted in Chad.

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

Chad did not release any cluster munition-contaminated area in 2018.¹⁸

SURVEY IN 2018

Chad did not report any survey in 2018.¹⁹

CLEARANCE IN 2018

Chad did not release any land through clearance in 2018.²⁰

ARTICLE 4 DEADLINE AND COMPLIANCE

**CCM ENTRY INTO FORCE
FOR CHAD: 1 SEPTEMBER 2013**

ARTICLE 4 DEADLINE: 1 SEPTEMBER 2023

ON TRACK TO MEET ARTICLE 4 DEADLINE: NO

By not conducting any survey to determine the extent of CMR contamination Chad is not compliant with the CCM. The absence of any contamination data prevents a conclusive determination as to whether it will meet its Article 4 deadline, but based on current progress it is not on track.

Table 1: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (m ²)
2018	0
2017	0
2016	0
2015	0
2014	0
Total	0

1 Email from Souttani Moussa, Manager/Administrator, National High Commission for Demining (HCND), 14 May 2019.
 2 CCM Article 7 Report (for 2015), Form F; and email from Llewelyn Jones, Director of Programmes, MAG, 31 May 2016.
 3 CCM Article 7 Report (for 2015), Form H.
 4 Emails from Liebeschitz Rodolphe, United Nations Development Programme (UNDP), 21 February 2011; and Bruno Bouchardy, MAG Chad, 11 March 2011.
 5 Statement of Chad, CCM Third Meeting of States Parties, Oslo, 13 September 2012.
 6 CCM Article 7 Report (for 2013), Form F.
 7 Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline Extension Request, April 2019, p. 20.
 8 Ibid.
 9 Emails from Souttani Moussa, HCND, 19 June and 3 July 2018 and 14 May 2019.

10 APMBC Article 5 deadline Extension Request, April 2019, p.
 11 Email from Souttani Moussa, HCND, 14 May 2019.
 12 Email from Romain Coupez, Country Director, MAG, 4 March 2019.
 13 Email from Romain Coupez, MAG, 3 May 2017.
 14 HI "Country Profile Chad", September 2017, at: <http://bit.ly/2LWNxhP>.
 15 Emails from Souttani Moussa, HCND, 14 May 2019; and Romain Coupez, MAG, 4 March 2019.
 16 APMBC Article 5 deadline Extension Request, April 2019, p. 30.
 17 HCND, Mine Action Plan 2014–2019, May 2014, p. 4.
 18 Email from Souttani Moussa, HCND, 14 May 2019.
 19 Ibid.
 20 Ibid.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 JUNE 2021
NOT ON TRACK TO MEET DEADLINE

KEY DATA

**CLUSTER MUNITION
CONTAMINATION: MEDIUM**

96.9 KM²

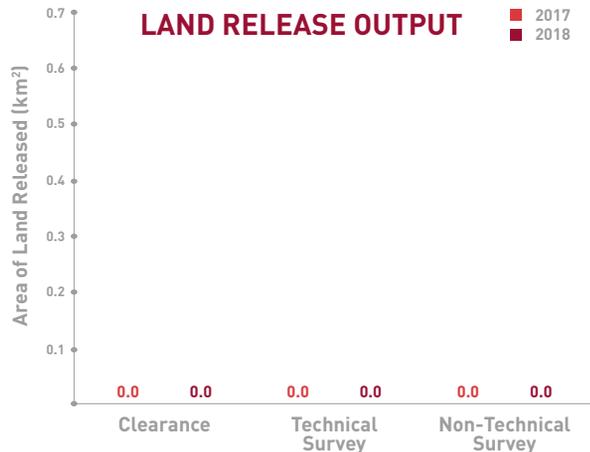
SUBMUNITION
CLEARANCE IN 2018

0 KM²

SUBMUNITIONS
DESTROYED IN 2018

0

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

Chile did not conduct any survey or clearance of its cluster munition remnant (CMR)-contaminated areas in 2018. While it is a positive development that Chile will begin non-technical survey of CMR-contaminated areas in 2019, Chile has so far failed to meet its obligations under the Convention on Cluster Munitions (CCM), and roles and responsibilities at national level are not yet clear. Although Chile is currently focusing on completing clearance of mined areas it should ensure that this is not at the expense of CMR clearance, which is also an international legal obligation.

RECOMMENDATIONS FOR ACTION

- Chile should submit an action plan to the CCM for the conduct and completion of CMR survey and clearance.
- Chile should ensure that it dedicates sufficient resources to complete CMR clearance within its CCM Article 4 deadline of June 2021.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	3	There is no change in Chile's understanding of CMR contamination from 2017. Chile has not conducted any survey of the suspected area so a more precise estimate is not available, though survey is planned for 2019. The contamination figure is likely an overestimate as it exceeds the total area of cluster munition use and some clearance has been carried out by the military.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	3	The Division of International Relations of the Undersecretary of Defence manages CMR survey and clearance, but there is a lack of engagement from this division to address CMR. It is expected that the National Demining Commission (CNAD), which currently manages mine survey and clearance, will assume responsibility for Chile's obligations under the CCM by the end of 2019. Chile carries out and funds all of its own mine action activities.
GENDER (10% of overall score)	6	Chile has taken steps to mainstream gender across the armed forces with women working at all levels of the mine action programme. Chile should take the next steps and formulate a mine action-specific gender policy.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	6	Chile uses the IMSMA database which it updated in 2017. Chile has submitted Article 7 reports annually since 2012 and provided an update at the Eighth Meeting of States Parties to the CCM, but more detail on the plans for CMR survey and clearance should be provided.
PLANNING AND TASKING (10% of overall score)	3	Chile has a National Plan for Demining and Clearing Military Polygons 2020–2026 that includes goals for CMR survey and clearance. For the first time, Chile included plans for CMR survey in its CCM Article 7 report for 2018 but has yet to elaborate detailed plans for completion of clearance of CMR.
LAND RELEASE SYSTEM (20% of overall score)	5	Chile is guided by the International Mine Action Standards (IMAS). All survey and clearance is undertaken by the military with both machines and dogs used during operations. However, none of this capacity is currently being deployed for CMR survey or clearance.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	2	No CMR survey or clearance again took place in 2018. Although survey is due to take place in 2019, Chile is not planning to deploy its assets for clearance until completion of anti-personnel mine clearance on 1 March 2020. This will leave Chile with just over a year to complete CMR clearance the extent of which is currently unclear but is expected to be significant.
Average score	3.8	Overall programme performance: VERY POOR

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Division of International Relations, Undersecretary of Defence (Subsecretaría de Defensa, División de Relaciones Internacionales)
- National Demining Commission (Comisión Nacional de Desminado, CNAD)

NATIONAL OPERATORS

- Army Corps of Engineers
- Navy Peace and Demining Division

INTERNATIONAL OPERATORS

- None

OTHER ACTORS

- None

UNDERSTANDING OF CMR CONTAMINATION

Chile has reported almost 97km² of CMR-contaminated area in three of its fifteen regions (see Table 1).

Contamination is the consequence of deployment of cluster munitions on military training ranges. Since the reported extent represents the total area of military land used for training, and cluster munitions were only deployed in the impact areas or target areas, it is very likely that the actual extent of the contamination is significantly smaller. Chile has reported that according to military procedure, clearance of submunitions or other unexploded ordnance (UXO) present in these areas has been conducted after use so it is unclear how much CMR contamination remains. The contaminated areas remain within military enclosures so are inaccessible to the public. In Arica and Parinacota, MK-II LAR 160 cluster munition rockets were used, while in Tarapacá and Magallanes and Antártica Chilena CB-250K cluster bombs were dropped.¹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Chile is also affected, to a limited extent, by other UXO, and has some 4.45km² of mined area still to release (see Mine Action Review's *Clearing the Mines* report on Chile for further information).²

Table 1: Suspected CMR contamination (at March 2019)³

Province	SHAs	Area (km ²)	Cluster munitions dropped
Arica and Parinacota	1	33.71	608
Tarapacá	2	56.65	20
Magallanes and Antártica Chilena	1	6.52	20
Totals	4	96.88	648

SHAs = Suspected hazardous areas

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The national mine action programme is managed by the National Demining Commission (Comisión Nacional de Desminado, CNAD), which is chaired by the Minister of Defence. Chile's obligations under the CCM are the responsibility of the Division of International Relations of the Undersecretary of Defence.⁴ Chile considers Law No. 17,798 on Arms Control, which includes penal sanctions, as sufficient to implement the CCM.⁵

Following a meeting held in March 2019, CNAD, through a national decree due to be signed into law by December 2019, will assume responsibility for implementing

Chile's obligations under the CCM and Protocols II and V of the Convention on Certain Conventional Weapons (CCW). Until this decree is promulgated, responsibility for CMR will remain under the Division of International Relations of the Undersecretary of Defence.⁶

Chile is funding all its survey and clearance operations. For 2019, it earmarked almost US\$200,000 dollars for explosive ordnance disposal (EOD) training and just under \$12,000 for non-technical survey of CMR-contaminated areas.⁷

GENDER

While there is no specific gender policy within CNAD, Chile's policy of integrating women into the armed forces has been in place since 2000. As at May 2019, 14.4% of total armed forces personnel were female. In 2016, restrictions on the type of military positions a woman could hold were lifted and legislation was adopted which modified the military grading system allowing women to be promoted in the same way as men. Women have been working in demining in Chile since 2004 across all types of roles, including as deminers and in managerial/

supervisory roles. In 2007, the first woman was appointed as Manual Demining Section Commander in Arica province and then, in May 2018, a woman was appointed as Demining Company Commander, also in Arica. Chile has made provisions to make it easier for women to work in the sector by, for example, adapting demining equipment to better suit female specifications, providing childcare and eliminating the gender wage gap.⁸

INFORMATION MANAGEMENT AND REPORTING

CNAD is responsible for Chile's mine action information management. Since 2003, Chile has been using the Information Management System for Mine Action (IMSMA). During 2017, Chile upgraded to Version 6 of IMSMA after starting the MARS (Mine Action Reporting System) application that replaced IMSMA Mobile. This application has equipped Chile with high-quality geographic information to support decision-making around survey and clearance.⁹

Chile has submitted its CCM Article 7 transparency report every year since 2012. However, this is the first time Chile has provided information on plans for survey and clearance of CMR. Chile gave a statement on Article 4 compliance at the Eighth Meeting of States Parties in 2018, reporting plans to complete survey and clearance of CMR contamination in order to meet its Article 4 deadline.¹⁰

PLANNING AND TASKING

The National Plan for Humanitarian Demining 2016–20 was formulated in accordance with the request of the Anti-Personnel Mine Ban Convention (APMBC) Eleventh Meeting of the States Parties (11MSP) that Chile provide updates relative to the timelines presented in its 2011 extension request.¹¹ The main objective of the plan is to eliminate all existing anti-personnel mines on national territory by the March 2020 deadline.¹² The National Plan for Demining and Clearing Military Polygons 2020–2026 includes a set of provisions to comply with Chile's obligations under the CCM, the APMBC, and the Convention on Certain Conventional Weapons. The plan is aimed at the implementing partners within the armed forces and government agencies.¹³

Chile is currently deploying all demining units for survey and clearance of its remaining mined areas. Chile is working to complete clearance of anti-personnel mines

by its APMBC Article 5 deadline of 1 March 2020. Once this demining is complete Chile has undertaken to strengthen and deploy its existing capacity to complete technical survey and clearance of CMR-contaminated areas. In 2019, Chile planned to train 41 personnel in EOD and conduct non-technical survey of the areas suspected to contain CMR.¹⁴ Information for the non-technical survey will be derived from a desk assessment of military records of cluster bomb deployment and subsequent clearance.¹⁵

Chile had a workplan for 2018, the National Directive for the Execution of Demining Activities, but it did not include any CMR survey or clearance.¹⁶ In its 2019 workplan, the National Directive for the Execution of Demining Activities, included plans for non-technical survey of CMR-contaminated areas.¹⁷

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Chile is guided by the international mine action standards (IMAS).¹⁸ It first developed a joint demining manual for its armed forces in 2009, which includes procedures for destruction of UXO.¹⁹ As at June 2019, the Armed Forces Manual of Humanitarian Demining and Clearance of Explosive Remnants of War was awaiting final approval.²⁰

OPERATORS

Mine clearance in Chile is conducted by the Army Corps of Engineers and the Navy Peace and Demining Division. In 2017, Chile deployed seven manual demining teams with a total of 207 deminers.²¹ No teams are currently being deployed for survey or clearance of CMR.

OPERATIONAL TOOLS

Mechanical resources are used for mine clearance in Chile.²² In 2018, Chile used explosive detection dogs for the first time to carry out quality control of an area that had been cleared using machines.²³

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

No CMR survey or clearance took place in 2018 or in 2017, calling into serious question Chile's compliance with its international legal obligations under the CCM.

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR CHILE: 1 JUNE 2011

ARTICLE 4 DEADLINE: 1 JUNE 2021

ON TRACK TO MEET ARTICLE 4 DEADLINE: NO

Table 2: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (m ²)
2018	0
2017	0
2016	0
2015	0
2014	0
Total	0

Chile is not on target to meet its Article 4 deadline. As in previous years, Chile failed to conduct any survey or clearance of its CMR-contaminated areas in 2018. Chile is currently focusing on survey and clearance of anti-personnel mine contamination. It will begin clearance of CMR once this is complete in March 2020, but this will leave Chile with just over a year to complete CMR clearance. Chile intends to request an extension to its Article 4 deadline. However, as the Division of International Relations of the Undersecretary of Defence is not engaged in planning for CMR survey and clearance and responsibility has yet to be reassigned to CNAD, as at May 2019, it is unclear exactly how these activities will be conducted.²⁴

- 1 CCM Article 7 Report (for 1 May 2018 to 30 March 2019), Form F.
- 2 Anti-Personnel Mine Ban Convention (APMBC) Article 7 Report (for 2018), Form F.
- 3 Ibid. Chile has reported the number of cluster munitions that were launched in these areas but the number of CMR is unknown.
- 4 Email from Pamela Moraga, Disarmament Affairs, Non-Proliferation and International Security Coordinator, Permanent Mission of Chile to the United Nations Office in Geneva, 19 September 2018.
- 5 CCM Country Profile Chile, 30 April 2019, at: <http://bit.ly/2YpSUHN>
- 6 Interview with Col. Andres Caceres Cuadra, Executive Secretary, CNAD; and Pamela Morega, Permanent Mission of Chile to the United Nations Office in Geneva, 23 May 2019; and email from Col. Juan José López Demuth, Executive Secretary, CNAD, 22 June 2019.
- 7 APMBC Article 7 Report (for 2018), Form I.
- 8 Statement from Chile during the Thematic Discussion on Integrating Gender into Mine Action, APMBC Intersessionals, 23 May 2019; and emails from Col. Juan José López Demuth, Executive Secretary, CNAD, 22 and 27 June 2019.
- 9 Ibid.
- 10 Statement on Article 4 Compliance, Eighth meeting of State Parties of the Convention of Cluster Munitions, 3-5 September 2018.
- 11 Decisions on the request submitted by Chile for an extension of the deadline for completing the destruction of anti-personnel mines in accordance with Article 5 of the APMBC, 11MSP, 2 December 2011.
- 12 Email from Col. Andres Caceres Cuadra, CNAD, 12 July 2018.
- 13 Email from Col. Juan José López Demuth, Executive Secretary, CNAD, 27 June 2019.
- 14 CCM Article 7 Report (for 1 May 2018 to 30 March 2019), Form F.
- 15 Interview with Col. Andres Caceres Cuadra, Executive Secretary, CNAD; and Pamela Morega, Permanent Mission of Chile to the United Nations Office in Geneva, 23 May 2019.
- 16 APMBC Article 7 Report (for 2018), Form A.
- 17 Email from Col. Juan José López Demuth, Executive Secretary, CNAD, 22 June 2019.
- 18 APMBC Article 7 Report (for 2018), Form F.
- 19 Manual No. MDO-90402. CCM Article 7 Report (for 2015), Form F2.1.
- 20 Email from Col. Juan José López Demuth, Executive Secretary, CNAD, 27 June 2019.
- 21 Email from Col. Andres Caceres Cuadra, CNAD, 12 July 2018.
- 22 APMBC Article 7 Report (for 2018), Form F.
- 23 CNAD, "Desminado Canino", 27 December 2018, at: <http://bit.ly/2VcPHwb>.
- 24 Interview with Col. Andres Caceres Cuadra, Executive Secretary, CNAD; and Pamela Morega, Permanent Mission of Chile to the United Nations Office in Geneva, 23 May 2019.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 AUGUST 2020
ON TRACK TO MEET DEADLINE

KEY DATA

CLUSTER MUNITION CONTAMINATION: LIGHT

CONFIRMED
HAZARDOUS AREA

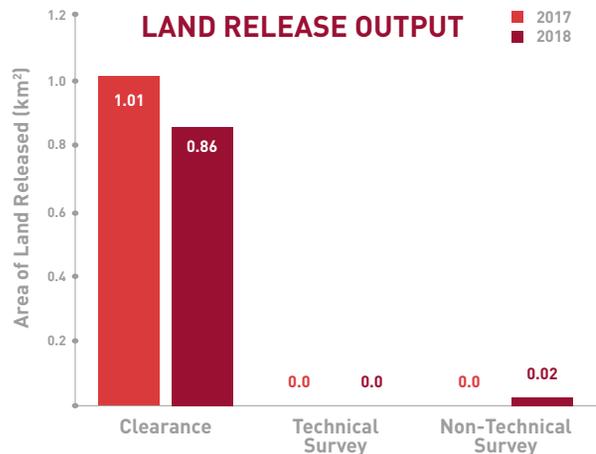
<0.27 km²

SUBMUNITION
CLEARANCE IN 2018

0.86 km²

SUBMUNITIONS
DESTROYED IN 2018

578



KEY DEVELOPMENTS

Croatia continued to make progress in the clearance of cluster munition remnants (CMR) in 2018, despite a small drop in clearance output compared to the previous year. Although Croatia did not complete CMR clearance by the end of 2018, as had previously been planned, it reported that it remains committed to meeting its obligations under Article 4 of the Convention on Cluster Munitions (CCM) in advance of its clearance deadline, and has maintained dedicated national funding and political commitment to achieve this. At the beginning of 2019, the Croatian Mine Action Centre (CROMAC) and the government Office for Mine Action (OMA) were integrated within the Ministry of Interior, but Croatia does not expect this internal restructuring to impact its implementation of Article 4.

RECOMMENDATIONS FOR ACTION

- Croatia should complete clearance of CMR before its Article 4 deadline of 1 March 2020.
- Croatia should ensure that sustainable capacity and systems are in place to address any residual risk from CMR that may arise following fulfilment of its Article 4 obligations.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	8	Croatia has a good understanding of its remaining four confirmed hazardous areas (CHAs) containing CMR. However, areas of previously unrecorded CMR contamination continue to be discovered and Croatia recognises the importance of managing the residual risk associated with previously unknown CMR.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	9	There is strong national ownership of mine action in Croatia, including a national commitment and funding to complete Article 4 clearance ahead of the August 2020 deadline. In January 2019, CROMAC and the OMA were integrated within the Ministry of Interior, but this is not expected to impact Article 4 implementation.
GENDER (10% of overall score)	5	Gender policies and implementation regarding mine action in Croatia are addressed under the national Gender Equality Act, which includes guidelines of gender equality and regulates against gender-based discrimination. However, it is hard to determine the extent to which this is mainstreamed and implemented with regards to mine action specifically.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	9	Croatia has an information management system that is compliant with international mine action standards (IMAS) and permits the disaggregation of contamination type and land release method. Croatia provides regular updates on its progress in Article 4 implementation at CCM meetings.
PLANNING AND TASKING (10% of overall score)	9	Croatia has a national mine action strategy which expires in 2019, in addition to annual operational workplans for CMR survey and clearance, which are approved by responsible state ministries and other state bodies. Elaboration of a new national mine action strategy now falls to the responsibility of Ministry of Interior, and may be part of a nationwide strategy or the national programme of the Civil Protection Directorate. Croatia is planning how it will deal with residual risk and liability, after completion of CMR clearance.
LAND RELEASE SYSTEM (20% of overall score)	7	The 2015 law on mine action incorporates developments from the latest IMAS, and encompasses national mine action standards. CMR clearance in Croatia is focused on CHAs and it is reported there is sufficient survey and clearance capacity, deploying an appropriate range of assets, to address CMR contamination.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	8	Croatia did not complete CMR clearance in 2018, as previously expected. Croatia has reiterated its commitment to fulfilling its Article 4 obligations prior to its deadline of 1 August 2020. National authorities report that there is sufficient funding and capacity in place to meet the clearance deadline.
Average score	7.8	Overall programme performance: GOOD

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Ministry of Interior, in which the Croatian Mine Action Centre (CROMAC) and the government Office for Mine Action (OMA) were integrated at the beginning of January 2019

NATIONAL OPERATORS

- Forty commercial demining companies are accredited for mine and CMR clearance operations. Of these, four were engaged in CMR clearance operations in 2018: Harpija, Istraživač, Titan, and Zeleni kvadrat

INTERNATIONAL OPERATORS

- None

OTHER ACTORS

- None

UNDERSTANDING OF CMR CONTAMINATION

At the end of 2018, Croatia had four confirmed hazardous areas (CHAs) containing CMR, covering a total area of less than 0.27km², across four counties (see Table 1).¹ This compares to reported contamination a year earlier of more than 1.05km².²

While almost 0.88km² of CMR-contaminated area was released by survey and clearance in 2018, just under 0.09km² of previously unrecorded CMR contamination was added to the database in 2018 (around half in Sisak-Moslavina county and the remainder in Zadar county).³

According to the national authority, Croatia's CMR contamination database has been established "as accurately and proficiently as possible", and is in line with relevant national legislation and mine action standards. However, small areas of previously unrecorded CMR contamination continue to be discovered and Croatia recognises the possibility of further unforeseen CMR findings.⁴

Table 1: CMR contamination by county (at end 2018)⁵

County	CHAs	Area (m ²)
Lika-Senj	1	198,385
Zadar	1	2,576
Šibenik-Knin	1	19,551
Sisak-Moslavina	1	45,604
Totals	4	266,116

Croatia was contaminated with unexploded KB-1 and Mk-1 submunitions by the conflicts in the 1990s that followed the break-up of the Socialist Federal Republic of Yugoslavia.⁶

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Croatia is heavily contaminated by unexploded ordnance (UXO) other than submunitions and by anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Croatia for further information on the mine problem).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

In August 2018, the Croatian government formally concluded that some 54 government agencies, including CROMAC and the government OMA, were to be integrated within existing state administration bodies. This was formally concluded through two pieces of legislation enacted in December 2018 and which entered into force on 1 January 2019.⁷ As a consequence of these laws, CROMAC and OMA ceased to exist as separate government entities from 1 January 2019 and have been integrated into the Ministry of Interior.⁸

Prior to 2019, both CROMAC (established in 1998 as the umbrella organisation for mine action coordination),⁹ and the government OMA (created in 2012 as a government focal point for mine action),¹⁰ had operated as a separate entities.

A new law on mine action was adopted by the Croatian Parliament on 21 October 2015.¹¹ While the 2015 Law, which was initiated by the OMA with the text drafted by the Ministry of Interior, marked an improvement in certain respects (for instance, by permitting land release through technical survey), there were concerns from mine action experts and professionals with significant experience in the field [e.g. CROMAC staff and deminers], that overall the new law is impractical to implement in the field, and impedes efficient and effective mine action in certain aspects.¹²

Under the new law, authorised CROMAC staff no longer have the authority to review personnel and technical equipment prior to and during demining operations. This now falls under the responsibility of the Ministry of Interior, in addition to the fact that all demining equipment used must be certified and demining companies accredited.¹³ CROMAC only undertakes quality control (QC) of executed demining operations.¹⁴ In addition, CROMAC no longer has responsibility for investigating demining accidents. This responsibility now lies with the State Attorney, under the oversight of the Ministry of Interior, rather than with the body with the requisite technical expertise. CROMAC only receives accident report summaries from the Ministry.¹⁵

Under the 2015 law, the Ministry of Interior assesses authorised legal entities for conducting demining; this was formerly CROMAC's responsibility.¹⁶ Regarding accreditation, the Ministry of Interior now provides three separate permits: approval for manual mine detection, approval for mechanical mine detection, and approval for operations by mine and UXO detection dogs. This replaces the former unified accreditation licence.¹⁷

In 2018, some 2.2% of total funds (approximately €1.16 million) available for demining activities were spent on survey and clearance of CMR-contaminated area. Funding for CMR land release operations is said to have been fully resourced in Croatia's annual demining plan.¹⁸

GENDER

As an integral part of the Ministry of Interior, the Civil Protection Directorate implements the Gender Equality Act (Official Gazette 82/08 and 69/17), which establishes national guidelines for gender equality, regulates against gender-based discrimination, and creates equal opportunities for men and women, including with regards to employment.¹⁹

According to the national authorities, all groups, including women, men, boys and girls, are consulted during survey and community liaison.²⁰

No information was available from the national authorities on the proportion of women employed in operational roles in survey and clearance teams, or on the proportion of women in managerial/supervisory level positions.

INFORMATION MANAGEMENT AND REPORTING

For the purposes of information management, CROMAC established a mine information system (MIS), which is said to be compliant with international mine action standards (IMAS) and customised to meet CROMAC's needs. The MIS uses databases and a geoinformation system (GIS) to deliver a fully integrated information management system.²¹ There are ongoing efforts to improve the quality of CMR-related data, as a part of the regular activities of CROMAC's survey personnel.²²

Croatia submits annual Article 7 transparency reports and reports on its progress in Article 4 implementation at the CCM intersessional meetings and meetings of states parties.

PLANNING AND TASKING

Croatia has a national mine action strategy for 2009–19, which was drafted by CROMAC with the agreement of concerned ministries, the OMA, the National Protection and Rescue Directorate, and local administration and self-administration bodies whose responsibility covers regions with hazardous areas.²³ The strategy, which was adopted by the Croatian Parliament, includes among its main goals the tackling of CMR in accordance with the obligations of the CCM.²⁴ Elaboration of a new national mine action strategy falls under jurisdiction of the Ministry of Interior, which implies it could be a part of a nationwide strategy or the national programme of the Civil Protection Directorate for 2019–26. Any strategy will be in line with Croatia's prioritisation of meeting its CCM Article 4 deadline.²⁵ All CMR-contaminated areas are said to be cleared in accordance with county and state priorities.²⁶

Based on approved funding, CROMAC drafts annual workplans, which are submitted to the responsible ministries and other state bodies for comment and approval.²⁷ The national mine action plan for 2018 was officially approved by the Croatian government in March 2018, and one of its main goals was to eliminate all known CMR-contaminated areas by the end of 2018.²⁸ Croatia did not meet this goal but expects to release all known CMR-contaminated areas by the end of 2019, in advance of its Article 4 deadline of 1 August 2020.²⁹

In 2018, Croatia discussed the issue of national survey and clearance capacity to address CMR contamination discovered after the release of CMR-contaminated areas or post completion (i.e. residual contamination), with the Geneva Centre for Humanitarian Demining (GICHD). CROMAC is working with the GICHD on a case study entitled "national capacities and residual contamination in Croatia", which will document progress that is being made on this issue. The integration of CROMAC within the Ministry of Interior, which took effect from January 2019, is reported to be one of the first steps to deal with residual risk and liability and will elevate the issue within the Ministry of Interior.³⁰

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

A new law on mine action was adopted by the Croatian Parliament on 21 October 2015, incorporating developments from the latest IMAS, and specifically those relating to the use of technical survey to confirm the presence or absence of contamination.³¹ The 2015 law introduces a new procedure for “supplementary general survey” (i.e. non-technical survey) and enables “exclusion” (i.e. reduction) of suspected hazardous areas (SHAs) through technical survey, which was not possible under the previous law.³² The 2015 law has eliminated the need for standing operating procedures (SOPs), as all aspects of mine action are now clearly defined.³³ National mine action standards are also encompassed within it.³⁴

CMR clearance in Croatia is focused on releasing CHAs and in 2018 submunitions were discovered and destroyed in all CMR-contaminated areas that were cleared.³⁵

OPERATORS

In 2018, 40 authorised commercial demining companies were accredited for mine and CMR clearance operations. Of this, four companies were engaged in CMR clearance operations in 2018: Harpija, Istraživač, Titan, and Zeleni kvadrat.³⁶

CROMAC undertook all non-technical survey in 2018, deploying nine survey personnel. In 2018, CROMAC had approximately 40 deminers for technical survey. This included 21 deminers previously employed by national clearance operator MUNGOS, which was dissolved in 2017.³⁷

OPERATIONAL TOOLS

CMR survey and clearance operations in Croatia are conducted manually, with mechanical assets, and using mine detection dogs (MDDs).³⁸

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

A total of 0.88km² of CMR contaminated was released in 2018, of which 0.86km² was cleared, and almost 0.02km² was cancelled by non-technical survey. This was a drop from the 1km² of clearance in 2017. No CMR-contaminated area was reduced by technical survey in 2018 or 2017. In addition, almost 0.09km² of previously unrecorded CMR contamination was added to the database in 2018.³⁹

SURVEY IN 2018

In 2018, 16,436m² was cancelled by non-technical survey in Split-Dalmatia and Zadar counties (see Table 2). No CMR-contaminated area was reduced by technical survey.⁴⁰ This was an increase on 2017, when no CMR-contaminated area was released by survey.⁴¹

In addition, 0.088km² of previously unrecorded CMR contamination was added to the database in 2018: 0.045km² in Sisak-Moslavina county and 0.043km² in Zadar county.⁴²

Table 2: Cancellation by non-technical survey in 2018⁴³

County	Operator	Area cancelled (m ²)
Split-Dalmatia	CROMAC	448
Zadar	CROMAC	15,988
Total		16,436

CLEARANCE IN 2018

In 2018, Croatia cleared six areas in four counties covering just over 0.86km² of CMR-contaminated area, destroying 571 KB-1 submunitions (see Table 3). All the areas cleared were found to have CMR.⁴⁴ This is a slight decrease in output on 2017, when just over 1.01km² of CMR-contaminated was cleared, destroying a total of 123 KB-1 submunitions.⁴⁵

A proportion of the CMR-contaminated area cleared in 2018 was not included in Croatia's reporting on release during the year, reportedly because official confirmation was only finalised in 2019.⁴⁶

Also, as part of the continued "less arms, fewer tragedies" programme, the Croatian Police (under the Ministry of Interior), and in partnership with the UNDP, collected seven submunitions (six KB-1 and one MK-1 submunition), which were subsequently transported to Croatian military facilities and destroyed.⁴⁷

Table 3: Clearance of CMR-contaminated area in 2018⁴⁸

County	Operator	Areas cleared	Area cleared (m ²)	Submunitions destroyed
Lika-Senj	Harpija/Istraživač/Titan	3	532,777	424
Šibenik-Knin	Zeleni kvadrat	1	148,090	6
Sisak-Moslavina	Istraživač	1	136,276	130
Zadar	Zeleni kvadrat	1	43,165	11
Totals		6	860,308	571

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR CROATIA: 1 AUGUST 2010

ARTICLE 4 DEADLINE: 1 AUGUST 2020

ON TRACK TO MEET ARTICLE 4 DEADLINE: YES

Under Article 4 of the CCM, Croatia is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 August 2020. It is on track to meet this deadline, and as at May 2019, Croatia expected to complete CMR clearance by the end of 2019, based on current capacity. Croatia does not foresee any obstacles in meeting its Article 4 deadline.⁴⁹ If, however, there is a risk, by the time of the Ninth Meeting of States Parties, that the deadline will not be met, a one-year extension should be submitted to ensure Croatia's continued compliance with the CCM.

Croatia has cleared a total of 4.16km² of CMR-contaminated area over the past five years (see Table 4). Challenges to CMR clearance are posed by rocky, forested, and mountainous areas, which prevent use of demining machines. In addition, use of demining machinery is not permitted in areas designated as protected for conservation.⁵⁰ CROMAC had planned to complete CMR clearance by the end of 2018, in accordance with its national mine action plan for 2018,⁵¹ however this was not realised. However, Croatia still plans to meet its Article 4 deadline by completing clearance of all known CMR contamination in advance of its August 2020 deadline.⁵²

Table 4: Five-year summary of CMR clearance (2014–18)⁵³

Year	Area cleared (km ²)
2018	0.86
2017	1.01
2016	1.20
2015	0.43
2014	0.66
Total	4.16

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- 1 Email from Slavenka Ivšić, Civil Protection Directorate, Ministry of the Interior, 23 May 2019; and CCM Article 7 Report (for 2018), Form F.
- 2 Email from Davor Laura, Head of Quality Control, CROMAC, 6 April 2018; and CCM Article 7 Report (for 2017), Form F.
- 3 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019; and CCM Article 7 Report (for 2018), Form F.
- 4 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 5 Ibid.; and CCM Article 7 Report (for 2018), Form F.
- 6 CCM Article 7 Report (for 2017), Form F.
- 7 Act on Amendments to the Act on Mine Action (OG No. 118/2018) and Act on Amendment to the Act on the Government (OG No. 116/2018).
- 8 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019; and CCM Article 7 Report (for 2018), Form J.
- 9 CROMAC, "National Mine Action Strategy of Croatia 2009–2019", Zagreb, June 2009, p. 2.
- 10 Interviews with Dijana Pleština, (then) Director, OMA, in Geneva, 23 May 2012 and 10 April 2014; and email from Miljenko Vahtarić, CROMAC, 4 July 2013.
- 11 National Gazette No. 110/15; and CCM Article 7 Report (for 2017), Form A.
- 12 Interviews with Neven Karas, CROMAC; and Tomislav Ban, Assistant Director and Head of Sector for Operational Planning and Programming, CROMAC, Sisak, 18 May 2017.
- 13 Email from Dejan Rendulić, CROMAC, 14 June 2018.
- 14 Email from Nataša Mateković, CROMAC, 30 August 2017.
- 15 Ibid.; and interview with Ante Brkljačić, CROMAC, in Geneva, 9 June 2017.
- 16 Email from Miljenko Vahtarić, CROMAC, 24 August 2016.
- 17 Ibid.
- 18 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 19 Ibid.
- 20 Ibid.
- 21 CROMAC website, "CROMAC's Mine Information System", accessed 26 June 2018.
- 22 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 23 Anti-Personnel Mine Ban Convention Article 5 deadline Extension Request (draft), 29 March 2018, p. 25.
- 24 Email from Miljenko Vahtarić, CROMAC, 13 May 2016.
- 25 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 26 Emails from Miljenko Vahtarić, CROMAC, 10 June 2015; and Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 27 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 28 Email from Davor Laura, CROMAC, 6 April 2018.
- 29 Emails from Slavenka Ivšić, Civil Protection Directorate, 23 May and 5 June 2019.
- 30 Ibid.
- 31 National Gazette No. 110/15; and CCM Article 7 Report (for 2017), Form A.
- 32 CCM Article 7 Report (for 2017), Form A; and emails from Miljenko Vahtarić, CROMAC, 13 and 18 May 2016.
- 33 Email from Miljenko Vahtarić, CROMAC, 13 May 2016; and CCM Article 7 Report (for 2015), Form A.
- 34 Email from Miljenko Vahtarić, CROMAC, 13 May 2016.
- 35 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019; and Statement of Croatia, Clearance Session, Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 36 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 37 Ibid.
- 38 Ibid; and Statement of Croatia, Clearance Session, Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 39 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019; and CCM Article 7 Report (for 2018), Form F.
- 40 Ibid.
- 41 Email from Davor Laura, CROMAC, 6 April 2018; and CCM Article 7 Report (for 2017), Form F.
- 42 Ibid.
- 43 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019; and CCM Article 7 Report (for 2018), Form F.
- 44 Ibid.
- 45 CCM Article 7 Report (for 2017), Form F.
- 46 Email from Slavenka Ivšić, Civil Protection Directorate, 5 June 2019.
- 47 CCM Article 7 Report (for 2018), Form F; and Statement of Croatia on Clearance, Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 48 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019; and CCM Article 7 Report (for 2018), Form F.
- 49 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 50 Ibid.
- 51 Interview with Nataša Mateković, CROMAC, in Geneva, 10 February 2017; email from Davor Laura, CROMAC, 6 April 2018; Statement of Croatia, Clearance Session, Seventh Meeting of States Parties to the CCM, Geneva, 5 September 2017; and interview with Hrjove Debač, OMA; and Davor Laura, CROMAC, in Geneva, February 2018.
- 52 Email from Slavenka Ivšić, Civil Protection Directorate, 23 May 2019.
- 53 See Cluster Munition Monitor and Mine Action Review reports on clearance in Croatia covering 2014–17.

GERMANY

MINE
ACTION
REVIEW

CLEARING CLUSTER MUNITION REMNANTS 2019

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 AUGUST 2020
EXTENSION REQUESTED TO 1 AUGUST 2025

KEY DATA

CLUSTER MUNITION CONTAMINATION: MEDIUM

SUSPECTED
HAZARDOUS AREA

9.78 KM²

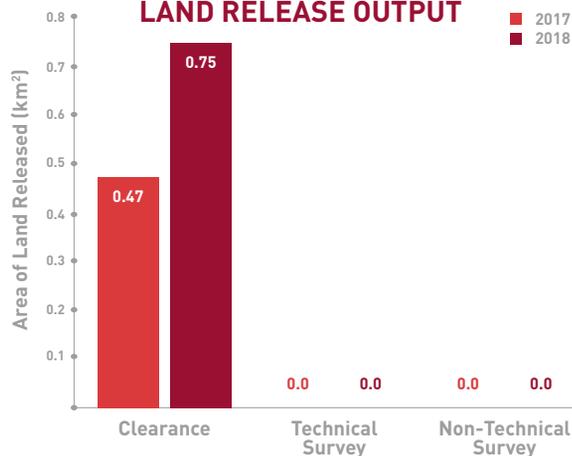
SUBMUNITION
CLEARANCE IN 2018

0.75 KM²

SUBMUNITIONS
DESTROYED IN 2018

1,542

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

In 2018, Germany continued to expand its clearance operations to clear and destroy cluster munition remnants (CMR) contamination at the former military testing facility at Wittstock, increasing clearance capacity from 40 in the summer of 2017 to 120 in 2018. However, Germany will not meet its 2020 Article 4 clearance deadline under the Convention on Cluster Munitions (CCM) and, at the end of 2018, submitted a request for a five-year extension to 1 August 2025. The request was due to be considered at the CCM Ninth Meeting of States Parties in September 2019.

RECOMMENDATIONS FOR ACTION

- Germany should assess ways in which it can speed up release of cluster munition-contaminated-area, to ensure that it fulfils its CCM Article 4 obligations before its requested new deadline of 1 August 2025. This could involve amending national legislation to allow international contractors to conduct clearance more quickly.
- Germany should ensure that its annual CCM Article 7 transparency report accurately reflects the amount of CMR contamination remaining at the end of the reporting period and should report annual clearance output for the reporting period, rather than clearance output to date.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	8	Germany has a good understanding of the extent of its sole CMR-contaminated area in a former Soviet military training area at Wittstock. Due to the lack of detailed data on the former testing of weapons at the site, and the significant amount of other unexploded ordnance (UXO), Germany has not been able to more accurately determine the extent and density of CMR at Wittstock.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	8	There is now strong national ownership and commitment to release its sole CMR-contaminated area. Roles and responsibilities for clearance are clear, coherent, and entirely funded by the federal government, albeit at a relatively high cost. German law prevents the contracting of overseas commercial clearance operators or non-governmental organisations (NGOs) for CMR clearance.
GENDER (10% of overall score)	7	There is equal access to employment for qualified women and men for explosive ordnance disposal (EOD), including of CMR, in Germany, though women only make up a small proportion of the sector. At Wittstock, one woman holds an EOD licence, and five female UXO specialists are engaged operationally. The on-site project management and clearance supervision company employs two female full-time engineers and three male part-time employees.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	6	Germany has reported on progress to survey and clear CMR contamination in both its CCM Article 7 transparency report and in its Article 4 deadline extension request. The Extension Request is of a high quality, with clear annual milestones for clearance, through to Article 4 completion. However, in its Article 7 reporting, Germany should reduce the annual contamination baseline of CMR contamination, which has remained at 11km ² for several years, to reflect land released by survey and clearance as work progresses. In addition, Germany should report annual clearance output in its Article 7 reporting, as the CCM requires, and not output to date.
PLANNING AND TASKING (10% of overall score)	8	Germany has a completion plan in place to address the remaining CMR contamination, with realistic annual clearance goals, based on forecast capacity and output.
LAND RELEASE SYSTEM (20% of overall score)	7	Germany is restricted from conducting technical survey or from using mechanical assets, due to the high level of explosive ordnance contamination at the site, which includes different types of UXO, with varying spatial distribution of contamination, resulting from overlapping contamination from multiple weapon types.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	5	Germany will not make its Article 4 clearance deadline of 1 August 2020 and has requested a five-year extension until 1 August 2025. It now plans to complete CMR clearance before the end of 2024, based on existing capacity and subject to available burnt area for clearance, favourable weather conditions, and the density of the contamination discovered.
Average score	6.9	Overall programme performance: AVERAGE

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- The Wittstock site is administrated and project managed by the Federal Forestry Agency as a subdivision of the Institute for Federal Real Estate (BImA), with support from the Central Office of the Federal Government for UXO Clearance and a consulting engineer

NATIONAL OPERATORS

- Commercial UXO clearance contractors: Röhl Munitionsbergung GmbH (Brandenburg (Havel)) and Schollenberger Kampfmittelbergung GmbH (Celle)

- On-site project management/clearance supervision company
- Destruction of CMR and other ordnance is the ultimate responsibility of the Brandenburg state explosive ordnance disposal (EOD) agency: KMBD

INTERNATIONAL OPERATORS

- None

OTHER ACTORS

- None

UNDERSTANDING OF CMR CONTAMINATION

As at December 2018, Germany reported that it had approximately 11km² of area suspected to contain CMR at a former Soviet military training area at Wittstock, Brandenburg, in former East Germany.¹ This is unchanged from the CMR contamination reported for 2017 and 2016, despite clearance of 470,000m² in 2017,² and 750,000m² in 2018.³ Taking into account the total clearance of 1.22km² in 2017–18, the remaining CMR contamination as at the end of 2018 was in fact an estimated 9.78km². A wide range of Soviet-era submunitions have been found at Wittstock: AO-1 Sch, AO-1 M, AO-2.5 RTM, AO-10 Sch, ShOAB-0.5, PTAB-1 M, PTAB-2.5 M, PTAB 2.5 TG, PTAB-10.5, ZAB 1-E, ZAB 2.5M, and ZAB 2.5.⁴

CMR were discovered “by chance” at Wittstock and declared in June 2011, first at the Anti-Personnel Mine Ban Convention (APMBC) intersessional meetings and then a week later at the CCM intersessional meetings.⁵ From 2011 to early 2014, suspected CMR contamination was reported to total 4km².⁶ In August 2014, however, Germany reported that the total suspected hazardous area (SHA) was actually 11km².⁷ The increased estimate was ascribed to discovery of submunitions during non-technical survey across a wider area than previously reported.⁸ According to Germany, the dense vegetation cover and the special hazards posed by CMR and other explosive ordnance did not allow for technical survey.⁹

The entire Wittstock site, which extends over 120km², is heavily contaminated with various kinds of unexploded ordnance (UXO), in varying special distribution and overlapping contamination, as a result of use of the site for military training purposes in 1945–93.¹⁰ The 11km² of CMR contamination is in the area of a mock airfield within the site, which was used by the air force for bombing practice, by the army for artillery firing exercises, as well as for general military exercises and training. Usage involved a wide range of munitions over a period of four decades. Only general information on historical use of cluster munitions at the site is available and the degree of contamination from submunitions and other UXO is not known for a large part of the hazardous area.¹¹

In early October 2011, ownership of Wittstock was transferred from the military to the federal government authority in charge of real estate, Institute for Federal Real Estate (BlmA). BlmA implemented a risk education programme that included marking the perimeter and preventing civilian access to the area, based on a “danger prevention plan”.¹² Once safely released, the site is due to remain part of a “nature protection area” in the Kyritz-Ruppiner-Heide, managed by BlmA as part of the Europa NATURA 2000 site, under the European Union (EU) Habitats Directive.¹³

Persistent delay in initiating clearance of CMR at Wittstock until March 2017¹⁴ was ascribed to extensive preliminary work needed to prepare the area for CMR clearance. Due to the dense vegetation in the contaminated area, Germany opted to burn the area in sections, to ensure an unobstructed view of the ground.¹⁵ Preparation for burning and clearance in turn necessitated a desk study and creation of an evacuation and access road network in 2013–15, to make the SHA accessible for clearance operators.¹⁶

This was followed in 2015–16 by the creation and maintenance of an internal site-wide system of firebreaks surrounding and subdividing the area suspected to be contaminated with CMR, to prevent uncontrolled forest fires during prescribed burning of the CMR contaminated area.¹⁷ Owing to contamination from large items of UXO, the fire-breaks were created using an unmanned, remote-controlled caterpillar by an explosive ordnance disposal (EOD) contractor in 2016.¹⁸ This was completed in 2016, with the exception of a small forested area on the eastern edge of the SHA.¹⁹ In total, 14 individual ShOAB-0.5 explosive submunitions were discovered during site preparation, which lasted to the end of 2016.²⁰

The prescribed burning of the first sections of the SHA started in 2017 and was ongoing as of writing. It requires special meteorological conditions to keep the fire under control, and, as such, prescribed burning can only take place on a few days each year. Germany plans to burn 200 to 300 hectares per annum, taking into account natural protection issues and planned clearance progress.²¹

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Germany has full national ownership of its land release efforts. The Wittstock site is administrated and project managed by the Federal Forestry Agency as a subdivision of the BlmA. The BlmA is an institution incorporated under public law and which is wholly owned by the federal government.²²

The Federal Forestry Agency’s responsibilities include project coordination and control, risk management, and budget planning. Support is provided by the Central Office of the Federal Government for UXO Clearance and a consulting engineer.²³

Commercial UXO clearance contractors are contracted and managed by the local branch of the Federal Forestry Agency, Bundesforstbetrieb Westbrandenburg.²⁴

The Regulatory Agency of the County of Ostprignitz-Ruppin is responsible for public security under the police law of the federal state of Brandenburg.²⁵

In Germany, the clearance and disposal of UXO is a security task that is under the control of the police and administrative legislation and is therefore the responsibility of the respective federal states. Almost all federal states have set up a corresponding state agency for EOD for these tasks. In Brandenburg, this is the so-called KMBD (in English: the Brandenburg state war material disposal service), which is part of the Brandenburg police. Under German legislation, the federal government is not allowed to maintain an agency for EOD.²⁶ Contracting foreign companies for CMR clearance in Wittstock is also not possible under

German law.²⁷ This limits Germany's ability to upscale demining capacity by preventing the contracting of NGOs or overseas commercial expertise.

All CMR clearance costs are, though, paid for by the federal BImA. National funding to complete CMR clearance has been fully secured and is said to cover unforeseen cost increases. Clearance costs were expected to increase from 2021, due to price inflations expected as part of the new tender planned for commercial UXO clearance.²⁸

In 2017, CMR clearance cost over €1.6 million while in 2018, the figure increased five-fold to more than €9.5 million,²⁹ presumably reflecting the upscaling of clearance operations. As at October 2018, total clearance costs to address CMR contamination at Wittstock were estimated to be more than €67 million, of which €60 million was budgeted for clearance by commercial contractors; €3 million for engineering costs; and €4.3 million for the disposal of ordnance.³⁰

GENDER

There is equal access to employment for qualified women and men for EOD clearance in Germany, however women only make up a small proportion of the sector. At Wittstock, one woman holds an EOD licence (required under the state law on explosives), and five

female UXO specialists are working operationally. The on-site project management and clearance supervision company employs two full-time engineers, both female, and three part-time employees, all male.³¹

INFORMATION MANAGEMENT AND REPORTING

Germany uses its own information management system to record the special distribution of CMR, including use of a geographical information system (GIS).³²

Germany provides regular updates on its progress in Article 4 implementation, both in its annual Article 7 transparency reporting, and in statements at the CCM Meeting of States Parties. However, in its Article 7 Transparency report for 2018,³³ Germany reported combined clearance output for 2017 and 2018, rather than the annual clearance output for 2018, as is required by the Convention.

Germany submitted a detailed, comprehensive, and timely Article 4 Extension Request, which was to be considered by states parties at the Ninth Meeting of States Parties in September 2019. In addition, Germany answered questions on its extension request from the CCM Coordination Committee Analysis Group.

Germany's Article 4 deadline extension request details progress in addressing its CMR contamination to date, the extent of contamination remaining, and includes a detailed and costed workplan covering the amount of time requested, with measurable benchmarks.

PLANNING AND TASKING

Germany has developed a national plan for the release of the CMR-contaminated area, as detailed in its extension request, with annual milestones for the release of areas confirmed or suspected to contain CMR. Based on current clearance projections of 1.5–2 km² per year, CMR clearance is currently expected to be completed by the end of 2024, with associated documentation to be finalised in 2025.³⁴

A project coordination committee meets on a weekly basis with its core members and monthly with an extended group, to assess the status of clearance progress as well as the quality of clearance, costs, and milestones compared to the project plans. Weekly reports are disseminated to document clearance and progress.³⁵

Nature conservation requirements limit the controlled burning to a maximum of 200–300 hectares (2km²–3km²) per year, which, for safety reasons, is limited to few days per year. In 2017, controlled burning was only possible on two separate days. Germany plans to burn approximately 250 hectares (2.5km²) per year, to build up a reserve of burnt areas for clearance.³⁶ In mid-March 2019, some 210 hectares (2.1km²) of heathland were burned, to guarantee sufficient area for CMR clearance operations in 2019 and 2020.³⁷

Detailed planning of the specific sections of the CMR-contaminated area to be cleared is not possible beyond annual planning, because it is determined by the location of areas that have been burnt, which in turn is contingent on weather conditions on the day of burning.³⁸

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

CMR clearance in Germany is conducted in accordance with German federal legislation and legislation of the state of Brandenburg, occupational safety standards of the German Statutory Accident Insurance Association (Deutsche Gesetzliche Unfallversicherung, DGUV), and the construction technical guidelines on UXO clearance of the federal government (Baufachlichen Richtlinien Kampfmittelräumung des Bundes). According to Germany, federal and state legislation is binding and takes precedent over the application of international health and safety or technical standards.³⁹

The "Guidelines for the Clearance of Unexploded Ordnance on Federal Properties" are the legal basis for the clearance of UXO on federal government properties and thus apply to action on the Wittstock site. In addition, site-specific work instructions, approved by the KMBD, include detection of UXO (instruments and their use); handling of submunitions and other UXO (on-site transport, storage, and disposal); and documentation.⁴⁰

The entire area suspected to be contaminated with CMR has been divided into 50 x 50 metre boxes, each of which is subject to prescribed burning, followed by sub-surface clearance.⁴¹ CMR clearance started in an area where the occurrence of CMR was known from earlier finds, and was conducted outwards in 50 x 50 metre boxes. According to Germany, to date, CMR have been found in almost every parcel cleared, and therefore technical survey has not been deemed useful thus far. Germany has declared that if, during future clearance, areas are often encountered which do not contain CMR, the method of land release will be changed to technical survey.⁴² The smallest target for detector sensitivity for clearance has been defined as a half sphere of the ShOAB-0.5 submunition.⁴³

Under state regulation on war material ("Kampfmittelverordnung"), the transport and disposal of explosive ordnance in Brandenburg state is the sole responsibility of the KMBD.⁴⁴

OPERATORS

In Germany, site clearance (search, discovery, identification, recovery, and preparation for handover to state agencies for demolition) is typically conducted by commercial contractors that meet the requirements of the law on explosives. There are reportedly only around 1,500 people working in commercial ordnance clearance in Germany; mostly small enterprises, which are active regionally.⁴⁵ Two commercial UXO clearance contractors won the public tender for CMR clearance at Wittstock: Röhl Munitionsbergung GmbH (Brandenburg [Havel]) and Schollenberger Kampfmittelbergung GmbH (Celle). On-site project management and supervision are provided by a separate company, which includes a consulting engineer.⁴⁶ As previously mentioned, disposal, whether through destruction or other means, is conducted by the KMBD.⁴⁷

CMR clearance commenced at Wittstock in March 2017, with nine personnel, which increased to forty in the summer of 2017, and to one hundred in April 2018. As of June 2018, capacity stood at 120 personnel, with an average daily clearance rate per person of between 50m² and 60m².⁴⁸ Since mid-March 2019, upscaling of demining capacity has been ongoing, and will result in the 140 or 150 personnel clearance capacity projected in Germany's extension request.⁴⁹

There are staff shortages for deminers in Germany, in particular for the specially licenced team leaders required by German law.⁵⁰ The 150 demining personnel planned for deployment at Wittstock represents around 10% of the overall EOD personnel available in Germany.⁵¹ In its Article 4 deadline extension request, Germany is assuming an annual effective clearance capacity of 140 demining personnel, who will each work 225 days a year.⁵²

OPERATIONAL TOOLS

Subsurface CMR clearance at Wittstock is conducted only manually. According to federal guidelines, while mechanical clearance would be possible for clearance of CMR, it is not possible at Wittstock due to the presence of large quantities of air-dropped and shaped-charge munitions, which would pose a hazard to both the operators and the equipment.⁵³

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

A total of 750,000m² of CMR-contaminated area was cleared in 2018,⁵⁴ with the destruction of 1,542 submunitions, all in situ. No area was released by survey.⁵⁵

SURVEY IN 2018

No CMR-contaminated area was cancelled by non-technical survey or reduced by technical survey in 2018,⁵⁶ or in the previous year.

CLEARANCE IN 2018

Germany cleared 750,000m² of CMR-contaminated area in 2018 and destroyed 1,542 submunitions (2 AO-1 M; 23 AO-1 SCh; 1 AO-10 SCh; 2 AO-2.5 RTM; 1 PTAB-1 M; 101 PTAB-2.5 M; 4 PTAB-2.5 TG; 11 PTAB-10.5; 1,354 ShOAB-0.5; 1 ZAB 1-E; 1 ZAB 2.5; and 41 ZAB 2.5M).⁵⁷ Clearance output in 2018 was an increase on the previous year, when 470,000m² was cleared by the clearance that began in March 2017, with 508 submunitions destroyed.⁵⁸ Previously, in its Article 7 report for 2017, Germany had reported destruction of 513 submunitions in 2017, but this was subsequently reported as 508 submunitions in Germany's answers to the Article 4 analysis group.⁵⁹

Clearance was conducted by Röhl Munitionsbergung (Brandenburg (Havel)) and Schollenberger Kampfmittelbergung GmbH (Celle) in January–October 2018, with a long winter break due to frozen ground. For safety reasons, the contractors were assigned different geographical clearance areas.⁶⁰

CMR clearance is subject to internal quality control (QC) by the commercial contractors and to external quality control by an independent engineering company of between 10% and 20% of each 50 x 50 metre clearance box.⁶¹

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR GERMANY: 1 AUGUST 2010

CCM ARTICLE 4 DEADLINE: 1 AUGUST 2020

ON TRACK TO MEET ARTICLE 4 DEADLINE: NO

FIVE-YEAR EXTENSION REQUESTED TO 1 AUGUST 2025

Under Article 4 of the CCM, Germany is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 August 2020. Germany will not meet this deadline and has requested a five-year extension (the maximum length permitted under the Convention) to 1 August 2025.

After extensive and lengthy preliminary work for preparation of the site for clearance, including survey and a creation of a fire protection system, Germany finally began CMR clearance in March 2017. A total of 1.22km² of CMR contamination has been cleared in the last two years (see Table 1).

Table 1: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (m ²)
2018	750,000
2017	470,000
2016	0
2015	0
2014	0
Total	1,220,000

Germany predicts it will take between five years (meaning completion of clearance in 2023) and six years (completion of clearance in 2024), based on the estimated 980 hectares (9.8km²) of remaining CMR contamination as at the end of 2018, and an estimated annual clearance capacity of 140 personnel, working 225 days per annum, at a clearance rate of 50–60m² per person per day. This corresponds to clearance of 1.5–2km² per annum. Reporting and documentation relating to clearance efforts are predicted to be finalised in 2025.⁶²

Potential obstacles that could impact Germany's ability to meet its requested new deadline of August 2025 include the very high levels of CMR and UXO contamination, including different spatial distributions and potentially higher levels of contamination than expected and addressed to date.⁶³ Germany's clearance plan also assumes that a sufficient amount of controlled burning is able to take place to meet the planned clearance output, which has so far been the case. There is also the potential for the planned clearance schedule to be negatively impacted due to metrological conditions, in particular, extended periods of frost, resulting in frozen ground that cannot be cleared.⁶⁴

Finally, as previously mentioned, there are also challenges posed in acquiring suitably qualified personnel for clearance, which could potentially lead to staffing shortfalls. EU procurement requirements will likely require new tendering of the clearance at Wittstock in 2020, which could further impact the number of personnel available.⁶⁵

- 1 CCM Article 7 Report (for 2017 and 2018), Form F; email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018; and CCM Article 4 deadline Extension Request, 2019, (hereafter, CCM Extension Request 2019), p. 11.
- 2 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018.
- 3 CCM Extension Request 2019, p. 29.
- 4 Article 7 Report (for 2018), Form F.
- 5 Statement of Germany, APMBC intersessional meetings (Standing Committee on Mine Action), Geneva, 21 June 2011; and Statement of Germany, CCM intersessional meetings (Clearance and Risk Reduction Session), Geneva, 28 June 2011.
- 6 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018; and Statement of Germany, CCM Third Meeting of States Parties, Oslo, 13 September 2012; Article 7 Reports (for 2012 and 2013), Form F.
- 7 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 4 August 2014.
- 8 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.
- 9 CCM Extension Request 2019, p. 9.
- 10 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May and 12 July 2018; CCM Extension Request 2019, pp. 1 and 5; Statements of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015 and CCM Eighth Meeting of States Parties, Geneva, 3–5 September 2018.
- 11 CCM Extension Request 2019, p. 9.
- 12 Statement of Germany, APMBC intersessional meetings, Geneva, 23 May 2012; and CCM Article 7 Report (for 2011), Form G.
- 13 APMBC Article 5 deadline Extension Request, 15 April 2013, p. 7; and CCM Article 7 Report (for 2015), Form F.
- 14 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5, at: <http://bit.ly/2DnYvGw>.
- 15 Article 7 Report (for 2015 and 2018), Form F.
- 16 CCM Extension Request 2019, pp. 16 and 36–37.
- 17 *Ibid.*, pp. 14, 16–17, and 36–37.
- 18 *Ibid.*, p. 19; email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 19 April 2017; and Article 7 Report (for 2016), Form F.
- 19 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 19 April 2017; and Article 7 Report (for 2016), Form F.
- 20 CCM Extension Request 2019, p. 4.
- 21 *Ibid.*, p. 22.
- 22 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.
- 23 *Ibid.*
- 24 *Ibid.*
- 25 *Ibid.*, p. 6.
- 26 CCM Extension Request 2019, p. 12.
- 27 *Ibid.*, p. 34.
- 28 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 4.
- 29 Article 7 Report (for 2018), Form I.
- 30 CCM Extension Request 2019, pp. 3 and 39.
- 31 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.
- 32 *Ibid.*
- 33 CCM Article 7 Report (for 2018), Form F.
- 34 CCM Extension Request 2019, p. 3.
- 35 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 3.
- 36 CCM Extension Request 2019, p. 35.
- 37 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.
- 38 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 3.
- 39 *Ibid.*, p. 2.
- 40 CCM Extension Request 2019, p. 12.
- 41 *Ibid.*, p. 25.
- 42 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 2.
- 43 *Ibid.*
- 44 2019 CCM Extension Request, p. 12.
- 45 *Ibid.*
- 46 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.
- 47 CCM Extension Request 2019, p. 12.
- 48 *Ibid.*, pp. 3 and 30.
- 49 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.
- 50 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 12 July 2018.
- 51 CCM Extension Request 2019, pp. 33 and 34; and Statement of Germany, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 52 CCM Extension Request 2019, p. 33.
- 53 *Ibid.*, p. 15.
- 54 Article 7 Report (for 2018), Form F; and Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 4.
- 55 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 4.
- 56 CCM Article 7 Report (for 2017 and 2018), Form F.
- 57 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 4.
- 58 *Ibid.* In its Article 7 report for 2018, Germany reported clearing a total of 1,234,000m² of CMR-contaminated area, during which 2,050 submunitions were destroyed (56 AO-1 Sch, 2 AO-1 M, 2 AO-2.5 RTM, 2 AO-10 Sch, 1,678 ShOAB-0.5, 1 PTAB-1 M, 188 PTAB-2.5 M, 4 PTAB 2.5 TG, 13 PTAB-10.5, 1 ZAB 1-E, 102 ZAB 2.5M, and 1 ZAB 2.5). There is therefore a small difference between the combined 1,220,000m² reported for 2017 and 2018 in Germany's Extension Request, and the combined 1,234,000m² total reported in its Article 7 report for 2018. Presumably this is because the Extension Request only included clearance data up to the end of October 2018 and not to the end of the year. In addition, previously Germany had reported that 513 submunitions were destroyed in 2017 (CCM Article 7 Report (for 2017), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018).
- 59 CCM Article 7 Report (for 2017), Form F; and Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 4.
- 60 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 6; and CCM Extension Request 2019, p. 12.
- 61 CCM Extension Request 2019, p. 28.
- 62 CCM Extension Request 2019, pp. 33 and 37.
- 63 Email from official from the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018; and CCM Extension Request 2019, pp. 35 and 36.
- 64 CCM Extension Request 2019, pp. 3, 34, and 36.
- 65 *Ibid.*, pp. 33 and 34; and Statement of Germany, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 NOVEMBER 2023
NOT ON TRACK TO MEET DEADLINE

KEY DATA

**CLUSTER MUNITION
CONTAMINATION: HEAVY**

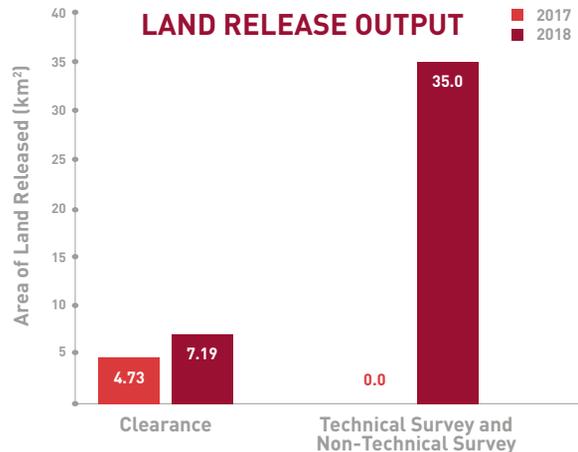
191 km²

SUBMUNITION
CLEARANCE IN 2018

7.19 km²

SUBMUNITIONS
DESTROYED IN 2018

3,647



KEY DEVELOPMENTS

Cluster munition remnant (CMR) survey and clearance output rose in 2018 despite limited resources and capacity. The Regional Mine Action Centre for the South (RMAC-S) adopted the Cluster Munition Remnant Survey (CMRS) methodology and drafted a national standard awaiting approval by the Directorate for Mine Action (DMA).

RECOMMENDATIONS FOR ACTION

- Iraq should mobilise more resources and national capacity for survey and clearance of CMR contamination.
- The Ministry of Interior should report comprehensively on the funding, capacity, deployment, and results of Civil Defence mine action operations.
- The DMA should adopt the CMRS methodology as a national standard.
- The DMA should adopt electronic reporting by operators as standard practice; if necessary, through an exception to Iraqi law.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	5	Progress in survey in the most affected southern governorates is better defining the extent of contamination but progress is limited owing to the low level of funding and small capacity acting on cluster munitions.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	6	The DMA is responsible for planning, tasking, and coordinating mine action but is overshadowed by powerful government ministries.
GENDER (10% of overall score)	5	Gender considerations do not feature in national plans but international operators and their national partners employ women in a wide range of roles, but subject to cultural sensitivities in different areas.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	5	Information relating to cluster munitions is improving in accuracy and accessibility.
PLANNING AND TASKING (10% of overall score)	5	Planning and tasking for survey and clearance of cluster munitions affected areas through RMAC-S benefitted from good coordination with operators.
LAND RELEASE SYSTEM (20% of overall score)	6	RMAC-S, whose area covers nearly 90% of CMR contamination, has embraced CMRS/technical survey.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	5	Productivity and numbers of items destroyed rose but the scale of contamination and limited resources ensures Iraq will need an extension to its CCM Article 4 deadline.
Average score	5.3	Overall programme performance: AVERAGE

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Higher Council of Mine Action
- Department of Mine Action
- Iraq Kurdistan Mine Action Agency

NATIONAL OPERATORS

- Ministry of Defence
- Ministry of Interior (Civil Defence)
- Commercial operators Al Khebra Al Fania and Ta'az Demining Company

INTERNATIONAL OPERATORS

- Danish Demining Group (DDG)
- Humanity and Inclusion (HI)
- Mines Advisory Group (MAG)
- Norwegian People's Aid (NPA)
- Swiss Foundation for Mine Action (FSD)

OTHER ACTORS

- United Nations Mine Action Service (UNMAS)

UNDERSTANDING OF CMR CONTAMINATION

Iraq estimated CMR contamination at the end of 2018 at more than 190km² (see Table 1), one of the four worst-affected countries in the world. The nearly 50% increase over the estimate reported a year earlier is attributable to errors in the data presented previously. The DMA believes the estimate may increase as a result of continuing survey and the discovery of previously unrecorded contamination.¹

The Kurdish Region of Iraq (KRI) also has some CMR but the extent is not known. Iraq's Kurdish region authorities do not report the presence of any confirmed CMR-contaminated areas, but Mines Advisory Group (MAG) continues to clear submunitions in the KRI and has reported some areas still need to be surveyed to determine the extent of contamination.²

NPA's survey also identified 18.6km² of new contamination in the four southern governorates in 2018, 16.8km² of it in Muthanna. Those results combined with its experience finding significant contamination beyond the perimeter of polygons tasked for clearance ensure the extent of contamination will most likely increase significantly as survey progresses.³

Iraq's contamination dates back to the Gulf War of 1991 and the United States (US)-led invasion of Iraq in 2003 and followed the path of allied forces advance from the south to Baghdad. Coalition aircraft also struck Iraqi army positions in the northern governorate of Kirkuk. The areas most heavily affected are the southern governorates of Muthanna, Thi Qar and Basrah, which account for nearly 90% of Iraq's CMR contamination and where the most commonly found items are BLU-63 and BLU-97 submunitions. Other CMR found in the area include BLU-61 and M42 submunitions.⁴

Table 1: CMR contamination in Federal Iraq (at end 2018)⁵

Province	CHAs	CHA area (m ²)
Basrah	N/R	27,851,470
Diyala	N/R	20,076
Kerbala	N/R	2,107,444
Kirkuk	N/R	3,418,306
Missan	N/R	1,353,148
Muthanna	N/R	101,647,074
Najaf	N/R	5,321,629
Thi Qar	N/R	45,433,774
Qadisiya	N/R	3,966,337
Total		191,119,258

CHAs = Confirmed hazardous areas N/R = Not reported

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Cluster munitions, however, make up only a modest part of Iraq's overall explosive remnants of war (ERW) contamination. Four southern governorates alone have close to 1,000km² of minefield and substantial areas affected by ERW. Central and northern areas liberated from Islamic State have hundreds of square kilometres affected by mines of an improvised nature and the KRI reports almost 220km² of known mined area as well as ERW contamination in areas bordering Turkey that have yet to be surveyed because of insecurity.⁶ See Mine Action Review's *Clearing the Mines* report on Iraq for further information on the mine problem.

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The mine action programme in Iraq is managed along regional lines. The DMA represents Iraq internationally and oversees mine action for humanitarian purposes in 15 of Iraq's 19 governorates.⁷ Mine action in the KRI's four governorates is overseen by the Iraq Kurdistan Mine Action Agency (IKMAA), which reports to the Council of Ministers and is led by a director general who has ministerial rank.

FEDERAL IRAQ

The DMA is responsible for overseeing mine action and implementing policies set by an inter-ministerial Higher Council of Mine Action which reports to the Prime Minister. Coordinating the planning, tasking, and information management among all the actors remains a significant challenge. As a department of the Ministry of Health and Environment, the DMA has less authority than the politically powerful Ministries of Defence and Interior, which manage significant explosive ordnance disposal (EOD) and mine clearance capacity.

Rapid turnover of directors has also hampered management and policy continuity. Essa al-Fayadh, reportedly at least the tenth director since 2003, left office in February 2019. Deputy Minister of Health and Environment Kamran Ali took over as acting director of the DMA but was expected to turn the position over to a new director in the course of 2019.

The DMA oversees three Regional Mine Action Centres (RMACs):

- North: covering the governorates of Anbar, Diyala, Kirkuk, Nineveh, and Salah ad-Din;
- Middle Euphrates (MEU): Babylon, Baghdad, Karbala, Najaf, Qadisiyah, and Wasset;
- South: Basrah, Missan, Muthanna, and Thi-Qar.

RMAC-S, whose four governorates have the vast majority of Iraq's submunition contamination, is the national focal point for its CMR response.

Federal Iraq's spending on mine action is not known. The sector remains heavily dependent on international donor funding, most of it channelled through UNMAS but with additional bilateral funding to support clearance. In the past two years the Iraqi government and donors have given priority to tackling massive contamination by mines of an improvised nature in areas liberated from Islamic State, leaving scant resources for tackling contamination by other ERW in others areas of Iraq, including the substantial cluster munitions threat concentrated in the south.

The DMA is responsible for accrediting operators after they have first registered with the NGO Directorate, a process that previously could drag on for years. In the past year Iraq has taken steps to accelerate the process enabling a significant shift of mine clearance capacity from the KRI to Federal Iraq. Operators report that cumbersome and frequently changing bureaucratic procedures governing tasking, reporting, and team deployments consumed considerable time and energy, hampering productivity in 2018. Management changes in 2019 reportedly smoothed relations between the DMA and UNMAS and appeared to pave the way for some internal restructuring within the DMA.⁸

UNMAS established a presence in Iraq in mid 2015 to help develop an emergency response in areas liberated from Islamic State. By April 2019, UNMAS had 100 personnel in Iraq, including 48 international staff, contracting implementing partners to conduct survey and clearance on tasks supporting UN Development Programme (UNDP) stabilisation initiatives and in support of the Government of Iraq.⁹ This did not extend to areas mainly affected by cluster munitions.

KURDISTAN REGION OF IRAQ

IKMAA functions as a regulator and operator in the KRI. It reports directly to the Kurdish Regional Government's Council of Ministers and coordinates four directorates in Dohuk, Erbil, Garmian, and Sulimaniya (Stemani). Financial constraints halved salaries for all staff for the last three years and resulted in a number of posts being left vacant, but in 2019 payment of salaries resumed and IKMAA planned to fill vacant posts.¹⁰ Capacity at the start of 2018 included 37 12-strong manual demining teams, 7 mechanical teams, 5 survey teams, 3 EOD teams, 10 risk education teams and 37 quality assurance (QA) teams responsible for accreditation and monitoring the work of all operators.¹¹

IKMAA's priorities for areas affected by minefields remained unchanged and included clearing agricultural land and infrastructure, tackling confirmed hazardous areas (CHAs) close to populated areas and areas reporting most mine incidents and casualties.¹²

Operators identified areas affected by mines of an improvised nature for clearance in consultation with district-level authorities and submitted requests for task orders to IKMAA. Areas to which communities were returning were the main priority. IKMAA teams conducted QA.

GENDER

Gender-related issues do not feature in Iraq's National Strategic and Executive Plan for Mine Action 2017–21. International operators and their national partners individually recruit women for a variety of roles, subject to cultural sensitivities that vary in different parts of the country. Most operators employ women in administrative office roles, many also have a significant representation of women in community liaison and risk education functions, some also employ women in clearance teams, including as team leaders.¹³

UNMAS Iraq appointed a dedicated Senior Gender Adviser in 2019, the first UNMAS programme to create such a post. It required implementing partners to apply Gender in Mine Action guidelines and developed Standard Working Practices to provide guidelines for implementing partners with a focus on recruitment and activities in explosive hazard management, risk education and building capacity.¹⁴

INFORMATION MANAGEMENT AND REPORTING

Information management and access to reliable data remain a major challenge for mine action in Iraq but appeared poised for improvement in 2019.

The DMA and IKMAA maintain Information Management System for Mine Action (IMSMA) NG databases with technical support from iMMAP, a commercial service provider working under contract to the US Department of State's Office of Weapons Removal and Abatement (WRA).

The national mine action database is located at the DMA's Baghdad headquarters. RMAC-S maintains a database in Basrah, receiving reports from demining organisations in its area of operations, which is synchronised with Baghdad's at intervals determined by the volume of data to be uploaded. Operators working on projects funded through UNMAS report directly to UNMAS. The DMA reported that before May 2018 its IMSMA database did not receive operating results data from UNMAS.¹⁵ Although iMMAP coordinates data on behalf of the DMA and IKMAA, operators report the extent to which information was shared by all national actors is unclear.¹⁶

Operators are required to submit results in hard copy delivered by hand every month to the DMA, which then uploads results into the database. The procedure meets Iraqi legal requirements, which do not recognise electronic copies, but can cause long delays in uploading results of survey and clearance. As a result, operators say task orders issued by the DMA often lack the most up-to-date information.¹⁷

In March 2019, RMAC-S started receiving data reports electronically as well as in hard copy. Improvements in cluster munitions survey are strengthening the quality of available data through RMAC-S database. In the mine action sector in general, operators report limited access to data and expressed concern about the limited quantity and quality of data available with task orders.¹⁸

All mine action stakeholders were critical of the sector's information management. The DMA and iMMAP reported problems with the timeliness and accuracy of reporting by implementing partners. Operators voiced frustration with the lack of consistency in DMA reporting requirements, difficulties gaining access to data, and its generally poor quality.¹⁹

In February 2019, the DMA brought an operational dashboard into service giving operators online access to its data on contamination, survey, and clearance. As at May 2019, the DMA was preparing to roll out what it claims is the world's first Online Task Management System (OTMS), prepared by iMMAP and designed to facilitate investigation of the data and streamline tasking.²⁰

In 2018, UNMAS set up an online tasking request form for UN agencies and humanitarian NGOs to expedite explosive hazard management and to report potential explosive threats in areas where they worked or intend to work in liberated areas. Once a request had been validated, and where UNMAS had capacity to respond, an implementing partner would be tasked after the DMA was informed. Alternatively, UNMAS would submit a suspected hazardous area (SHA) report to the DMA.²¹ If other operators were present in the area, UNMAS said the request would be shared via the mine action subcluster.²²

PLANNING AND TASKING

Iraq does not have a strategic plan for clearance of CMR. In 2018, Federal Iraq's operations addressing cluster munitions were confined to its southernmost governorates. Given the scale of contamination and the tiny capacity and resources available to deal with

it, RMAC-S has given priority to survey to better define contamination and clearance of areas that are close to communities, have experienced recent casualties or where contamination hinders development projects.²³

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

National mine action standards are largely consistent with the International Mine Action Standards (IMAS), with small adjustments to reflect national conditions. After a trial of the Cluster Munition Remnant Survey methodology conducted by NPA in Muthanna governorate in January 2018, RMAC-S drafted a national standard adopting the CMRS methodology, which is under consideration by the DMA.²⁴

Available data on CMR contamination is unreliable, based on non-technical survey conducted years earlier to an uncertain standard and in areas with few inhabitants at the time to inform the survey. RMAC-S received US bombing data for the 1991 Gulf War but not for the US-led coalition's offensive in 2003. As a result, operators have cancelled large areas of recorded hazardous areas through non-technical survey. They also found that sometimes significant areas of polygons tasked for clearance had no contamination but clearing to fade-out identified substantial affected areas beyond the initial polygon boundary. With the adoption of CMRS/technical survey in 2018, NPA said it is reducing clearance tasks and defining newly identified contamination more precisely.²⁵

OPERATORS

The Ministry of Interior's Civil Defence is the only national operator undertaking humanitarian CMR clearance. National commercial companies contracted by the Ministry of Oil and active in 2018 included the Al Khebra Company for Demining and the Ta'az Group.²⁶

International organisations undertaking CMR area clearance included FSD, HI, and NPA in Federal Iraq and MAG in the KRI.

The Ministry of Defence alone is authorised to conduct demolitions of ERW in Federal Iraq.

OPERATIONAL TOOLS

Only manual clearance of CMR is conducted in Iraq.

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

By May 2019, Iraq had reported the release of a total of more than 42km² of land affected by cluster munitions through survey and clearance in 2018²⁷ but that may understate the actual result. IKMAA had not reported results for 2018 and significant discrepancies existed between the results of survey reported by the DMA and operators.

SURVEY IN 2018

Results in Federal Iraq were unclear. The DMA reported 35km² released through non-technical and technical survey in the four southern provinces. However, NPA, the only operator conducting systematic survey of CMR in RMAC-S's area of operations in 2018, reported cancelling or reducing a combined total of more than 90km² during the year (see Table 2).²⁸

Table 2: NPA CMR-related survey in 2018²⁹

Governorate	SHAs cancelled	Area cancelled (m ²)	Area reduced by TS (m ²)
Basra	21	7,318,961	151,441
Mayssan	1	286,121	0
Muthanna	8	82,193,780	807,773
Totals	30	89,798,862	959,214

CLEARANCE IN 2018

Iraq appears to have cleared a total of almost 7.2km² of CMR-affected area in 2018 (see Table 3), almost entirely in Federal Iraq and three-quarters of it in RMAC-S's area of operations.³⁰

The DMA attributed most of the increase to clearance by Iraq's Civil Defence, which operated with around 12 teams conducting survey and clearance in the south and reportedly cleared 3.4km² in 2018 compared with 1.1km² the previous year.³¹

Table 3: Clearance of CMR-contaminated area in 2018³²

Operator	Area cleared (m ²)
FEDERAL IRAQ	
Al Khebra	60,287
Civil Defence	3,414,495
FSD	32,125
HI	278,534
MoD	96,452
NPA	3,272,029
Taaz	13,321
Subtotal	7,167,243
KRI	
MAG ³³	27,663
Subtotal	27,663
Total	7,194,906

Iraq reported destruction of 3,540 submunitions in Federal Iraq in 2018, triple the number destroyed the previous year.³⁴ Demolitions of all ERW in Federal Iraq are conducted exclusively by the Ministry of Defence, as a result Iraq did not report items found by clearance operators in 2018. NPA reported finding 702 submunitions during clearance in 2018 and another 902 during technical survey while Danish Demining Group (DDG) found 41 submunitions.³⁵

In the KRI, MAG said it destroyed 39 submunitions in the course of area clearance in Dohuk governorate and another 68 in spot or other clearance tasks in Nineveh governorate.³⁶ In 2019, the Ministry of Defence deployed an engineer team working full time in RMAC-S area of operations resulting in more timely demolitions and a sharp increase in the number of CMR destroyed.³⁷

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR IRAQ: 1 NOVEMBER 2013

ARTICLE 4 DEADLINE: 1 NOVEMBER 2023

ON TRACK TO MEET ARTICLE 4 DEADLINE: NO

The scale of known CMR contamination, and the probability that much more may be found as survey progresses ensures Iraq will not meet its CCM Article 4 deadline. A further challenge is the low priority accorded cluster munitions clearance by international donors and national authorities.

RMAC-S calculated it could tackle the amount of CMR contamination it had identified at the end of 2018 in five years with 34 teams but had less than half that capacity available in 2018 with little immediate prospect of a significant increase in capacity while focused on clearance of liberated areas. The Ministry of Defence made clear operational commitments in liberated areas would occupy available capacity and would not make it possible to deploy engineers onto CMR clearance in 2019.³⁸

Table 4: Five-year summary of CMR clearance (2014–18)

Year	Central and Southern Iraq (m ²)	KRI (m ²)	Totals (m ²)
2018	7,167,243	27,663 ³⁹	7,194,906
2017	4,381,717	348,274	4,729,991
2016	2,889,585	209,920	3,099,505
2015	8,235,094	546,371	8,781,465
2014	N/K	N/K	N/K
Totals	22,673,639	1,132,228	23,805,867

N/K = Not known

- 1 Interview with Nibras Fakhir Matrood, Director, DMA RMAC-S, and Haitham Fattah Lafta, Operations Manager, DMA RMAC-S, Basrah, 29 April 2019; Article 7 Report for 2018, Form F.
- 2 Email from Khatib Omer Ahmed, Planning Manager, Directorate General of Technical Affairs, Iraqi Kurdistan Mine Action Agency (IKMAA), 8 May 2018; email from Portia Stratton, Country Director, MAG, 13 May 2019.
- 3 Interview with Mats Hektor, Project Manager, NPA South Iraq, and Mousa Alsqour, Operations Manager, NPA South Iraq, Basrah, 28 April 2019.
- 4 Interview with Nibras Fakhir Matrood and Haitham Fattah Lafta, RMAC-S, Basrah, 29 April 2019; and with Mats Hektor, NPA, Basrah, 28 April 2019.
- 5 Data provided by Nibras Fakhir Matrood, RMAC-S, Basrah, 29 April 2019. The total is corrected as the total provided by RMAC-S was inaccurate.
- 6 Interviews with Nibras Fakhir Matrood and Haitham Fattah Lafta, RMAC-S, Basrah, 29 April 2019; and Siraj Barzani, Director General, IKMAA, in Erbil, 9 May 2019.
- 7 DMA presentation to 2015 Mine Action Country Planning Workshop for Iraq, Istanbul, 13 May 2015; Geneva International Centre for Humanitarian Demining, "Capacity Development Support to National Mine Action Authorities in Iraq, Phase 1: Initial Assessment Mission", February 2012.
- 8 Interviews with mine action stakeholders in Iraq, 29 April–6 May 2019.
- 9 Email from Shinobu Mashima, Programme Officer, UNMAS Iraq, 4 May 2019.
- 10 Interview with Siraj Barzani, IKMAA, Erbil, 9 May 2019.
- 11 Email from Khatib Omer Ahmed, IKMAA, 8 May 2018.
- 12 Interview with Siraj Barzani, IKMAA, Erbil, 9 May 2019.
- 13 Interviews with mine action stakeholders in Iraq, 28 April–6 May 2019.
- 14 Email from Shinobu Mashima, UNMAS, 4 May 2019.
- 15 Interview with Ahmed Aljasim, DMA, in Geneva, 23 May 2019.
- 16 Interviews with operators in Iraq, 28 April–6 May 2019.
- 17 Ibid.
- 18 Ibid.
- 19 Interviews with Shawkat Tayeh, Head of Operations, DMA, Baghdad, 5 May 2019; Isam Ghareeb, Country Representative and Senior Technical Adviser, iMMAP, Erbil, 7 May 2019; and with operators in Iraq, 28 April–6 May 2019.
- 20 Interviews with Ahmed Aljasim, Head of Planning and Information, DMA, Erbil, 9 May 2019, and in Geneva, 23 May 2019; and Karzan Hamad, Senior Information Officer and Web Developer, iMMAP, Erbil, 9 May 2019.
- 21 Email from Shinobu Mashima, UNMAS, 4 May 2019.
- 22 Email from Dandan Xu, Associate Programme Management Officer, UNMAS, 28 June 2019.
- 23 Interview with Nibras Fakhir Matrood and Haitham Fattah Lafta, RMAC-S, Basrah, 29 April 2019.
- 24 Ibid.; and interview with Mats Hektor, NPA, Basrah, 28 April 2019.
- 25 Interviews with Mats Hektor, NPA, and Mousa Alsqour, NPA, Basrah, 28 April 2019; and emails, 22 and 28 May 2019.
- 26 Email from Nibras Fakhir Matrood, RMAC-S, 10 May 2019.
- 27 CCM Article 7 Report for 2018, Form F.
- 28 Email from Mats Hektor, NPA, 28 April 2019.
- 29 Ibid.
- 30 Article 7 Report for 2018, Form F; email from Nibras Fakhir Matrood, RMAC-S, 10 May 2019. The DMA also reported clearance of 10.3 million square meters in 2018. It said Article 7 Report data included only results reported in 2018 and the higher figure included results of clearance conducted in 2018 but only reported and recorded in the database in 2019. The DMA's higher result attributed clearance of 6.8 million square meters in 2018 to NPA, more than double the area reported cleared by NPA.
- 31 Email from Nibras Fakhir Matrood, RMAC-S, 10 May 2019.
- 32 Except as specified, data provided by email by Nibras Fakhir Matrood, RMAC-S, 10 May 2019. NPA reported clearing 3,778,754m² and DDG said it cleared 170,000m².
- 33 Email from Portia Stratton, MAG, 13 May 2019.
- 34 CCM Article 7 Report for 2018, Form F.
- 35 Emails from Mats Hektor, NPA, 28 April and 22 May 2019, and Mohammed Qasim, Programme Manager, DDG Basrah, 29 April 2019.
- 36 Email from Portia Stratton, MAG, 13 May 2019.
- 37 Interview with Nibras Fakhir Matrood and Haitham Fattah Lafta, RMAC-S, Basrah, 29 April 2019.
- 38 Ibid.
- 39 Email from Portia Stratton, MAG, 13 May 2019.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 AUGUST 2020
 FIVE-YEAR EXTENSION REQUEST SUBMITTED TO 1 AUGUST 2025
 LAO PDR WILL REQUIRE MULTIPLE EXTENSIONS BEFORE REACHING COMPLETION

KEY DATA

CLUSTER MUNITION CONTAMINATION: MASSIVE

NO RELIABLE ESTIMATE OF CLUSTER
MUNITION CONTAMINATION EXISTS, AS YET.

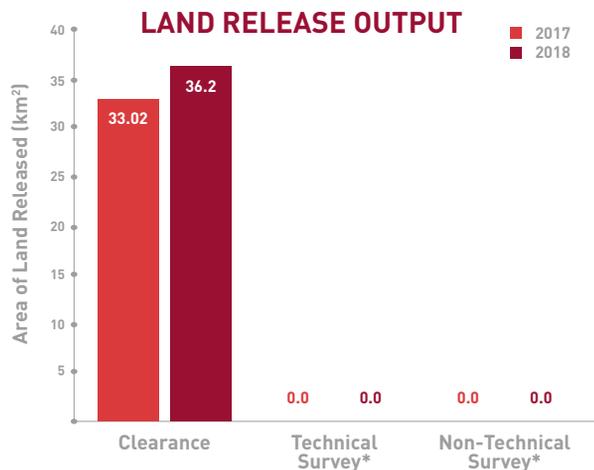
SUBMUNITION
CLEARANCE IN 2018

36.2KM²

SUBMUNITIONS
DESTROYED IN 2018

90,798

* Non-technical survey (NTS) and technical survey (TS) are conducted in Lao PDR, but are focused on finding evidence of cluster munition contamination as part of a nationwide survey. The output of the Cluster Munition Remnants Survey (CMRS) being undertaken in Lao PDR is the creation of evidence-based confirmed hazardous areas (CHAs).



KEY DEVELOPMENTS

The national mine action programme in the Lao People's Democratic Republic (Lao PDR) continued to make solid progress in 2018, strengthening both structures and processes. The Prime Minister approved a decree in February 2018 on the organisation and operations of the National Regulatory Authority (NRA), defining and clarifying its role, duties, organisational structure, and working principles. Coordination and collaboration at national and provincial level between the NRA, clearance operators, and other stakeholders strengthened, with the creation of a sector-wide work plan for 2018 which included input from all stakeholders. Towards the end of 2018, Lao PDR submitted a five-year extension request to its CCM Article 4 deadline for consideration at the Ninth Meeting of States Parties in September 2019.

National unexploded ordnance (UXO) survey standards were formally approved in July 2018, requiring evidence-based survey methodology to identify confirmed hazardous areas (CHAs) as standard practice. Efforts were also ongoing to clean up historical errors and strengthen information management systems and processes.

Land release by clearance in 2018 was a 10% increase on the previous year's achievement, at more than 36km².

RECOMMENDATIONS FOR ACTION

- Cooperation and coordination between clearance operators should be further strengthened. In particular, the NRA should help facilitate effective collaboration by ensuring that UXO Lao data from historic tasks, which is not on the database, be made available to international operators as and when needed, and without unnecessary delay, to help inform survey and clearance operations.
- The NRA should maintain efforts to address inaccurate and incomplete historical operational data in the IMSMA database, and improve information management systems and processes, to ensure the quality, credibility, and transparency of data, especially given the increased volume of data resulting from the ongoing nationwide cluster munition remnants survey (CMRS).
- Procedures for issuing, amending, or renewing Memoranda of Understanding (MoU) should be streamlined, standardised, and made transparent, to avoid inefficiencies and excessive delays.
- The National Regulatory Authority (NRA) should strengthen guidance on the prioritisation processes and criteria for cluster munition remnant (CMR) clearance tasks.

- The NRA and clearance operators should strengthen coordination with provincial, district and village-level authorities during implementation and planning of CMRS and clearance, incorporating gender considerations.
- The NRA should seek to expand and strengthen its external quality management (QM) capacity.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	7	Lao PDR does not yet have a reliable estimate of CMR contamination, but is undertaking a nationwide survey that should produce an evidence-based assessment of the full extent of CMR contamination. Some 2,873 villages are believed to be impacted by CMR.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	7	There is strong national ownership from the NRA and the relevant prime ministerial decree in 2018 clarified and confirmed the role of the NRA as the primary coordinator and national focal point for the sector. Mine action in Lao PDR is also firmly linked to the government's sustainable development planning. However, MoU procedures remain complex and heavy, causing significant delay and impeding the implementation and expansion of survey and clearance, including by preventing the acquisition and import of equipment.
GENDER (10% of overall score)	7	In partnership with UN Women and the Lao Women's Union, the NRA held a workshop in December 2018 on how to promote gender rights in the Lao PDR UXO sector and, in early 2019, finalised a manual for trainers on gender mainstreaming. The four major international clearance operators in Lao PDR either have gender policies in place or are in the process of implementing such policies.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	6	There are ongoing efforts to correct historical data in IMSMA and to improve information management systems and processes to ensure the quality, credibility, and transparency of data, especially given the increased volume of data resulting from the ongoing nationwide CMRS. Lao PDR submitted its CCM Article 4 extension request on time, for consideration at the Meeting of States Parties in September 2019.
PLANNING AND TASKING (10% of overall score)	6	A first sector-wide annual workplan for Lao PDR (for 2018), was developed in an inclusive manner with input from all relevant stakeholders and subsequently approved by the NRA Board. In its draft Article 4 extension request, Lao PDR outlined a workplan for the five-year period of the extension, with three potential clearance output estimates, each with measurable benchmarks, dependent on the level of funding and capacity obtained. No comprehensive national-level guidance on the prioritisation of clearance tasks exists, but a project began in 2019 to create a nationwide prioritisation matrix.
LAND RELEASE SYSTEM (20% of overall score)	8	Lao PDR UXO Survey Standards, which specify the minimum standards and requirements for the survey of all cluster munition-contaminated areas in Lao PDR, were officially approved in July 2018. The survey standards are well adapted to the local threat and context and adopt an evidence-based land release methodology, in line with international best practice.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	7	The use of CMRS is a solid basis for the targeting of clearance and improvements to the survey methodology in 2018 will further enhance the efficiency of clearance operations.
Average score	7.0	Overall programme performance: GOOD

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- National Regulatory Authority (NRA) Board
- National Regulatory Authority (NRA)

NATIONAL OPERATORS

- UXO Lao
- Humanitarian teams of Lao Army
- Commercial operators Humanitarian teams of Lao Army
- Commercial operators

INTERNATIONAL OPERATORS

- The HALO Trust
- Humanity and Inclusion (HI)
- Mines Advisory Group (MAG)
- Norwegian People's Aid (NPA)
- Japan Mine Action Service (JMAS)
- Commercial operators

OTHER ACTORS

- United Nations Development Programme (UNDP)
- Tetra Tech

UNDERSTANDING OF CMR CONTAMINATION

Lao PDR does not yet have a reliable estimate of CMR contamination,¹ but is undertaking a nationwide CMRS that should produce an evidence-based assessment of the full extent of CMR contamination.² US bombing data indicate 70,000 individual target locations across Lao PDR.³ Fourteen of the country's seventeen provinces are contaminated: Attapeu, Bolikhamxay, Champasak, Houaphanh, Khammouane, Luang Prabang, Oudomxay, Phongsaly, Saravan, Savannakhet, Vientiane Capital, Vientiane Province, Xekong, and Xiengkhouang.⁴ Of these, nine provinces are heavily affected: Attapeu, Champasak, Houaphanh, Khammouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhouang.⁵

In its 2019 Article 4 extension request, Lao PDR estimated that the total land contaminated by CMR is approximately 8,470km², a figure unchanged since its September 2011 clearance statement to the CCM Second Meeting of States Parties. National authorities acknowledged that the nationwide survey will confirm the extent of cluster munition contamination far more accurately.⁶

Lao PDR has the world's highest level of contamination by unexploded submunitions as a result of the Indochina War of the 1960s and 1970s. The United States conducted one of the heaviest aerial bombardments in history, dropping more than two million tonnes of bombs between 1964 and 1973,⁷ including more than 270 million

submunitions (known locally as bombies). The failure rate is not known, but Lao PDR reports it may have been as high as 30 percent, and an estimated 80 million submunitions are thought to have remained unexploded at the end of the war.⁸

During the period of its Article 4 extension request (2020–25), Lao PDR will focus survey on the six heavily contaminated provinces currently being surveyed, but the remaining affected provinces will also need to be surveyed in order to quantify the extent of CMR contamination nationwide.⁹

According to Lao PDR, in 2014–18, UXO operators in Lao PDR (UXO Lao, humanitarian teams of Lao Army, HI, The HALO Trust, Mines Advisory Group (MAG), and Norwegian People's Aid (NPA)) conducted non-technical and technical survey in ten contaminated provinces, including Attapeu, Bolikhamxay, Champasak, Khammouane, Saravan, Savannakhet, and Xekong. By the end of 2018, non-technical survey had been conducted in 1,558 villages and technical survey in 1,217 villages, resulting in 9,284 CHAs, equivalent to 85,829 hectares (858km²) – see Table 1.¹⁰ The amount of CHA is expected to continue to increase as the nationwide CMRS continues, and may double or even triple over the next five years.¹¹

Table 1: CMR survey results (at end 2018)¹²

Province	No. of villages	No. of CHAs	Total area (km ²)
Attapeu	108	1,301	124.0
Bolikhamxai	3	1	0.1
Champasak	69	215	10.9
Houaphanh	98	287	30.6
Khammouane	92	432	68.2
Luang Prabang	43	175	17.9
Saravan	277	1,911	83.5
Savannakhet	209	2,897	128.0
Xekong	119	1,075	76.6
Xiengkhouang	199	990	318.4
Totals	1,217	9,284	858.2

Between the time Lao PDR became a state party to the CCM on 1 August 2010 (when the Convention as a whole entered into force) and the end of 2018, a total of 41,088 hectares (410.9km²) has been cleared, with the destruction of 518,368 submunitions. This includes clearance by humanitarian operators, commercial operators, and humanitarian clearance teams of the Lao Army.¹³

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Lao PDR also has extensive contamination from other explosive remnants of war (ERW), including both air-dropped and ground-fired unexploded ordnance (UXO), though the extent of contamination is not known. Clearance operators have reported the presence of at least 186 types of munition in Lao PDR. These range from 20lb fragmentation bombs to 3,000lb general-purpose bombs, as well as artillery shells, grenades, mortars, and rockets.¹⁴ Lao PDR is also contaminated, but to a much lesser extent, by anti-personnel mines and anti-vehicle mines (See Mine Action Review's *Clearing the Mines* report on Lao PDR for more information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The NRA, created by government decree in 2004 and active since mid 2006, has an interministerial board composed of representatives from government ministries and is chaired by the Minister of Labour and Social Welfare.¹⁵ The Prime Minister of Lao PDR approved a new decree, "On the Organisation and Operations of the National Regulatory Authority for UXO in Lao PDR" in February 2018. The decree defines the position, role, duties, rights, organisational structure, and the working principles and methods of the NRA.¹⁶

The NRA acts as the coordinator for national and international clearance operators and serves as the national focal point for the sector. This includes overall management and consideration of policy, planning, projects, and coordination of the implementation of the national strategy nationwide, as well as NRA planning and coordination functions at the provincial and district levels.¹⁷ While the NRA has the central role of UXO Sector coordination, increased coordination and collaboration between all stakeholders, including line ministries, local authorities, UXO operators, development partners, and others are essential for the NRA to fulfil its coordination role.¹⁸ Effective coordination is particularly crucial in the context of prioritising clearance of the large number of CHAs already recorded in the database as a result of the ongoing CMRS.¹⁹

Prior to 2004, nearly all humanitarian clearance operations in the UXO Sector had been conducted under the umbrella of the national mine action operator, Lao National Unexploded Ordnance Programme (UXO Lao), which was established in 1996.²⁰

The Lao government adopted UXO clearance as a ninth Millennium Development Goal in 2010, targeting removal of all UXO from priority agricultural land by 2020.²¹ Subsequently, during the Association of Southeast Asian Nations (ASEAN) summit in September 2016, Lao PDR launched sustainable development goal (SDG) 18, "Lives Safe from UXO", which focuses on freeing the country from UXO. The Eighth National Socio-Economic Development Plan (2016–20) also reflects the importance of UXO clearance for realising Lao PDR's development targets.²²

UNDP provides programmatic and technical support to the NRA and UXO Lao, including with regard to information sharing and coordination, albeit at a reduced capacity compared to previous years.²³ In 2018, further capacity development in information management, QM, and operations support, was provided primarily to UXO Lao, and to a lesser extent the NRA, through a US-funded grant manager, Janus Global Operations. As part of its work in 2018, Janus supported UXO Lao with survey and data analysis and correction as a follow-on to training they conducted in 2017.²⁴ Effective 31 December 2018, Tetra Tech replaced Janus as the US-funded grant manager in Lao PDR.²⁵

There is a Sector Working Group (SWG), led by the chair of the NRA board, and co-chaired by UNDP and the US Ambassador in Vientiane, which meets annually and brings together key stakeholders, including donors, to share information and enhance coordination and resource mobilization.²⁶ The last SWG meeting was convened in November 2018.²⁷ National authorities in Lao PDR planned to diversify the sources of funding throughout the extension request period, including engaging the private sector and non-institutional donors. The Lao government also planned to approach new potential donors, such as China, India, and Russia.²⁸

International clearance operators recognised a notable improvement in both cooperation and coordination with the NRA throughout 2018, particularly at national level but also provincial and district levels.²⁹ Humanitarian clearance operators are involved in key decision-making processes by the national authorities, including through participation in Technical Working Groups (TWGs).³⁰ There are four TWGs, namely: for survey and clearance, information management, UXO risk education, and victim assistance. The TWGs, which are held regularly, are designed to promote information sharing and progress in the four thematic aspects.³¹ Operators were also consulted during the elaboration of Lao PDR's CCM Article 4 extension request.³² In addition, there were efforts to establish a survey working group in 2019, involving the NRA, clearance operators, and other key stakeholders.³³

Despite some efforts by the national authorities in 2018 to clarify the procedure for MoUs,³⁴ MoU procedures in Lao PDR remain complex and heavy, causing significant delay and impeding the implementation and expansion of survey and clearance, including by preventing the acquisition and import of equipment.³⁵ It should, though, be noted that MoU procedures are long and complex for all NGO activities in Lao PDR, not only those related to mine action. MoUs are typically issued to international clearance operators on a project basis. Operators are required to report and get approval for completed projects before an MoU for a new project can be approved. The lack of an MoU prevents expansion of operations or acquisition of new equipment.³⁶ Furthermore, even after formal approval of an MoU, operators may still experience challenges importing necessary equipment.³⁷

The NRA acknowledged delays in procurement of vehicles and equipment³⁸ and accepted that improvements could be made on the part of the national and local authorities involved in the MoU process. However, it also highlighted that some of the delays are due to incorrect reporting or a failure to follow correct procedures by clearance operators.³⁹ MoUs for The HALO Trust and NPA were finally signed on 21 June 2019,⁴⁰ marking a positive step forward for implementation. HI and MAG had already had their MoUs signed previously.

GENDER

As at end-June 2019, the national authorities in Lao PDR had not responded to Mine Action Review's questionnaire, therefore no data on gender was provided by the Ministry of Foreign Affairs or the NRA.

In 2018, UN Women, the NRA, and the Lao Women's Union worked in partnership on how to promote gender rights in the UXO sector. A capacity-building training took place in December 2018 in Vientiane, piloting a sector-specific manual which covers all mine action pillars. The objectives of the workshop were in line with the priorities of the Lao Women's Union to promote women's rights and the Lao government's commitment to advance gender equality in all sectors. The initiative also supports progress towards the National Action Plan for Gender Equality for 2016–20 and Lao PDR's own national Sustainable Development Goal 18 (SDG 18), to remove, by 2030, the obstacles that UXO pose to national development.⁴¹ A "Manual for Trainers on Gender Mainstreaming in the UXO Sector, Lao PDR" was finalised in the first quarter of 2019.

The HALO Trust, MAG, and NPA all reported having gender policies in place. These include consulting women and children during survey and community liaison activities. NPA planned to strengthen its efforts regarding gender in 2019, with the adoption of a gender-specific action plan.⁴² HI is establishing a gender, equality and inclusion (GESI) unit to help mainstream these aspects in its development and humanitarian action in Lao PDR.⁴³ UXO Lao does not have a gender policy at present.⁴⁴ The HALO Trust, HI, MAG, NPA, and UXO Lao all reported that their mine action data is disaggregated by sex and age.⁴⁵

The HALO Trust reported that all its teams are gender balanced and there is equal access to employment for qualified women and men in HALO's survey and clearance teams in Lao PDR. Overall, women account for 42% of operational roles in its survey and clearance teams in Lao PDR and 47% of managerial level/supervisory positions.⁴⁶

HI provides equal opportunities to employment for qualified women and men in its survey and clearance teams in Lao PDR, and trains and promotes women to managerial positions. HI has mixed non-technical survey teams, with employees of different ethnic origins and persons with disability, including UXO survivors. Overall, women account for 40% of HI's survey and clearance teams in Lao PDR and 50% of managerial level/supervisory positions.⁴⁷

MAG reported that there is equal access to employment for qualified women and men in its survey and clearance teams in Lao PDR. Overall, women account for 31% of operational roles in MAG's survey and clearance teams in Lao PDR and 32% of managerial level/supervisory positions.⁴⁸

NPA also reported that it prioritises minorities, particularly ethnic and language minorities, and women, as part of its recruitment process. While NPA survey and clearance teams are gender inclusive, they are not yet gender balanced. Overall, women account for 23% percent of operational roles in NPA's survey and clearance teams in Lao PDR and 16% of managerial level/supervisory positions.⁴⁹

UXO Lao ensures that all groups affected by CMR contamination, including women and children, are consulted during its survey and community liaison activities. This requirement is included in its SOPs. UXO Lao also ensures its survey and community liaison teams are inclusive and gender balanced, to facilitate access and participation from all groups.⁵⁰ UXO Lao reported that it offers employment opportunity to all, and is trying to increase the number of women in survey and clearance teams and in management positions.⁵¹ UXO Lao employs 1,366 staff, of whom 360 (i.e. 26%) are female.⁵² In its field operations women held three senior positions, five team leader positions, and two deputy team leader positions, in addition to an unspecified number of female deminers. At the national office management level, UXO Lao has one female unit chief and two deputies.⁵³

INFORMATION MANAGEMENT AND REPORTING

The national IMSMA database has multiple data problems, including incorrect or incomplete historical data (mainly that of UXO Lao data stored as hard copy documents in provincial UXO Lao offices); missing data from the migration to IMSMA; and delays in entering new or corrected data into the database.⁵⁴

The NRA has identified that capacity building on data management needs to be strengthened to provide quality control of data and prevent data errors in IMSMA.⁵⁵ It has also stressed that upgrading information management systems will be crucial given the greatly increased volume of data resulting from the ongoing nationwide CMRS.⁵⁶ According to international clearance operators, access to IMSMA data deteriorated in 2018, and rather than data being freely available as was previously the case, it is now only provided on a request-by-request basis.⁵⁷ They also believed there is scope for the data gathering forms to be strengthened to also

ensure socio-economic and impact data is also available for use in planning and prioritisation.⁵⁸ Revision of the IMSMA data collection forms is planned to be addressed under the UK Department for International Development (DFID) capacity development project in 2019–20.⁵⁹ In addition, the information management system in Lao PDR must also be equipped to record operator conclusion reports, in order to know how many villages have been surveyed. This analysis was missing as at early 2019.⁶⁰

Janus Global Operations provided capacity support to the UXO Lao IM department during 2018 to identify and correct historical data, and developed a tool to help identify data issues in IMSMA.⁶¹ A 2017 report by Sterling International, the US contractor before Janus, said analysis of data in the NRA IMSMA database found errors affecting up to 9,300 entries, or 14% of the 67,000 entries on the database. Sterling believed that the errors

could affect 22% of the area recorded in the database as cleared or technically surveyed. The errors included operators' misreporting of coordinates and mistaken entry of reports into IMSMA. Other errors included use of the wrong GPS format or the wrong map datum. The result was to put many tasks in the wrong location. Sterling found that the errors occurred mostly with UXO Lao's work, and mostly between 2004 and 2010, but that it affected "many" organisations.⁶²

Efforts to correct historical data within IMSMA (including incorporation of correct current data) are ongoing on all survey tasks and across all operators.⁶³ NPA reported that the quality of its data in the IMSMA database had improved and there were no mismatches in 2018 operations data between NPA's internal reporting systems and the IMSMA database. NPA attributed this improvement to the introduction of IMSMA VPN, which has increased the speed and quality of the data entry and reporting process. The test of the new IMSMA system took place from July to September 2018, with technical support from NPA, and was considered successful. The NRA plans to use this system sector-wide in Lao PDR.⁶⁴ Expanding the use of IMSMA to support survey planning and the review of all historical operational data (both electronic and paper), will help ensure that non-technical survey is followed up by robust technical survey operations.⁶⁵

When the organisation conducting the CMRS is different to the one holding historical records, the nationwide CMRS demands good cooperation and timely sharing of data relating to villages between clearance operators. This pertains to historical information on explosive ordnance disposal (EOD) roving tasks, area clearance, and accident data.⁶⁶ In general, communication between international operators and UXO Lao is continuing to improve. However, while UXO Lao does provide its data on historical tasks to international operators to help inform desktop studies before sending in survey teams, data is often slow to be made available.⁶⁷ Delays in the timely provision of historical data by UXO Lao are understood to be partly connected to the lack of an appropriate and clear structure for the granting of permissions for data sharing at the provincial level.⁶⁸ UXO Lao reported that it is not permitted to share data not in IMSMA directly with operators, by directive of the NRA.⁶⁹ HI highlighted the importance of having access to the overall contamination picture for Houaphanh province, in which it is operating, especially due to the discovery of landmines in HI's target villages.⁷⁰

It is also important that village-level data corrections made by operators during the nationwide CMRS are updated in IMSMA in a timely manner.⁷¹ According to international operators, information in the national database continues to be two to three months behind operators' information, as the NRA's capacity to check and enter data is limited. However, there are also gaps where operators are slow in submitting data to the national authority.⁷²

In 2018, evidence of falsification of UXO Lao CMR CHA data in Houaphanh Province came to light, and was subject to internal and external investigation.⁷³ The NRA confirmed that the incident had been investigated by the NRA, UXO Lao, and the European Union (EU). The findings of the investigation were shared and lessons learned to ensure that systems are put in place to prevent such occurrences in the future, and that if such incident does occur it is picked up swiftly. The investigation report demonstrates the need to strengthen and improve systems, including quality control at the local, provincial, and head office level. The incident also resulted in "restructuring" of UXO Lao personnel.⁷⁴ UXO Lao reported that its Information Management unit now has rigorous quality checks in place for all survey outputs (CHAs), as part of efforts to prevent such instances in the future.⁷⁵

Lao PDR provides regular updates on its progress in Article 4 implementation, both in its annual Article 7 transparency reporting and in statements at the CCM meetings of states parties.

Lao PDR submitted a timely CCM Article 4 deadline extension request for consideration at the CCM Ninth Meeting of States Parties in September 2019. Lao PDR's extension request details progress to address its CMR contamination to date, including the ongoing efforts to determine a baseline of CMR contamination through the nationwide CMRS. The survey will take several years to complete, but for the purposes of its Article 4 extension request, Lao PDR has outlined a workplan for the five-year period of the extension, with three potential clearance output estimates, each with measurable benchmarks, dependent on the level of funding and capacity obtained. The first estimate is based on current capacity and clearance output; the second, on required capacity and funding needed to clear the 800km² of CHA already identified as at the end of 2018; and the third estimate details projected funding and capacity needed to clear the existing 800km² of CHA already identified as at end 2018 as well as a further 800km² of CHA expected to be identified and added to the information management database during the five-year period of the request.⁷⁶

PLANNING AND TASKING

As part of efforts to implement the CCM Vientiane and Dubrovnik Action Plans, the Lao Government adopted "Safe Path Forward II, 2011–20", a 10-year national strategy for the UXO sector. The strategy's goal is "to reduce the humanitarian and socio-economic threats posed by UXO to the point where the residual contamination and challenges can be adequately addressed by a sustainable national capacity fully integrated into the regular institutional set-up of the Government."

Safe Path Forward II was reviewed in June 2015, when the NRA set a number of specific targets for the remaining five years up to 2020.⁷⁷ Many of these were superseded in March 2016 when the NRA issued a landmark paper committing to time-bound nationwide non-technical and technical survey through the CMRS project, with a view to producing Lao PDR's first baseline estimate of CMR contamination.⁷⁸ There is a corresponding multi-year workplan 2016–20 for implementation of the Safe Path Forward II strategy.⁷⁹

which called for spending on clearance of \$57 million, and targeted clearance for 2017–21 of 45km² a year, considerably in excess of actual clearance rates.⁸⁰

In a positive development, a first-ever sector-wide annual workplan for Lao PDR (for 2018), was developed in an inclusive manner with input from all relevant stakeholders and subsequently approved by the NRA Board.⁸¹ This is a step forward for the mine action sector in Lao PDR, which should lead to increased coordination and steering from the Lao authorities at all levels so the outcomes are agreed and accepted by all stakeholders.⁸² Unfortunately, stakeholders were not brought together to help inform elaboration of the annual sector-wide workplan for 2019, in the same way as for 2018, reportedly due to lack of budget. Instead the ministry collected the data to inform the 2019 plan.⁸³

According to Lao PDR's extension request, "all sector activities are implemented in order to achieve SDG18 "Lives Safe from UXO", to remove the UXO obstacle to national development and the activities should be implemented in line with the strategic documents and policies".⁸⁴ The UXO Sector has been further integrated into the national development agenda, such as the National Policy on Rural Development and Poverty Eradication, including the National Socio-Economic Development Plan (2016–20), on the approval of priority development areas.⁸⁵

In 2018, Lao PDR began its national CMRS baseline survey, with funding from the United States. The first phase of the survey involves six province-wide surveys by international operators The HALO Trust, MAG, and NPA of all villages suspected or confirmed as CMR-contaminated, according to the NRA's village list, in Attapeu, Champasak, Saravan, Savannakhet, Xekong, and Xiengkhouang.⁸⁶ The second phase of the US-funded project will likely be survey of an additional three heavily contaminated provinces, and would only start once phase one is completed.⁸⁷ In September 2018, Lao PDR announced that three additional contaminated provinces would be added to the national survey plan in 2019 and another five provinces in 2020–21, with the aim to have 14 provinces fully surveyed by end of 2021.⁸⁸ However, survey of the first six provinces is falling behind schedule.⁸⁹

Workplan estimates for the extension request period (2020–25)

Lao PDR's CCM Article 4 extension request includes a five-year workplan for survey and clearance, with progress dependent on the level of funding it secures.

Based on existing capacity, over the five-years period of Lao PDR's extension (1 August 2020–31 July 2025), 25 non-technical survey teams will survey 1,463 cluster munition contaminated villages (292 villages per year), at a total cost of US\$4.5 million (US\$0.9 million per year) and 76 technical survey teams would survey 2,873 villages (466 in year 1; 655 in year 2; 723 in year 3; 529 in year 4; and 500 in year 5), at a predicted total cost of US\$38 million (US\$7.6 million per year). Re-survey is to be conducted as required, if new evidence of CMR is reported and found.⁹⁰

As at the end of 2018, more than 9,284 CHAs, equivalent to 858km² in size, had already been identified through the ongoing CMRS and entered into IMSMA, representing several years of clearance efforts based on current clearance capacity. The NRA predicts that the number of CHAs containing CMR will significantly increase during the five-year period of the extension request, at a rate far faster than the CMR can be cleared.⁹¹

In its Article 4 extension request, Lao PDR outlines three different estimates for CMR clearance, based on three different scenarios for available resources.

The first estimate (estimate one), outlines predicted clearance output based on existing resources during 2020–25; namely 108 teams, with a total clearance output of 50km² per annum, at a cost of US\$12.5 million per year. This would result in clearance of 250km² at a costs of \$62.6 million, during the five-year extension request period.⁹² This seems highly ambitious, based on current output.

The second estimate (estimate two), outlines predicted clearance output based on the additional resources needed to address the 800km² of CHA already recorded in IMSMA as at end of 2018. This estimate sees annual clearance output incrementally increased from 60km² per annum in 2020 to 280km² per annum in 2024, with total clearance output of 800km² during the five-year extension request period, at a total cost of US\$200 million.⁹³

The third estimate (estimate three), outlines predicted clearance based on the additional resources needed to address 1,600km² of CHA (i.e. 800km² of CHA already recorded as at end of 2018 and a further 800km² of CHA predicted to result from CMRS during the five-year extension request period, at a total cost of US\$400 million.⁹⁴

Prioritisation of clearance is a critical step in the land release cycle and a key component of an integrated survey and clearance programme, especially given the large and increasing number of CHAs produced by the ongoing nationwide CMRS. However, at present, there is no comprehensive national-level guidance on the prioritisation of clearance tasks and prioritisation systems and criteria vary markedly between the operators.⁹⁵ No task dossier system is implemented by the NRA.⁹⁶ A Geneva International Centre for Humanitarian Demining (GICHD) report in 2017 found that "the current national-level prioritisation policies for UXO clearance in Lao PDR are quite general in nature. And, in the absence of agreed criteria for the sector, each UXO operator uses its own criteria to assist decision-making and work planning at the sub-district level."⁹⁷

The sector would benefit from the strengthening of the capacity and participation of the NRA at the provincial level and of district officers from the Labour and Social Welfare authorities. Operators also stressed the need for community participation in the process.⁹⁸ The NRA acknowledges difficulties in sector planning and prioritisation by local authorities.⁹⁹ According to Lao PDR's Article 4 extension request, the NRA, with the support of UNDP, has developed criteria and planning guidelines to align prioritisation of clearance with human development. Lao PDR recognises the importance of adopting and implementing a policy

of clear and transparent prioritisation of tasks for the coming years.¹⁰⁰ Under the new DFID contract which commenced in 2019, NPA will assist the NRA in developing national capacity and creating a nationwide prioritisation matrix, with input from fellow DFID consortium partners, HALO Trust and MAG.¹⁰¹

At the micro level, prioritisation of clearance tasks in Lao PDR is in part dictated by the wet and dry seasons. During the dry season, operators are able to access and clear paddy fields, while in the wet season, they focus on clearing grazing and community land.¹⁰²

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

The “Lao PDR UXO Survey Standards” (UXO Survey Standard No. 21/NRA) specify the minimum standards and requirements for the survey of all cluster munition-contaminated areas in Lao PDR.¹⁰³ The standards were developed in a participatory manner with assistance and input from the mine action community in Lao PDR and were completed in September 2017, before being officially approved by chair of the NRA on 4 July 2018.¹⁰⁴ The standards are said to conform to the International Mine Action Standards (IMAS).¹⁰⁵ The national standards are fully reflected in the standing operating procedures (SOPs) of clearance operators, who reported that they are well adapted to the local threat and context.¹⁰⁶

UXO Lao, however, believes that aspects of the standards relating to the creation and reporting of interim (incomplete) CHAs, due to the vast extent of CMR contamination in some areas, needs to be reviewed. It also believes that in some circumstances there may be justification for not carrying out survey, but instead making evidence-based assessments of contamination to establish CHAs. In places with severe contamination, UXO Lao is in favour of having the option to forego survey and move directly to clearance.¹⁰⁷ The NRA plans to formally review the national standards at least every three years, in collaboration with stakeholders, to ensure they evolve to meet changing circumstances and the introduction of new technologies and methodologies.¹⁰⁸

Prior to 2014, UXO operators in Lao PDR primarily carried out general survey on areas intended for clearance and roving clearance tasks, based on request and reports from villagers. Then, in 2015, all five humanitarian clearance operators (HI, HALO Trust, MAG, NPA, and UXO Lao) and the humanitarian teams of the Lao Army, changed to evidence-based survey procedures (i.e. the CMRS) in which CHAs are identified for clearance.¹⁰⁹ Acceptance and adoption of an evidence-based methodology to survey, in line with international best practice, represents a significant improvement on the request- and response-based system of the past.¹¹⁰ CMRS has resulted in clearance being directed to cluster munition strikes, across land boundaries where necessary, and away from the clearance of areas with low or no CMR contamination. There has been a significant improvement in the number of CMR destroyed per hectare cleared since 2015.¹¹¹

As part of the new CMRS procedure, and the corresponding national standard, non-technical survey is to be carried out on whole villages (i.e. all land within a village boundary), not just individual areas of land, with the aim to identify evidence points for follow-on technical survey. An additional aim during survey is to correct errors or omissions in data in IMSMA or in operator files.¹¹²

The survey approach has been strengthened over the last couple of years, with more emphasis on the importance of desk assessment of historical data and comprehensive non-technical survey. A review by NPA of villages surveyed between 2011 and 2017 in Attapeu, Saravan, and Xekong provinces concluded that teams had not made sufficient use of historical data in some villages. NPA subsequently amended procedures to include analysis of non-technical survey data by senior information management and operations staff and changed team structures to strengthen quality management.¹¹³ Methodology was also strengthened by having survey teams spend at least three days in each village, and, where possible, staying in the village, to facilitate the collection of all relevant data.¹¹⁴ The HALO Trust also highlighted the benefit of teams staying in the village during the CMRS process, to help identify further evidence and build trust with the local communities.¹¹⁵

Technical survey is only carried out based on CMR evidence points and is also conducted on whole villages.¹¹⁶ Technical survey works outwards from the initial evidence point, searching no less than 50% of each 50 metre by 50 metre box with a detector, with emphasis on finding a submunition. As soon as a submunition is found, technical survey moves to the adjacent boxes. If cluster munition fragments are found, searching must continue until a submunition is found or at least 50% of the box is covered.¹¹⁷

While operators in Lao PDR are required to conduct CMRS in accordance with the national survey standards, there is still scope for flexibility and adaptability in their individual SOPs, recognising that the approach may differ by province based on conditions on the ground. Factors such as the percentage of each box surveyed (above and beyond the mandatory 50%, and ranging from 50 to 70%), time in box, search patterns, type of detector used, and team size and structure, therefore, varied between operators.¹¹⁸

Operators continue to refine their cluster munition survey methodology in a bid to accelerate operations. The technique of “skipping boxes”, in which teams finding CMR in one survey box skip one or more of the immediate neighbouring boxes and then survey the next box, was successfully trialled in 2016 by MAG and NPA partnering in Khammouane province. The trial demonstrated the potential for significant gains in productivity when applied in areas of heavy CMR contamination with overlapping strikes and large CHA polygons.¹¹⁹ The new national survey procedure permits operators to skip one or more boxes to speed up the technical survey process, but stipulates that skipped boxes should never be at the edge of a technical survey task and must always have a red or yellow box outside them.¹²⁰ Where appropriate, skipping boxes has now become standard practice for technical survey teams, where the focus is on identifying the boundaries of CHAs.¹²¹

In addition, MAG uses Evidence Point Polygon (EPP) mapping methodology to support CMRS planning. The technique, pioneered by MAG, uses historical and ongoing operational data from GPS-recorded EOD spot tasks involving submunitions to plot what are termed Initial CHAs (iCHAs). Within the boundaries of iCHAs, including fadeout, no technical survey is required, resulting in time and resources efficiencies. However, in order to be effective, this technique relies on accurate and reliable EOD spot-task data, which is not always available. In areas where MAG is applying EPP mapping, it uses its own EOD data.¹²²

An end-of-survey report form was created in 2017 to standardise the way clearance operators finish village surveys and then report to the government.¹²³ The extent to which the form is in widespread use is unclear, however.¹²⁴ This topic was due for further discussion in the course of 2019.¹²⁵ In addition, a “UXO Hot Line” was approved on 28 November 2017, to make it easier for members of local communities to report UXO¹²⁶ and to request support in the aftermath of an incident.¹²⁷

CHAs are established based on red boxes and include a 50-metre fade-out from the place submunitions are found during technical survey, unless fade-out extends into inaccessible or commercial concession areas (responsibility for survey and clearance in commercial concession areas is then that of the concession holder).¹²⁸

According to the national survey standards, clearance must only be conducted in CHAs, unless either “official agreements with the NRA permit a dispensation” or “the UXO clearance is being paid for by a client and 100% clearance without survey is a requirement of the agreement”.¹²⁹ The NRA maintained the need to retain some flexibility to accommodate donor stipulations which sometimes require full clearance of UXO in non-CHAs, for development projects such as schools, and there is an official procedure for such instances.¹³⁰ In late 2016, the Prime Minister issued Order No. 43/PM, which stipulates that development projects in provinces and districts affected by UXO must undergo survey and clearance before project implementation, and these development projects must also allocate funding for survey and clearance.¹³¹

Except in the case of permanently inaccessible land or commercial concession areas, CHAs that are incomplete or have not been created using the technical survey process are not to be entered into IMSMA.¹³² Interpretation and understanding as to what constitutes “inaccessible” is not clearly defined and can vary between clearance operators,¹³³ but according to the national survey standards, dense vegetation and seasonal flooding are not valid reasons for the non-completion of technical survey.¹³⁴ Clearance teams deployed to CHAs are required to have the knowledge and necessary equipment to operate in difficult areas such as steep hillsides and dense jungle terrain, which requires strong monitoring mechanisms to ensure that the physical obstacles do not reduce the quality of the survey and clearance work.¹³⁵ The minimum clearance depth in Lao PDR is 25cm, which is intended to capture all surface and shallow CMR contamination.¹³⁶

With regard to completion of CHAs/cluster munition footprints, international clearance operators reported difficulty conducting CMRS in certain areas, due to national security or restrictions to access land due to cultural sensitivities and beliefs.¹³⁷ Furthermore, in technical survey tasks in areas of massive contamination, with overlapping strikes, it is not always possible to continue to fade-out, as the confirmed areas extend too far.¹³⁸

According to the NRA, understanding of the CMRS process, especially at the local and field levels, is sometimes limited.¹³⁹ Stakeholders across the mine action sector in Lao PDR agreed on the importance of strengthening coordination with village authorities as an integral component of the survey process, ensuring that communities participate, understand, and accept the results of survey. It is especially important that villagers fully understand that, despite demolition of UXO during the CMRS process, CHAs identified through survey remain hazardous until full clearance has taken place, which may not be for many years.¹⁴⁰

OPERATORS

Land release operations in Lao PDR are conducted by a range of implementing partners, which includes humanitarian operators such as the national operator UXO Lao; international NGOs, HALO Trust, HI, MAG, and NPA; commercial clearance operators; and humanitarian teams of the Lao Army.¹⁴¹

UXO Lao, the oldest and largest clearance operator in Lao PDR, is a government organisation operating under the Ministry of Labour and Social Welfare,¹⁴² in nine provinces (Attapeu, Champasak, Houaphanh, Khammouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhouang).¹⁴³ In Luang Prabang, UXO Lao operates with funding from Norway and management support from NPA.¹⁴⁴ At present, UXO Lao is conducting more clearance than survey, which is largely determined by the donors. Its 2018 operational capacity was similar to the previous year, with clearance capacity of 82 ten-strong teams at the start of the year, reduced to 81 teams during the year, when one clearance team in Xiengkhouang province was converted to a technical survey team to work on completing

technical survey of incomplete CHAs. UXO Lao's technical survey capacity in 2018 comprised 15 eleven-strong teams at the beginning of the year, increasing to 16 teams during the year (as previously mentioned, when a clearance team was converted to technical survey). Its non-technical capacity in 2018 comprised nine non-technical survey teams (one four-person team in each of the nine provinces it operates, with the exception of Luang Prabang Province where non-technical survey and risk education to conducted jointly, by two teams).¹⁴⁵

UXO Lao reported that in six of the nine provinces in which it conducts non-technical survey, international NGOs MAG, HALO and NPA, are funded by the US to conduct 100% CMRS of affected villages in the provinces, which includes non-technical survey. UXO Lao is therefore reviewing whether there is a need for it to conduct non-technical survey, but this decision is complicated by the expectation of the Lao PDR government for UXO Lao, as the national operator, to be involved in all survey.¹⁴⁶

UXO Lao has seven Hitachi tracked excavators adapted for use as vegetation cutting machines, which are used in support of UXO Lao's clearance of CHAs in the provinces of: Saravan (four machines, of which three are new), Xekong (two machines), and Champasak (one machine). In addition, UXO Lao has two Komatsu tracked excavators that have been fitted with an attachment to crush BLU-26s and other small submunition types. These machines are deployed in Xiengkhouang province, where they work alongside two area clearance teams and destroy the smaller CMR located during clearance. Other larger UXOs located during clearance still have to be destroyed using explosives.¹⁴⁷

In addition, UXO Lao carried out emergency clearance in Sanamxai district of Attapeu, following the collapse of a hydroelectric dam in July 2018 and the subsequent flooding of a number of villages. As part of the emergency response, UXO Lao mobilised 16 clearance teams to help the release of more than 2.9km² of resettlement and agricultural land.¹⁴⁸

The HALO Trust's survey and clearance efforts are focused on Savannakhet province, where in 2018 it operated in the four most contaminated districts: Nong, Phin, Sepon, and Vilabouly.¹⁴⁹ The HALO Trust reported plans to increase survey efforts and decrease clearance in 2018, reflecting the donor emphasis on survey as part of efforts to complete CMRS of Savannakhet province.¹⁵⁰ In 2018, The HALO Trust deployed two teams of two people for non-technical survey. This marked a change from 2017, when all survey teams conducted non-technical survey when entering a village for the first time, so all 14 teams shared the work. In 2018, two specialist teams were created for the sole responsibility of conducting non-technical survey across HALO Trust's programme in Lao.¹⁵¹ The HALO Trust increased its technical survey capacity in 2018 to 160 personnel, compared to 70 in 2017, and by May 2018, it was deploying 16 technical survey teams.¹⁵² HALO's clearance capacity decreased from 10 teams of 13 personnel (including driver) from January to April 2018, to 4 teams from May to December 2018. However, HALO Trust expected to increase clearance

capacity substantially in 2019, due to a new DFID contract which will see 17 new clearance teams (each with 13 personnel, including driver) deployed.¹⁵³ In 2019, HALO Trust planned to expand operations into two new districts within Savannakhet province.¹⁵⁴

HI reported a decrease in land release operations in 2018, due to the MoU process and the relocation of its operations from Savannakhet to Houaphanh province, in the north of Lao PDR. HI's MoU was approved in December 2018, with operations beginning in Houaphanh province in early 2019.¹⁵⁵ HI has one technical survey team, composed of a team leader, a section commander, and six technicians. This is a reduced survey capacity compared to the previous year and is due to a different approach to project implementation in 2018, which involves HI working with development partners to better shape the prioritisation process. In addition, HI has two clearance teams that were trained in 2018 and were ready to be deployed in 2019.¹⁵⁶

Although under the national UXO Survey Standards, technical survey is supposed to be finalised in one village before moving to another village, HI focuses on its own prioritisation system for both survey and clearance based on the probability of local communities encountering CMR. As some of the villages are very remote, with very steep areas covered with forests, HI prefers to focus on community areas and agricultural land first.¹⁵⁷

HI has discovered the presence of M-16 and M-14 anti-personnel landmines in most of the seven villages in Houamuang district, in Houaphanh province, in which it had conducted non-technical survey as at March 2019. This will have a significant impact on the methodology HI employs and will impede CMR land release operations. As at March 2019, HI planned to try to better determine the probable location of landmines to help reduce the probability of its teams operating in unknown mined areas. HI also planned to suggest a new SOP to the NRA for a combined technical survey/area clearance.¹⁵⁸

In addition to survey and clearance operations, HI also planned to help build the capacity of the provincial NRA in Houaphanh province, through provision of equipment and training in informational management and quality management. The lack of current capacity of the provincial NRA in Houaphanh reportedly hinders its ability to fulfil its role.¹⁵⁹

MAG is the largest international survey and clearance operator in Lao PDR. In 2018, it was responsible for half of all technical survey conducted in the country, identifying 144km² of contaminated land (see Table 2). MAG is operational in two provinces in Lao PDR: Xiengkhouang in the north, where it is conducting technical survey of all villages as part of the nationwide survey project, and Khammouane in the south, where MAG's main focus in 2019 is on surveying 30 priority villages in Boulapha district, one of the most heavily contaminated areas in Lao PDR.¹⁶⁰ In 2018, MAG deployed three non-technical survey teams, each consisting of two men and two women. MAG increased its non-technical survey capacity in 2019, with deployment of five additional non-technical survey teams in Khamouane province from March; and

increased its technical survey capacity from 90 in 2017 to 260 personnel in 2018.¹⁶¹ In addition to its own teams, MAG subcontracted two NPA technical survey teams from September 2018 to February 2019, in a six-month project under the Norwegian Ministry of Foreign Affairs grant to carry out CMRS in Khamouane province.¹⁶² As at March 2019, MAG had assumed all of the activities under the project and was conducting both survey and clearance.¹⁶³

In addition to survey, MAG also deployed 117 clearance personnel in 2018 in Xiengkhouang and Khammouane provinces, a slight decrease compared to 2017, as some personnel were moved to technical survey under MAG's contract with the United States.¹⁶⁴ MAG's clearance capacity in 2019 was set to significantly increase, with deployment of an additional 23 clearance teams: 11 in Xiengkhouang province and 12 in Khammouane province, totalling 299 new staff, mostly funded by DFID.¹⁶⁵ MAG also deploys mechanical assets in support of clearance operations, significantly increasing overall efficiency. MAG's clearance work is also funded by a private American foundation on the basis of which it deploys three clearance teams in Khammouane.¹⁶⁶

NPA is operational in the three southern provinces of Attapeu, Saravan, and Xekong. NPA plans to also become operational in Champasak province.¹⁶⁷ In addition, and as mentioned above, NPA was also subcontracted by MAG to carry out CMRS in Khammouane for six months, after which MAG conducted follow-on clearance of the CHAs created by NPA. This joint, fixed-term project was completed in February 2019.¹⁶⁸ NPA also acts as the project coordinator for Norwegian Ministry of Foreign Affairs bilateral support to Lao PDR, through UXO Lao's operations in Luang Prabang, in the north of the country.¹⁶⁹

In 2018, NPA deployed 23 CMRS (combined non-technical survey and technical survey) teams, totalling 138 personnel. NPA expected an increase of one CMRS team in 2019. NPA's clearance capacity in 2018 stood at 7 battle area clearance (BAC) teams, totalling 105 personnel. This represented an increase of three teams (totalling 45 personnel), compared to the previous year. NPA expected to deploy an additional two BAC teams (totalling 30 personnel) in 2019, under its DFID contract.¹⁷⁰ NPA's survey efforts in 2018 were largely focused on revisiting villages to conduct further investigation of historical data, based on strengthening of best practice for survey, and therefore less new CHAs were created.¹⁷¹ In addition, NPA also conducted unplanned emergency clearance in Sanamxai district of Attapeu, followed the collapse of a hydroelectric dam in July 2018 and the subsequent flooding of a number of villages. The NRA permitted NPA to use Vallon large-loop detectors (new to Lao PDR) for use

in flood-related emergency clearance in Attapeu, which resulted in swifter clearance compared to the sole use of handheld detectors. The use of a new type of large-loop detector, which has software developed to compensate specifically for the heavily mineralised soil found in Lao PDR, shows great potential to increase efficiency in normal CHA clearance. NPA plans for the detectors to be part of its standard operational toolbox in its new MoU, which was awaiting approval by the NRA as of writing.¹⁷² According to the NRA, the 2018 flooding in Attapeu resulted in some movement of CMR, but not much.¹⁷³

In addition to its survey and clearance operations, NPA also supports capacity development of the NRA and UXO Lao. NPA supports UXO Lao in Luang Prabang and provided support in 2018 for information management activities relating to the testing of IMSMA VPN systems. NPA planned to increase capacity development support under new DFID funding, which aims to support the NRA to train four provinces in the use of IMSMA and in data analysis; revise IMSMA forms to better include socio-economic and impact data, better inform prioritisation; draft an information management SOP; and procure basic ICT equipment for four provinces.¹⁷⁴

The Lao armed forces have five humanitarian teams in total.¹⁷⁵ The five humanitarian teams were previously funded by the Republic of Korea (through KOICA), but did not receive international funding in 2018.¹⁷⁶ According to the NRA, the humanitarian clearance teams of the Lao Army are a valuable asset, conducting survey and clearance in the same way as national and international clearance operators, and with good coordination between the NRA and the army. In addition, the army was being trained in IMSMA. Lao army engineers (completely separate to the humanitarian teams) not involved with humanitarian teams and not coordinated by the NRA started clearance of UXO to enable construction work on the \$6 billion Laos-China high speed railway.¹⁷⁷

From October 2018 to March 2019, Russian and Lao armed forces worked in partnership to survey and clear 1km² of land in Bolikhamxay province, with equipment supplied by Russia. The partnership project, which is expected to continue, is part of a broader framework of cooperation between the governments and armed forces of the two countries.¹⁷⁸

OPERATIONAL TOOLS

Manual and mechanical assets are deployed by clearance operators in Lao PDR. As at March 2019, the use of drones to assist CMR operations in Lao PDR had not yet been permitted by the NRA.¹⁷⁹

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

Total release in 2018 (all by clearance) was at least 36.2km², a 10% increase on the previous year's output.

SURVEY IN 2018

Based on data provided to Mine Action Review by humanitarian clearance operations in Lao PDR, set out in Table 2, a total of 210km² of CHA containing CMR was identified in 2018 with the destruction of more than 26,000 submunitions.

Table 2: Technical survey of CMR-suspected area in 2018¹⁸⁰

Operator	Area surveyed (m ²)	Area identified (m ²)	Submunitions destroyed	Other UXO destroyed
Lao Army 58	N/R	N/R	N/R	N/R
HALO Trust	47,502,954	23,479,091	3,992	1,020
HI	0	0	0	0
MAG	146,340,474	144,850,179	12,882	25
NPA	33,547,500	12,277,556	1,693	125
UXO Lao	65,223,000	29,638,895	7,556	1,336
Totals	292,613,928	210,245,721	26,123	2,506

CLEARANCE IN 2018

Based on data provided to Mine Action Review by humanitarian clearance operators in Lao PDR only (i.e. excluding CMR clearance output from the Lao Army and commercial operators), clearance in 2018 was at least 36.2km² with the destruction of more than 64,000 submunitions (see Table 3).

Table 3: Clearance of CMR-contaminated area by operator in 2018¹⁸¹

Operator	Clearance tasks	Area cleared (m ²)	Submunitions destroyed*	Other UXO destroyed
Army 58	N/R	N/R	N/R	N/R
Lao Army	N/R	N/R	N/R	N/R
HALO Trust	29	702,982	6,704	712
HI	0	0	0	0
MAG	109	3,246,974	3,855	795
NPA	40	2,613,579	2,841	0
UXO Lao**	763	29,638,895	51,275	11,121
Totals	941	36,202,430	64,675	12,628

* The totals for each operator include submunitions destroyed during roving tasks.

** UXO Lao also reported the destruction of five landmines.

According to Lao PDR's Article 7 report for 2018, a total of nearly 62.1km² was cleared in 2018, across 14 provinces, with the destruction of 78,974 CMR, in addition to 148 big bombs, 31 mines, and 18,471 items of other UXO, during clearance, technical survey, and spot tasks.¹⁸² However, there appears to be an error in the Article 7 report table, the total of which actually sums to 59.3km². In addition, in the same table, the 2018 clearance total for Luangnamtha Province and Luang Prabang Province is 20,572m² for each province, which is most likely also an error.¹⁸³ It is also possible that, as occurred in the previous year, the total includes clearance by commercial companies of areas found to have no CMR contamination.

All clearance organisations in Lao PDR are required to have a documented internal quality management (QM) system, covering both quality assurance (QA) and quality control procedures (QC).¹⁸⁴ External QM inspections of clearance organisations are carried out by the NRA.¹⁸⁵ However, at present the NRA's QM capacity is extremely limited and is inadequate, with only one QM team to cover sector-wide clearance.¹⁸⁶ The NRA has been seeking funding to increase its QM capacity to four teams.¹⁸⁷

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR LAO PDR: 1 AUGUST 2010

ARTICLE 4 DEADLINE: 1 AUGUST 2020

**REQUESTED ARTICLE 4 EXTENDED DEADLINE:
1 AUGUST 2025**

**LAO PDR WILL REQUIRE MULTIPLE EXTENSION
REQUESTS BEFORE REACHING COMPLETION.**

Under Article 4 of the CCM, Lao PDR is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 August 2020. Lao PDR will not meet this deadline and has requested a five-year extension (the maximum that can be requested per extension request under the CCM) until 1 August 2025. Based on current capacity and output, Lao PDR will not reach completion by the requested new deadline and will require multiple extensions to its Article 4 deadline. According to the national authorities, based on current resources and land release practices, “progress towards reaching a residual level of contamination as provided for in the CCM is decades away”.¹⁸⁸

As at end of 2018, 850km² of CHA had already been identified through the ongoing nationwide CMRS, and as the baseline survey continues the area of confirmed contamination/CHA is expected to continue to increase rapidly.¹⁸⁹ An estimate of the true extent of CMR contamination will not be known until the nationwide CMRS is completed.¹⁹⁰

Clearance of CMR in Lao PDR will take many years and will require long-term national capacity and funding. According to Lao PDR’s Article 4 extension request, annual clearance output based on current capacity and resources available is approximately 50km² per year on average,¹⁹¹ but annual clearance output over the last four years has been significantly less. In 2018, the NRA aimed to clear 5,000 hectares (50km²) of CHA, based on existing capacity,¹⁹² though actual output seems to have fallen short of this. Over the last five years, Lao PDR has cleared more than 200km² (see Table 4).

Table 4: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (km ²)
2018	36.20
2017	33.02
2016	30.17
2015*	41.30
2014*	67.78
Total	208.47

*2014–15 were transition years from request-based to evidence-based clearance, and so include a higher proportion of clearance of land that did not contain CMR.

The NRA has highlighted the challenges in balancing resources for survey and clearance. While nationwide CMRS is essential to quantify the extent of actual contamination in Lao PDR, there is also a need for follow-on clearance in priority areas, which also demands significant resources.¹⁹³ Commencement of DFID-funded clearance operations in Lao PDR in 2019, will help increase clearance output of HALO Trust, MAG, and NPA.¹⁹⁴

In its Article 7 report for 2018, Lao PDR reports the need to expand and increase the capacity of the Lao PDR Army teams.¹⁹⁵ It is only in the past few years that the Government of Lao PDR has allocated funds in its budget for UXO clearance, directed to the Lao Army dedicated teams.¹⁹⁶

Lao PDR has identified several challenges in Article 4 implementation. These include insufficient funding (in particular to the NRA and UXO Lao), and the need to strengthen coordination and collaboration among sector stakeholders in order to increase effectiveness and efficiency of the mine action sector in Lao PDR.¹⁹⁷ Existing clearance capacity is not sufficient to address the area of CHA identified for clearance through the ongoing nationwide CMRS. Furthermore, because the number of CMR found per hectare during clearance is now much higher, thanks to application of evidence-based land release methodology, more explosives are needed for the destruction of CMR. This increases operational costs as explosives in Lao PDR are reportedly among the most expensive in the region.¹⁹⁸

In addition to insufficient clearance capacity, in its Article 7 report for 2018, Lao PDR also cites outdated clearance equipment as another challenge (e.g. in distinguishing between CMR and scrap metal) and the national authorities highlight the need for more advanced clearance equipment and vehicles.¹⁹⁹

Operational challenges in clearance tasks include heavy rains during the wet season; high scrap-metal contamination and fragmentation from other UXO; difficulty accessing tasks due to flooding and vehicles getting stuck in the mud; and the proximity of high-voltage pylons and power lines.²⁰⁰

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- 183 Ibid.
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- 187 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.
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- 189 Interviews with Phoukhieo Chanthasomboune, NRA, and Thipasone Soukhathammavong, UXO Lao, Vientiane, 2 May 2018.
- 190 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.
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- 196 Sweet, "Prioritisation policy, procedures and practices relating to UXO clearance in Lao PDR".
- 197 Statement of Lao PDR on National Implementation Efforts, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.
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LEBANON

MINE
ACTION
REVIEW

CLEARING CLUSTER
MUNITION REMNANTS
2019

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 MAY 2021
NOT ON TRACK TO MEET DEADLINE

KEY DATA

CLUSTER MUNITION
CONTAMINATION: MEDIUM

CONFIRMED
HAZARDOUS AREA

11.85 KM²

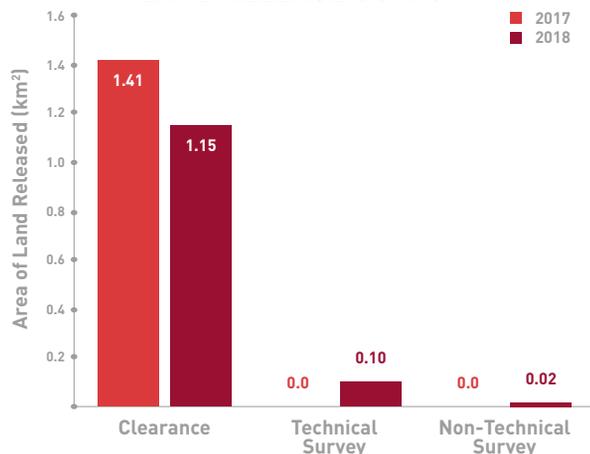
SUBMUNITION
CLEARANCE IN 2018

1.15 KM²

SUBMUNITIONS
DESTROYED IN 2018

3,583

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

In March 2018, the Lebanon Mine Action Center (LMAC) released its revised National Mine Action Standards (NMAS), which incorporated significant and welcome improvements to its accepted methodology for survey and clearance of cluster munition remnants (CMR). These included, among others, reduction of the required clearance depth from 20cm to 15cm; adjustments to the fade-out specifications for clearance; and the option for technical survey of tasks. Technical survey, which had not previously been permitted for CMR, was successfully piloted in 2018. Furthermore, Mines Advisory Group (MAG) and Norwegian People's Aid (NPA) were tasked to conduct non-technical survey in 2018, which previously had been permitted only to the Lebanese Armed Forces (LAF).

RECOMMENDATIONS FOR ACTION

- LMAC should continue efforts to improve the accuracy of CMR contamination data recorded in its database, in order to determine a more accurate baseline for its Convention on Cluster Munitions (CCM) Article 4 extension request and the elaboration of a new national mine action strategy. Evidence-based non-technical and technical survey/re-survey of cluster munition-contaminated areas, which is currently underway, is needed to confirm or deny the presence of CMR and to more accurately determine the size of hazardous areas, many of which are currently recorded in the database as 10,000m². In parallel, LMAC could also review the estimated size of those hazardous areas currently recorded as standard size, based on average clearance sizes of CMR tasks in different geographical areas.
- LMAC should, in collaboration with clearance operators, continue to expand use of non-technical and technical survey (manual, mechanical, and with the use of explosive detection dogs (EDDs)), as a routine part of the toolbox for all operators for the release of cluster-munition tasks.
- The integration and consolidation of the LMAC and Regional Mine Action Center (RMAC) databases and servers should be completed as soon as possible, through ensuring a direct connection between databases.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	6	With a view to improving the accuracy of its estimate of CMR contamination, LMAC reviewed and then readjusted the national baseline of CMR contamination in 2018. However, the baseline includes CHAs with an estimated standard size of 10,000m ² (for hazardous areas recorded without defined boundaries), in addition to potentially underestimated CHAs which do not factor in fadeout.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	9	LMAC demonstrated strong national ownership in 2018, with establishment of a bi-annual Mine Action Forum to provide a platform for dialogue, collaboration, and data sharing with donors, clearance operators, and partner organisations; creation of technical working groups which meet quarterly; and provision of substantial national funding for CMR clearance over the next five years.
GENDER (10% of overall score)	7	LMAC has taken action to mainstream gender in its implementation plan, including through inclusive policies, data disaggregation, and participation in courses at its regional demining school. Around 20% of survey and clearance staff of humanitarian clearance operators in Lebanon are women and 15% of staff in managerial level/supervisory positions.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	7	LMAC is currently taking efforts to improve its information management system by harmonising the LMAC and RMAC databases. As at end of 2018, there was a single Information Management System for Mine Action (IMSMA) database and a synchronisation procedure in place, pending a hardware upgrade to establish a direct connection. LMAC has also starting preparations to migrate to IMSMA Core, with complete migration not expected until 2020.
PLANNING AND TASKING (10% of overall score)	8	LMAC has fallen well behind schedule on its current mine action plan for 2011–20, and is in the process of elaborating a new strategy, which will also correspond with Lebanon's planned Article 4 extension request, to be submitted and approved in 2020. There are agreed and specified criteria for prioritisation of CMR tasks.
LAND RELEASE SYSTEM (20% of overall score)	8	LMAC made significant improvements to its land release methodology in 2018, which are now enshrined in its revised NMAS. These include reduction of required clearance depth for CMR; improvements to the fadeout specifications; and the use of technical survey for CMR tasks for the first time. In addition, LMAC is increasing non-technical survey capacity and permitting humanitarian clearance organisations to conduct non-technical survey, something previously only undertaken by the LAF. These changes are expected to significantly improve operational efficiencies.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	6	While CMR clearance output in 2018 was slightly down on the previous year, CMR-contaminated land was reported as released through non-technical and technical survey by humanitarian clearance operators, which is a significant development in Lebanon. Lebanon is not on track to meet its Article 4 deadline and is in the process of preparing a five-year extension request for consideration at the Second Review Conference in 2020.
Average score	7.1	Overall programme performance: GOOD

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Lebanon Mine Action Authority (LMAA)
- Lebanon Mine Action Center (LMAC)
- Regional Mine Action Center (RMAC)

NATIONAL OPERATORS

- Lebanese Armed Forces (LAF)/Engineering Regiment (ER)
- Lebanese Association for Mine and Natural Disaster Action (LAMINDA)
- Peace Generation Organization for Demining (POD)

INTERNATIONAL OPERATORS

- DanChurchAid (DCA)
- Mines Advisory Group (MAG)
- Norwegian People's Aid (NPA)

OTHER ACTORS

- Geneva International Centre for Humanitarian Demining (GICHD)
- United Nations Development Programme (UNDP)
- UN Interim Force in Lebanon (UNIFIL)
- United Nations Mine Action Service (UNMAS)

UNDERSTANDING OF CMR CONTAMINATION

At the end of 2018, Lebanon had 864 confirmed hazardous areas (CHAs) with CMR over a total area of more than 11.85km² [see Table 1].¹ This includes 84,079m² of confirmed CMR contamination recorded in Jroud Arsal, in the north-east of Lebanon, which is new contamination resulting from fighting which spilled over from the Syrian conflict.²

In previous years LMAC had also reported to Mine Action Review the amount of suspected hazardous areas (SHAs)/“dangerous areas”. However, in 2019 LMAC confirmed that SHAs/dangerous areas do not relate to CMR contamination, but instead to areas suspected or known to contain other unexploded ordnance (UXO), booby traps, improvised explosive devices (IEDs), and “nuisance” mines.³ As such, they do not fall under Lebanon’s CCM Article 4 obligations.

Table 1: CMR contamination by province (at end 2018)⁴

Province	CHAs	Area (m ²)
Beqaa	83	1,895,221
Janoub and Nabatiyeh (South)	740	9,441,717
Jabal Loubnan (Mount Lebanon)	39	496,067
Shimal (North)	2	20,000
Totals	864	11,853,005

This is seemingly a big drop in CMR contamination compared to the end of 2017, when 843 CHAs were confirmed to contain CMR, over a total area of almost 17.2km².

In fact, the significant drop in the CMR baseline of CHA is largely due to a decision by LMAC in 2018 to review its baseline of CMR contamination and change the way it reflects clearance data. According to LMAC, a significant factor negatively impacting the accuracy of the CHA baseline for CMR was a difference in data entry methodology between RMAC and LMAC. In many cases actual clearance output of tasks is greater than the original task size recorded in the database, due to fadeout. Upon task completion, LMAC was reducing its initial baseline by the original task size in the database, whereas RMAC was adding the additional cleared area in excess of the task size to the initial database and then reducing the whole size of the clearance task from the database. Previously LMAC used to use the “moving” initial baseline of RMAC for reporting. This resulted in CMR contamination in Lebanon not being reduced proportionally with the amount of CMR-contaminated area released through clearance year-on-year, potentially leading to the misleading and incorrect assumption that little or no progress is being made to address CMR contamination.⁵

To address this, LMAC has decided to use the CMR baseline in its database (instead of RMAC’s baseline), meaning the original size of the clearance task will be reduced from the initial baseline and any additional squared metres cleared in excess of this are registered as “productivity”. LMAC has corrected its CMR baseline

retrospectively, to reflect this decision and the result is reportedly a reduction in the original CMR baseline by 4,290,513m². The retrospective aggregate cleared area has also changed. Table 1, above, reflects the corrected baseline as at the end of 2018, following LMAC’s 2018 review and amendment.

As part of the 2018 database review, LMAC also decided to address the inaccuracy of CHAs in the database for which there were no defined boundaries and for which the estimated circular boundaries were judged by LMAC to be excessively large and not logical.⁶ The hazardous areas in question, without delineated borders, were largely the result of impact surveys following the 2006 conflict, during which areas were defined using only very basic information.⁷ As part of the database review process, LMAC decided to change the standard size of CHAs with no defined boundaries (and for which there is no threat of mines), to 10,000m², based on the fadeout distance for cluster munitions and LMAC’s clearance experience to date.⁸ According to LMAC, this has resulted in a reduction of the original baseline of CHA by 4,448,942m².⁹ However, the 10,000m² (per strike) area automatically assigned to CHAs where there are no defined boundaries, will likely in some instances underestimate the actual task size. LMAC predicts that an additional 2.6km², on top of the 11.85km² CMR baseline may also require clearance based on the average of historic clearance data. However, the true size of these clearance tasks will vary and is hard to estimate.¹⁰

CMR contamination depends on a variety of factors, including the type of cluster munition used and whether it was ground-launched or air-dropped, as well as the terrain onto which it lands.¹¹ Some areas contain unexploded submunitions resulting from both ground-launched and air-dropped cluster munitions, which can further complicate the picture.¹² Previously, hazardous areas in the south of Lebanon were historically automatically recorded in the database as 33,000m² per task as standard, and in the Mount Lebanon region, as 10,000m² per task, as the 1982 cluster munition strikes were not as intense as the 2006 strikes in the south.¹³ Based on empirical field data, MAG calculated the average CMR clearance task in the south to be approximately 60,000m²,¹⁴ while NPA had previously calculated it to be 65,000m² per task.¹⁵ However, according to LMAC these averages were based on inflated initial estimates for the size of CHAs, with clearance conducted on a significant area that in fact contained no CMR.¹⁶ Only further re-survey (with non-technical and technical survey) will help determine a more accurate estimation of CMR contamination,¹⁷ and it is possible that actual extent of CMR contamination may in fact be greater than the 11.85km² of CHA reported as at the end of 2018.

The accuracy of the baseline is further complicated by the fact that clearance undertaken in the aftermath of the 2006 cluster munition strikes was not conducted in accordance with the International Mine Action Standards (IMAS). This included emergency clearance undertaken by the LAF and in and around infrastructure, schools, and roads, and clearance contracted out by the UN Mine Action Coordination Centre – south Lebanon (MACC-SL),

which assumed the role of coordinating CMR clearance in 2007, in cooperation with the National Demining Office (now known as LMAC), to non-governmental organisations (NGOs), commercial operators, and government groups.¹⁸

LMAC's recent efforts to adjust its baseline to one that more accurately estimates total CMR contamination is a positive step, as is the initiation of systematic non-technical and technical survey of proposed CMR clearance tasks, which will help to determine where contamination actually exists. However, only time will reveal how accurate the adjusted baseline of CMR contamination is.

MAG undertook a pre-clearance non-technical survey of 443 CMR clearance tasks between September 2013 and April 2014,¹⁹ with support in carrying out the survey from national NGO, Peace Generation Organization for Demining (POD). The survey resulted in MAG recommending 347 tasks for clearance and 96 tasks for cancellation, covering an estimated 2.8km².²⁰ After reviewing the 96 tasks recommended by MAG for cancellation, LMAC decided to cancel 51, totalling an area of 1.7km²,²¹ but not to cancel the remaining 45 tasks recommended for cancellation, as following a review LMAC believed these areas might still contain CMR and required additional investigation/survey. These tasks recommended for cancellation are being prioritised as part of the non-technical survey project in 2019,²² and where required, will be subject to 30% technical survey, to determine whether or not CMR contamination actually exists.²³

With regard to CMR contamination, technical survey is conducted on tasks where the exact location of contamination is not known and with a view to locating evidence points (i.e. submunitions), from where to start clearance.²⁴

CMR contamination is largely the result of the conflict with Israel in July–August 2006. During the conflict, Israel fired an estimated four million submunitions on south Lebanon, 90% of which were dispersed in the last 72 hours of the conflict.²⁵ An estimated one million submunitions failed to explode.²⁶ Some Israeli bombing data has been provided – most recently through UN Interim Force in Lebanon (UNIFIL) – but has proved to be very inaccurate.²⁷ In addition, some CMR still remain from earlier conflicts with Israel in 1978 and 1982,²⁸ and there is a small amount of new CMR contamination on the north-east border with Syria, resulting from spill-over of the Syrian conflict onto Lebanese territory in 2014–17 (see below).²⁹ Types of submunitions found in Lebanon include AO-2.5 RT, BLU-18, BLU-26, BLU-61, BLU-63, M42, M43, M46, M77, M85, MK118, and MZD-2.³⁰

NEW CMR CONTAMINATION

Eleven new hazardous areas confirmed as CMR-contaminated, totalling 84,079m² and containing M42 and AO-2.5 RT submunitions as well as other explosive ordnance, were recorded in "Jroud Arsal" in the north-east along the border with Syria, as a result of spill-over in fighting from the Syrian conflict in 2014–17.³¹ The Lebanese territory in question was fully regained by the LAF in August 2017 and was assigned to LMAC for survey and clearance. Contamination also includes mines, IEDs, and explosive remnants of war (ERW).³²

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Lebanon is also contaminated by other UXO, booby-traps, and anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Lebanon for more information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Established in 1998 by the Council of Ministers, the Lebanon Mine Action Authority (LMAA) is the responsibility of the Ministry of Defence and is chaired by the Minister of Defence himself. The LMAA has overall responsibility for Lebanon's mine action programme. In 2007, a national mine action policy outlined the structure, roles, and responsibilities within the programme, and LMAC was tasked to execute and coordinate the programme on behalf of the LMAA.³³

LMAC, part of the LAF, is based in Beirut. Since 2009, the RMAC, based in Nabatiye, which is a part of LMAC, has overseen operations in south Lebanon and western Beqaa, under LMAC supervision.³⁴ The Director of LMAC is typically rotated every couple of years, and in recent years there has been a high turnover of the colonels who have run the RMAC. Both factors have the potential to negatively affect the management of the two mine action centres. The current director of LMAC started in March 2019, replacing his predecessor who had served as director for two years.³⁵

United Nations Development Programme (UNDP) personnel, funded by the European Union (EU), are also seconded to LMAC and RMAC, providing support for capacity building, including transparency reporting,

strategic reviews, IMSMA database entry, community liaison, and quality assurance (QA). UNDP does not provide technical assistance on operational decisions.³⁶ However, European Union (EU) funding for UNDP institutional support to LMAC was due to come to a halt at the end of 2019, which will result in a gap in capacity development.³⁷

In 2015, the Lebanese Ministry of Defence, represented by LMAC, signed a Memorandum of Understanding with the Geneva International Centre for Humanitarian Demining (GICHD) to manage and coordinate the Arab Regional Cooperation Programme (ARCP) (formerly known as the Arabic-Language Outreach Programme) for Mine Action.³⁸ The role of the ARCP includes supporting the national authorities in mine action in the Middle East and North Africa (MENA) region; providing technical assistance and training; coordinating and hosting exchange visits; promoting best practices and documenting lessons learned; and mobilising funding.³⁹ Planning, management, and coordination of the programme were handed over to LMAC at the beginning of 2017.⁴⁰ The GICHD and LMAC will be renewing the Memorandum of Understanding (MoU) in 2019, regarding management and coordination of the ARCP.⁴¹

In addition, a Regional School for Humanitarian Demining in Lebanon (RSHDL) has been established in partnership between Lebanon and France, with technical mine action support provided by a French military Officer dispatched to LMAC, to support the development of the curriculum on EOD disposal (EOD levels 1, 2, and 3) in compliance with IMAS.⁴² In the second half of 2017 the Regional School was renovated and equipped and became operational, enabling civilian and military personnel from Arab and other countries to benefit from a wide array of courses and workshops related to demining.⁴³

A “Mine Action Forum” has been established in Lebanon in close partnership between LMAC and Norway, providing an informal platform for LMAC to continue dialogue and collaboration with donors, clearance operators, and partner organisations, and to discuss priorities and needs in cluster munition and landmine survey and clearance at the national level. The forum meets twice a year, with UNDP designated as the secretariat to follow up and develop progress reports.⁴⁴ It is an example of what a “Country Coalition” under the CCM could look like, but in the case of Lebanon it was agreed the forum should be broadened to include landmines, and not just CMR.

The Mine Action Forum was the result of a two Lebanon-focused workshops, the first of which took place in November 2016, convened by Norway and the Netherlands in their capacity as CCM Co- Coordinators on clearance, and facilitated by the GICHD. The second workshop, in January 2018, convened in partnership between Norway and LMAC, resulted in the establishment of the Mine Action Forum as a vehicle to continue dialogue, transparency, and information sharing between mine action stakeholders in Lebanon, including on where potential funding gaps exist and how the provision of funding can be better coordinated.⁴⁵

There is good coordination and collaboration between LMAC/RMAC and clearance operators, with the operators consulted before key decisions are taken.⁴⁶ International clearance operators also reported that there is an enabling environment for mine action in Lebanon, with no obstacles regarding visas for international staff, approval of MoUs, or the importation of necessary equipment.⁴⁷

A technical working group (TWG) was established in March 2018, under the auspices of LMAC, following the release of the revised NMAS. The TWG, which meets quarterly, provides a useful forum for LMAC/RMAC to meet collectively with clearance operators to review and discuss field issues, including implementation of revisions to the NMAS, and potential ways to improve operational efficiencies.⁴⁸ There is also an NMAS amendment form which is open to any mine action stakeholder to submit to the LMAC director.⁴⁹

As in the previous year, Lebanon reported contributing US\$9 million annually in 2018 towards mine action in Lebanon (including both CMR and mine-related work), to support costs associated with the running of LMAC (facilities and staff); the LAF Engineering Regiment companies working in demining; risk education; and victim assistance.⁵⁰ In addition, the Lebanese government has committed an additional 50 billion Lebanese Pounds (approximately US\$33 million) to CMR clearance over five years (2019–23), which will be used to increase the number of CMR clearance teams, helping Lebanon to meet its Article 4 obligations under the CCM. Corresponding clearance contracts with DanChurchAid (DCA), LAMINDA and POD were finalised at the end of 2018, but signature by the Minister of Defense was delayed due to the announcement of a new government at the end of January 2019. As funding for cluster munition clearance is included in the national budget, the NGOs took the decision to go ahead and begin CMR clearance operations in February 2019, using their own funds. However, they subsequently elected to stop operations after three months, pending formal signature of the clearance contracts by the Minister of Defence.⁵¹

The Mine Action Forum in Lebanon has resulted in better coordination and greater transparency; enhancements to land release methodology (enshrined in the revised NMAS), and including piloting of technical survey for CMR; and increased battle area clearance (BAC) funding allocated by the Lebanese government. These measures have all served to strengthen donor confidence and mobilise additional resources.⁵² Lebanon secured an additional 43% of funding for mine action in 2018 compared to the previous year, for both CMR- and mine-related work.⁵³

GENDER

LMAC reported that it has taken several actions to mainstream gender in its implementation plan, including through inclusive policies, data disaggregation in risk education and victim assistance, and participation in courses at the RSHDL.⁵⁴ According to LMAC, within the overall humanitarian clearance operators in Lebanon, approximately 20% of survey and clearance staff are women and 15% of managerial level/supervisory positions.⁵⁵

Lebanon hosted a workshop on gender in mine action at the RSHDL in July 2018, attended by Iraq, Libya, Palestine, Somalia, Sudan, and Yemen, as part of the ARCP.⁵⁶

MAG, NPA, and POD all reported having gender policies in place.⁵⁷

MAG reported that it consults women during survey and community liaison activities; that all its community liaison teams are mixed; and that its data is disaggregated by sex and age. Overall, women account for 15% percent of operational roles in MAG’s survey and clearance teams in Lebanon, and 30% of managerial level/supervisory positions.⁵⁸

As at April 2019, NPA was in the process of developing an implementation plan for its organisational gender policy for Lebanon, with support from the Geneva-based Gender and Mine Action Programme (GMAP, a programme of the GICHD), which was due to be finalised in 2019. NPA reported that its survey and community

liaison teams are gender balanced, and 15% percent of employees in operational roles in NPA's survey and clearance team are women; 9% in managerial level/supervisory positions. NPA disaggregates data by sex and age.⁵⁹

INFORMATION MANAGEMENT AND REPORTING

IMSMA is used by LMAC and RMAC to record contamination and land release in Lebanon. As at April 2019, efforts were underway to integrate RMAC's information management database with the LMAC server.⁶⁰ As at end of 2018, there was a single IMSMA database and a synchronisation procedure in place between the two LMAC and RMAC databases, pending a hardware upgrade to establish a direct connection.⁶¹ Full harmonisation and consolidation of the servers was expected to be achieved in the course of 2019, which will facilitate synchronisation, as IMSMA reports will be sent directly to LMAC for approval, improving the accuracy and efficiency of the process. The integration will also help better protect data while decreasing maintenance costs.⁶²

Furthermore, LMAC is migrating from its current version of IMSMA (IMSMA NG) to IMSMA Core, which it hopes will help facilitate the production of clearer reports that can be translated into dashboards for stakeholders, including donors, to monitor and follow.⁶³ Migration to IMSMA Core requires regular IMSMA backups and corrections to data. Migration is forecast to be achieved only in 2020.⁶⁴

As previously mentioned in the "Understanding of Contamination" section, the current baseline of CMR contamination in LMAC's information management system is not considered reliable, principally because the size of many hazardous areas in the database do not accurately reflect the actual extent of contamination. Some clearance tasks result in a clearance output in excess of the task size originally recorded in IMSMA, often due to fadeout. LMAC has reported that the system for database entry now more accurately reflects operational data.⁶⁵ Now, any area cleared in excess of the original task size is no longer recorded as additional tasks in the database, but as "productivity".⁶⁶

In addition, in IMSMA, hazardous areas which have no defined boundaries, are now recorded as an average/standard polygon size of 10,000m². In reality, some of these areas are found to be substantially larger than the 10,000m² recorded, while others contain no CMR at all.⁶⁷ Since 2018, LMAC has been actively expanding application of non-technical and technical survey of CMR-contaminated areas, which will better determine the actual baseline of remaining CMR contamination.⁶⁸

During clearance, a single task may not always be completed in a single assignment. Instead, clearance of separate sections of the task, such as the "fade-out" area or the "disclaimed" area (area for which permission is not granted for clearance, and which requires signed release papers), may be postponed in favour of higher priority/high-impact tasks elsewhere, and returned to at a later date. In such instances, the fade-out, disclaimed, and/or uncleared areas are marked as separate subtasks in the database, although they are linked through numerical labelling to the original task. Since 2016, disclaimed areas can be cleared without the landowner's permission.⁶⁹

Lebanon's latest revision of NMAS, published in March 2018, allows technical survey of CMR-contaminated areas. By May 2019, LMAC had updated data forms to allow for the correct reporting of land reduced through technical survey.⁷⁰

In 2018, LMAC changed requirements for clearance operators to report operational data monthly in favour of daily and weekly reporting instead. According to NPA, this has resulted in closer and more regular checks of data by LMAC and RMAC QA officers.⁷¹

PLANNING AND TASKING

In September 2011, LMAC adopted a strategic mine action plan for 2011–20.⁷² The plan called for clearance of all CMR by 2016, and for completion of mine clearance outside the Blue Line by 2020. Both goals are dependent on capacity, but progress has fallen well short of planning targets,⁷³ which will not be met.

A first interim review of the strategy was conducted in January–March 2014 to assess progress towards the 2013 milestone, and to adjust the 2016 and 2020 milestones accordingly. The review revealed that in 2011–13 CMR clearance was slow and suffered from underfunding (with consequently fewer operating teams), while previously unrecorded contaminated areas were identified, adding to the overall contamination estimate.⁷⁴

A second interim assessment, this time for 2014–16, was undertaken in 2016, but only released in March 2018. The results similarly highlighted the huge gap between actual output and planned BAC output (when compared to the original strategic plan). This second milestone assessment also reflected on the achievements, challenges, and lessons learned, offering recommendations that reflected available resources (financial and human), as well as a qualitative roadmap towards completion.⁷⁵

LMAC has planned to prepare a new strategic mine action plan by the end of 2019, which will also be aligned with Lebanon's planned extension request to its CCM Article 4 deadline of May 2021. The Article 4 extension request will be submitted for approval at the Second Review conference in 2020.⁷⁶

Lebanon has set four levels of priority for its land release. The first is to address infrastructure (e.g.

housing, roads, hospitals, and schools); the second is to address utilities (e.g. water, electricity, drainage, and telephone lines); the third is to release agricultural land and grazing areas for livestock; and the fourth is to release land for other activities (e.g. nature reserves or areas used by wildlife).⁷⁷ In some instances, task prioritisation is also influenced by requested specifications from donors, for example based on the geographical location.⁷⁸

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Lebanon developed its first NMAS in 2010.⁷⁹ Over the last two years, LMAC worked with UNDP and other partners, under a project funded by the EU, to revise the standards.⁸⁰ The aim of the revision has been to enhance efficiency by harmonising national standards with IMAS, as well as to add new modules not present in the original NMAS.⁸¹ LMAC adopted a consultative and constructive approach to the NMAS revision process, liaising extensively with demining operators, who submitted comments and recommendations during the process.⁸² The revised NMAS, formally approved in March 2018, has a solid focus on land release and evidence-based decision-making, in line with the IMAS, and based on recommendations and analysis of operational data collected by the implementing agencies. Notable enhancements include reduction of the required clearance depth of CMR from 20cm to 15cm; the division of the 50 metres required fade-out into two zones (subsurface clearance at 15cm for the first 35 metres and visual surface clearance for the remaining 15 metres, instrument aided where required for vegetation cutting), and enhancements in how rapid response tasks are addressed and recorded.⁸³ In addition, and of particular significance, the new NMAS allow technical survey to be used for CMR tasks, which was successfully trialled with the use of explosives detection dogs (EDDs) in 2018.⁸⁴ These changes should dramatically improve the efficiency of CMR land release in Lebanon.⁸⁵

In March 2018, the new NMAS were presented to operators during a workshop at the RSHDL, during which LMAC/RMAC discussed next steps in operationalising the new standards.⁸⁶ Demining NGOs have updated their standing operating procedures (SOPs) according to the new NMAS.⁸⁷ LMAC views the NMAS as living documents, which will need regular updating to ensure they keep track with developments in IMAS, while also taking into consideration field experiences in Lebanon.⁸⁸ For example, the standards will need to be updated, or an addendum added, to include the use of EDDs for technical survey of CMR.⁸⁹

Historically, clearance tasks assigned to operators by LMAC were typically deemed to already reflect non-technical survey data, and LMAC did not formally permit operators to conduct additional survey on assigned tasks prior to clearance.⁹⁰ However, over the course of the period since November 2016's CCM Article 4 workshop, clearance operators have been permitted to cut lanes directly into the CHA and not from

the Universal Transverse Mercator (UTM) coordinates resulting from the original non-technical survey, which in some cases is as far as 300 metres from the contaminated area.⁹¹ Clearance operators can also now seek permission to walk onto CMR task sites after surface clearance, before undertaking subsurface clearance, which means that BAC methodologies can now be better employed.⁹²

Furthermore, operators now have an opportunity to discuss specific land release considerations with LMAC/RMAC for assigned clearance tasks, which arise during the pre-clearance assessment stage of operations. Such discussions might result in the refining of the task size or approved land release specifications (e.g. use of technical survey, for all or part of the task, rather than full clearance).⁹³

Since the release and implementation of the revised NMAS, national authorities in Lebanon have actively promoted the use of non-technical survey and technical survey on cluster munition sites, in order to define the presence or absence of an explosive threat.⁹⁴ This is evidenced by deployment of MAG and NPA teams to conduct non-technical survey of new contamination in the north-east region of Lebanon, bordering Syria,⁹⁵ and also the contracting of both organisations to conduct non-technical survey in southern Lebanon. Until then, the only non-technical survey capacity that was permitted was that of the LAF. New technical survey of CMR tasks began in 2018 through NPA's technical survey pilot project using EDDs. These measures will help ensure an increasing number of tasks will be released back to the local community.⁹⁶

There is, however, still significant potential to increase the use and capacity of non-technical survey and technical survey on cluster munition sites, to determine the presence or absence of CMR contamination.⁹⁷ LMAC has planned for technical survey to become a central part of its planning in 2019,⁹⁸ both through use of EDDs and manually.

OPERATORS

In 2018, CMR clearance was conducted by international operators DCA, MAG, and NPA; national operators POD and LAMINDA; and the Engineering Regiment of the LAF. Clearance capacity fluctuated throughout 2018, but averaged 21 clearance teams (five DCA teams; five MAG teams, four NPA teams, four POD teams, one LAMINDA team, and two LAF teams).⁹⁹

All LAF engineering companies have two teams of EOD-qualified personnel.¹⁰⁰ In addition, the LAF has two non-technical survey teams that were deployed in 2018.¹⁰¹

MAG deployed eight staff to conduct non-technical survey in 2018, in addition to one dedicated technical survey team of nine people.¹⁰² Previously, MAG had not been officially permitted to conduct survey, with the exception of the pre-clearance non-technical survey it conducted in 2013/14, with support from POD. MAG planned to maintain and increase capacity in 2019, and to increase use of newly introduced large-loop detectors and move more towards BAC methodologies, as and where appropriate.¹⁰³

NPA's technical survey pilot project team in south Lebanon comprises six technical staff: a supervisor, a team leader, two dog handlers and their EDDs, two manual searchers (for clearance capacity and for manual technical survey of area not appropriate for EDDs, such as areas of thick vegetation).¹⁰⁴ In addition, NPA deployed a further five non-technical survey personnel, supported by a technical field manager, to survey new contamination in the north-east region of Lebanon, bordering Syria.¹⁰⁵ NPA plans to increase its non-technical survey capacity in its south Lebanon operations throughout 2019.¹⁰⁶

OPERATIONAL TOOLS

Manual clearance is the primary method of clearing CMR in Lebanon, but machines are sometimes deployed to make access lanes and prepare the ground.¹⁰⁷

During 2017, LMAC began to explore the potential for the use of EDDs as a tool to accelerate the release of land contaminated with CMR.¹⁰⁸ Under an NPA pilot project for technical survey using dogs and manual assets, EDDs received accreditation and were deployed in April 2018.¹⁰⁹ The pilot project proved a success,¹¹⁰ and NPA's technical survey team is now fully integrated into NPA operations and is being tasked by the RMAC as follow-up to previous non-technical survey, to confirm CMR contamination prior to areas being tasked for clearance.¹¹¹

One of the advantages of using EDDs is that dogs detect explosives, not metal, which can help speed up the technical survey process by avoiding unnecessary excavation of the scrap-metal signals that are generated by manual detectors. In addition to NPA's technical survey with EDDs, MAG and NPA are both conducting manual technical survey.¹¹²

MAG is the only international operator in Lebanon with mechanical assets to support manual clearance operations. These assets can be used by other organisations upon request to LMAC.¹¹³

As part of non-technical survey of the area on the north-east border of Lebanon, contaminated during spill-over of the Syrian conflict in 2014–17, drones were used for the first time, and proved very helpful in helping inform survey efforts.¹¹⁴

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

A total of 1.27km² of CMR-contaminated area was released in 2018, of which 1.15km² was cleared, 0.1km² was reduced by technical survey, and 0.02km² was cancelled by non-technical survey.

In addition, 0.84km² of new CMR contamination was added to the database in 2018, following non-technical survey in Arsal, in the north-east of Lebanon bordering Syria.

SURVEY IN 2018

In 2018, 103,000m² was reduced through technical survey (see Table 2).¹¹⁵ A further 20,314m² of newly suspected area in the Arsal region on the north-east border with Syria was cancelled through non-technical survey by MAG.¹¹⁶ In addition, the non-technical survey of the Arsal area, which commenced in July 2018, and was also conducted by NPA, resulted in 84,079m² identified as being CMR-contaminated.¹¹⁷ Technical survey and clearance of this area is planned for 2019.

Survey output in 2018 marked an increase compared to 2017, when no land was released by survey and when only the LAF were permitted to conduct non-technical survey.

Table 2: Reduction by technical survey in 2018¹¹⁸

Operator	Area reduced (m ²)
MAG	25,000
NPA	78,000
Total	103,000

MAG reported that it is performing 30% technical survey of low-threat cluster munition sites, which were previously recommended for cancellation through non-technical survey in 2013–14. In areas of the West Bekaa, where there are no CMR evidence points, just large polygons (from 1980s contamination), MAG is conducting technical survey of the whole site to determine where clearance is required and where land can be reduced through technical survey.¹¹⁹

Under the NPA pilot project for technical survey with the use of EDDs, the EDDs received accreditation in April 2018, and were deployed on the first technical survey task at the end of that month.¹²⁰ As part of the pilot project, non-technical survey is systematically conducted before technical survey and deployment of the EDDs.¹²¹ NPA reported that its technical survey pilot project with EDD, focused on five tasks suspected to contain CMR, found CMR contamination in only three of the tasks. In total, 29,860m² were subjected to technical survey, of which 4,185m² were quality controlled.¹²² The NPA pilot project is focused on cluster munition tasks where the location of submunitions had not been specified through non-technical survey. The pilot project tasks were inspected by quality control (QC) teams to evaluate the performance of the EDDs.¹²³

CLEARANCE IN 2018

Lebanon reported clearing just under 1.15km² of CMR-contaminated land in 2018, destroying in the process 3,583 submunitions (see Table 3).¹²⁴ This includes 119 submunitions destroyed during rapid response/EOD spot tasks in 2018.¹²⁵ Clearance in 2018 was slightly down compared to the 1.41km² of CMR-contaminated land cleared in 2017.¹²⁶ Clearance rates are influenced by the type of terrain and the depth of CMR, which in some locations is deeper than 15cm.¹²⁷

Table 3 above includes the destruction of submunitions during spot tasks in 2018, including 2 submunitions found in spot tasks conducted by MAG, 4 by NPA, and 101 submunitions by POD.¹²⁸

LMAC reported that eight CHAs were cleared in 2018, which proved to contain no CMR. LMAC hopes that introduction of technical survey for areas suspected to be CMR-contaminated, should help prevent unnecessary full clearance of areas which prove not to be contaminated.¹²⁹

Table 3: Clearance of CMR-contaminated area in 2018¹³⁰

Operator	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
DCA	394,120	1,457	10
MAG	269,082	271	100
NPA	193,720*	598	2
POD	175,241	497	0
LAMINDA	67,460	277	37
LAF	47,715	483	11,097
Totals	1,147,338	3,583	11,246

* 163,860m² of battle area clearance and 29,860m² cleared during EDD technical survey.¹³¹

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR LEBANON: 1 MAY 2011

ARTICLE 4 DEADLINE: 1 MAY 2021

ON TRACK TO MEET ARTICLE 4 DEADLINE: NO

Under Article 4 of the CCM, Lebanon is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 May 2021. Lebanon is not on track to meet this deadline and plans to submit an Article 4 extension request for consideration at the Second CCM Review Conference in 2020.

Originally, clearance of CMR-contaminated land had been expected to be completed by the end of 2016, in accordance with the 2011–20 national strategy.¹³² However, meeting this target was contingent on securing the number of BAC teams needed, which did not happen, and progress against the strategy has fallen well behind schedule.¹³³

In total, more than 8km² of CMR contamination has been cleared in the last five years (see Table 4 below).

Table 4: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (km ²)
2018	1.15
2017	1.41
2016	*1.90
2015	1.69
2014	2.10
Total	8.25

* In addition, a further 99,641m² of re-clearance was conducted.

LMAC predicts that the addition of eight new BAC teams in 2019, thanks to national funding for CMR clearance for five years, will result in an increase in total annual clearance output to 1.67km² per year.¹³⁴

Progress in land release is expected to be accelerated by adoption of better land release procedures in 2018, as enshrined in the revised NMAS. Crucially, LMAC's demonstrated commitment to promote and implement use of non-technical and technical survey on cluster munition-contaminated areas will help to cancel or reduce areas more efficiently.¹³⁵

As at April 2019, LMAC envisaged that, based on current capacity (including the eight new BAC teams, funded by Lebanon), it will take until 2025 to complete CMR clearance in Lebanon.¹³⁶ In its Article 7 report (for 2018) Lebanon says it could take as long as ten years, based on current average output, and that an increase in the number of teams to forty, would reduce completion to three years.¹³⁷ However, LMAC still needs to more accurately determine the baseline of CMR contamination through increased survey, which it is in the process of conducting and only then will it be able to determine a more accurate timeline for completion of its Article 4 obligations.

There is a concern that funding in some cases risks being diverted from BAC towards other objectives, such as mine clearance on the Blue Line, or clearance in the north-eastern border with Syria.¹³⁸ Furthermore, LMAC reported that donors mostly look to fund clearance of high-impact sites, whereas many of the remaining CMR tasks are viewed as moderate or low impact. LMAC is, however, encouraging donors to maintain funding to help it complete CMR clearance and its CCM Article 4 obligations.¹³⁹ Discovery of new contaminated area and the impact of working in difficult terrains and extreme weather conditions, which slow down clearance operations, were also cited as challenges in Article 4 implementation in Lebanon.¹⁴⁰

- 1 Email from Maj. Fadi Wazen, Operations Section Head, LMAC, 7 March 2019; and Article 7 Report (for 2018), Form F.
- 2 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14.
- 3 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 4 Email from Maj. Fadi Wazen, LMAC, 7 March 2019. LMAC's "2018 Annual Report Lebanon Mine Action Centre", reports total baseline CMR contamination as 11,768,926m².
- 5 Email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.
- 6 Article 7 Report (for 2018), Form F.
- 7 Interview with Brig.-Gen. Elie Nassif (then) Director, and Brig.-Gen. Fakh, (then) Head of Operations, LMAC, Beirut, 18 April 2016; email from Maj. Fadi Wazen, LMAC, 7 March 2019; and Article 7 Report (for 2018), Form F.
- 8 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 13; and Article 7 Report (for 2018), Form F.
- 9 Article 7 Report (for 2018), Form F.
- 10 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 11 Interview with Oussama Merhi, (then) UNDP Mine Action Advisor for LMAC, in Geneva, 26 June 2015; and Article 7 Report (for 2015), Form F.
- 12 Interview with Oussama Merhi, UNDP, in Geneva, 26 June 2015.
- 13 Article 7 Report (for 2015), Form F; interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakh, LMAC, Beirut, 11 May 2016; and email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 14 Interview with Bekim Shala, (then) Programme Manager, MAG, Nabatiyeh, 14 April 2016.
- 15 Email from Eva Veble, (then) Lebanon Programme Manager, NPA, 8 July 2016.
- 16 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 17 Email from Brig.-Gen. Ziad Nasr, (then) Director, LMAC, 27 April 2018; and "Mine Action Forum: Action Points 1st Quarter Progress Report", circulated by Ariane Elmas, UNDP Mine Action Advisor for LMAC, 21 March 2018.
- 18 Human Rights Watch, "Flooding South Lebanon. Israel's use of cluster munitions in Lebanon in July and August 2006", 16 February 2008.
- 19 MAG, "Cluster Munition Contamination in Lebanon using survey data", September 2014.
- 20 Email from Bekim Shala, MAG, 14 June 2016.
- 21 Email from Brig.-Gen. Elie Nassif, LMAC, 17 June 2015.
- 22 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 23 Interviews with Oussama Merhi, UNDP, in Geneva, 26 June 2015; and with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakh, LMAC, Beirut, 11 April 2016; and emails from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016; LMAC Operations Department, 3 July 2018; and Dave Wiley, MAG, 14 June 2018 and 7 March 2019.
- 24 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 25 Landmine Action, "Foreseeable Harm: the use and impact of cluster munitions in Lebanon: 2006", 2006.
- 26 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and Article 7 Report (for 2018), Form F.
- 27 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakh, LMAC, Beirut, 11 April 2016; presentation by Brig.-Gen. Fakh, LMAC, Beirut, 16 November 2016; and Article 7 Report (for 2018), Form F.
- 28 Landmine Action, "Foreseeable Harm: the use and impact of cluster munitions in Lebanon: 2006", 2006; interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakh, LMAC, Beirut, 11 April 2016; and Article 7 Report (for 2016) Form F.
- 29 Emails from Maj. Fadi Wazen, LMAC, 7 March 2019; David Willey, Programme Manager, MAG, 7 March 2019; and Emile Ollivier, Grants Coordinator, NPA, 19 March 2019.
- 30 Article 7 Report (for 2018), Form F; and email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 31 Email from Maj. Fadi Wazen, LMAC, 7 March 2019, and presentation in Beirut, 8 April 2018; LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14; and Article 7 Report (for 2018), Form F.
- 32 Email from Maj. Fadi Wazen, LMAC, 7 March 2019 and presentation in Beirut, 8 April 2018; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14.
- 33 LMAC, "Mid-term Review to Strategy 2011-2020, Milestone 2013", August 2014, pp. 4-5.
- 34 LMAC, "Lebanon Mine Action Strategy 2011-2020", September 2011, p. 4.
- 35 Email from Brig.-Gen. Ziad Nasr, LMAC, 26 March 2019.
- 36 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakh, LMAC, Beirut, 11 April 2016; and LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014-2016", March 2018; and "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018".
- 37 LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 36; interview with Brig.-Gen. Jihad Bechelany, LMAC Director, Maj. Fadi Wazen, LMAC, and Ariane Elmas, UNDP, Beirut, 16 April 2019; and email from Emile Ollivier, NPA, 19 March 2019.
- 38 Email from Anna-Lena Schluchter, containing data from Rana Elias, Focal point for Lebanon, GICHD, 21 June 2017.
- 39 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014-2016", March 2018.
- 40 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and LMAC, "2017 Annual Report Lebanon Mine Action Centre", undated.
- 41 Email from Rana Elias, GICHD, 17 June 2019.
- 42 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014-2016", March 2018.
- 43 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; CCM Article 7 Report (for 2018), Form A; and Statement of Lebanon on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4-6 September 2017.

- 44 LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 23.
- 45 Expert workshop under the framework of supporting Lebanon in meeting its CCM Article 4 obligations, Beirut, 17 November 2016; expert workshop on cluster munition and landmine survey and clearance in Lebanon, Beirut, 17 January 2018; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 23.
- 46 Emails from Emile Ollivier, NPA, 19 March 2019; David Willey, MAG, 7 March 2019; and Mahmoud Rahhal, POD, 8 March 2019.
- 47 Emails from Emile Ollivier, NPA, 19 March 2019; and David Willey, MAG, 7 March 2019.
- 48 LMAC, "2018 Annual Report Lebanon Mine Action Centre", pp. 4, 7, and 17; and emails from Maj. Fadi Wazen, LMAC, 7 March 2019; and Emile Ollivier, NPA, 19 March 2019.
- 49 Email from Emile Ollivier, NPA, 19 March 2019.
- 50 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 51 Emails from Maj. Fadi Wazen, LMAC, 31 May and 7 June 2019; and interview, Beirut, 16 April 2019.
- 52 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 23.
- 53 LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 17.
- 54 LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 5; and email from Major Fadi Wazen, LMAC, 7 March 2019;
- 55 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 56 LMAC, "2018 Annual Report Lebanon Mine Action Centre", pp. 5 and 19.
- 57 Emails from Emile Ollivier, NPA, 19 March 2019; David Willey, MAG, 7 March 2019; and Mahmoud Rahhal, POD, 8 March 2019.
- 58 Email from David Willey, MAG, 7 March 2019.
- 59 Email from Emile Ollivier, NPA, 19 March 2019.
- 60 LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 15.
- 61 Email from Rana Elias, GICHD, 17 June 2019.
- 62 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and interview with Maj. Ali Makki, Information Management Section Head, LMAC, and Ariane Elmas, UNDP, Beirut, 16 April 2019.
- 63 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; email from LMAC Operations Department, 28 June 2018; "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018"; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14.
- 64 Email from Rana Elias, GICHD, 17 June 2019.
- 65 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016.
- 66 LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14; and interview with Maj. Ali Makki, LMAC, Beirut, 16 April 2019.
- 67 Email from David Willey, MAG, 7 March 2019.
- 68 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 69 Email from Brig.-Gen. Elie Nassif, LMAC, 5 July 2016.
- 70 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 71 Email from Emile Ollivier, NPA, 19 March 2019.
- 72 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011, p. 4.
- 73 Response to Cluster Munition Monitor questionnaire by Brig.-Gen. Imad Odiemi, LMAC, 2 May 2014.
- 74 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.
- 75 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018; LMAC, "2017 Annual Report Lebanon Mine Action Centre", undated; and email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.
- 76 Interview with Maj. Fadi Wazen, Beirut, 16 April 2019.
- 77 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.
- 78 Interview with Maj. Fadi Wazen, LMAC, Beirut, 16 April 2019.
- 79 Email from Brig.-Gen. Elie Nassif, LMAC, 17 June 2015.
- 80 Emails from Brig.-Gen. Elie Nassif, LMAC, 7 July 2015; and Rory Logan, (then) Programme Manager, NPA, 20 April 2015; Statement of Lebanon, First CCM Review Conference, Dubrovnik, 7–11 September 2015; and email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.
- 81 Emails from Brig.-Gen. Elie Nassif, LMAC, 7 July 2015; and Rory Logan, NPA, 20 April 2015.
- 82 Emails from Dave Wiley, MAG, 27 April 2018 and 7 March 2019; and Craig McDiarmid, NPA, 17 April 2018 and 19 March 2019.
- 83 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; Craig McDiarmid, NPA, 17 April 2018; and Dave Wiley, MAG, 27 April 2018; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 17.
- 84 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; Craig McDiarmid, NPA, 17 April 2018; Maj. Fadi Wazen, LMAC, 7 March 2019; and Emile Ollivier, NPA, 19 March 2019.
- 85 "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018"; LMAC, "2017 Annual Report Lebanon Mine Action Centre", undated; and emails from Dave Wiley, MAG, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018.
- 86 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; Craig McDiarmid, NPA, 17 April 2018; and Dave Wiley, MAG, 27 April 2018.
- 87 Emails from Emile Ollivier, NPA, 19 March 2019; David Willey, MAG, 7 March 2019; and Mahmoud Rahhal, POD, 8 March 2019.
- 88 Expert workshop on cluster munition and landmine survey and clearance in Lebanon, Beirut, 17 January 2018; and LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.
- 89 Expert workshop on cluster munition and landmine survey and clearance in Lebanon, Beirut, 17 January 2018.
- 90 Emails from Bekim Shala, MAG, 21 June 2016; and Craig McDiarmid, NPA, 30 March 2017.
- 91 Emails from Craig McDiarmid, NPA, 30 March 2017 and 17 April 2018; and David Willey, MAG, 7 March 2019.
- 92 Email from David Willey, MAG, 7 March 2019.
- 93 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016; and with Maj. Fadi Wazen, LMAC, Beirut, 16 April 2019.
- 94 Emails from Dave Wiley, MAG, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018.
- 95 Emails from David Willey, MAG, 7 March 2019; and Emile Ollivier, NPA, 19 March 2019; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14.
- 96 Telephone interview with Craig McDiarmid, NPA, 15 June 2018; emails from David Willey, MAG, 7 March 2019; and Emile Ollivier, NPA, 19 March 2019.
- 97 Emails from Dave Wiley, MAG, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018.
- 98 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 99 LMAC, "2018 Annual Report Lebanon Mine Action Centre", pp. 10–11; and email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 100 Email from LMAC Operations Department, 28 June 2018; and email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 101 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and LMAC Operations Department, 28 June 2018.
- 102 Email from David Willey, MAG, 7 March 2019.
- 103 Ibid.
- 104 Email from Emile Ollivier, NPA, 19 March 2019.
- 105 Ibid.
- 106 Ibid.
- 107 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 108 Statement of Lebanon on clearance, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.
- 109 Email from Craig McDiarmid, NPA, 15 June 2018.
- 110 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 111 Email from Emile Ollivier, NPA, 19 March 2019.
- 112 Emails from David Willey, MAG, 7 March 2019; and Emile Ollivier, NPA, 19 March 2019.
- 113 Emails from Bekim Shala, MAG, 3 April 2016; and Dave Wiley, MAG, 25 April 2017 and 27 April 2018.
- 114 Presentation by Maj. Fadi Wazen, LMAC, at the RHDSL, Beirut, 8 April 2019.
- 115 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 116 Email from David Willey, MAG, 7 March 2019; and Article 7 Report (for 2018), Form F.
- 117 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 12.
- 118 Email from Maj. Fadi Wazen, LMAC, 7 March 2019. NPA reported reducing 54,200m² through technical survey in 2018 (officially reported in January 2019), slightly lower than the 78,000m² reported by LMAC.
- 119 Email from David Willey, MAG, 7 March 2019.

- 120 Email from Craig McDiarmid, NPA, 15 June 2018.
- 121 Email from Craig McDiarmid, NPA, 17 April 2018; and telephone interview, 15 June 2018.
- 122 Email from Emile Ollivier, NPA, 19 March 2019.
- 123 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.
- 124 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; LMAC, "2018 Annual Report Lebanon Mine Action Centre", pp. 10–11; and Article 7 Report (for 2018), Form F.
- 125 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", pp. 10–11.
- 126 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and CCM Article 7 Report (for 2017), Form F.
- 127 Email from Maj. Fadi Wazen, LMAC, 31 May 2019.
- 128 Emails from David Willey, MAG, 7 March 2019; Emile Ollivier, NPA, 19 March 2019; and Mahmoud Rahhal, POD, 8 March 2019.
- 129 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; and interview with Brig.-Gen. Jihad Bechelany, Director, and Maj. Fadi Wazen, LMAC, Beirut, 16 April 2019.
- 130 Email from Maj. Fadi Wazen, LMAC, 7 March 2019; LMAC, "2018 Annual Report Lebanon Mine Action Centre", pp. 10–11; and Article 7 Report (for 2018), Form F. MAG reported slightly different clearance data for 2018, with 269,082m² and destruction of 271 submunitions and 78 items of other UXO. Email from David Willey, MAG, 7 March 2019. NPA reported destruction of 602 submunitions and 3 other items of UXO, a very small variance on the 598 submunitions and 2 items of UXO reported for NPA by LMAC. Email from Emile Ollivier, NPA, 19 March 2019. POD reported clearing 184,641m² of CMR-contaminated areas with the destruction of 396 submunitions. Email from Mahmoud Rahhal, POD, 8 March 2019.
- 131 Email from Emile Ollivier, NPA, 19 March 2019.
- 132 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.
- 133 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011.
- 134 Email from Emile Ollivier, NPA, 19 March 2019.
- 135 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and emails from Craig McDiarmid, NPA, 17 April 2018; and Dave Wiley, MAG, 27 April 2018.
- 136 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 137 Article 7 Report (for 2018), Form I.
- 138 Expert workshop under the framework of supporting Lebanon in meeting its CCM Article 4 obligations, Beirut, 17 November 2016; and Article 7 Report (for 2018), Form F.
- 139 Email from Maj. Fadi Wazen, LMAC, 7 March 2019.
- 140 Article 7 Report (for 2018), Form F.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 AUGUST 2020
JUST ON TRACK TO MEET DEADLINE

KEY DATA

CLUSTER MUNITION
CONTAMINATION: LIGHT

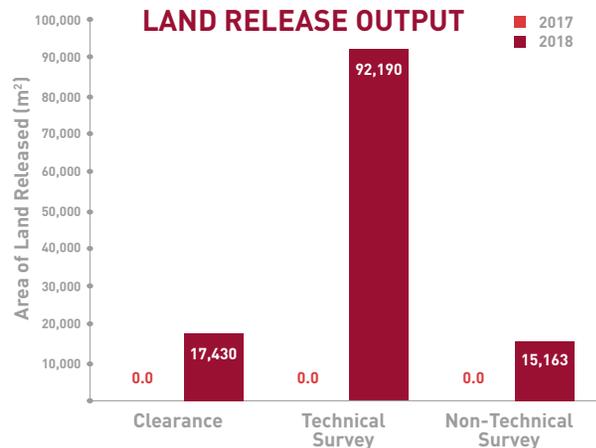
1.72 KM²

SUBMUNITION
CLEARANCE IN 2018

17,430 M²

SUBMUNITIONS
DESTROYED IN 2018

6



KEY DEVELOPMENTS

In 2018, Montenegro recommenced survey and clearance of the relatively small amount of area still contaminated with cluster munition remnants (CMR). The land release project, implemented with the support of Norwegian People's Aid (NPA), aims to complete CMR clearance by 1 August 2020: Montenegro's Article 4 deadline.

RECOMMENDATIONS FOR ACTION

- Montenegro should ensure that CMR survey and clearance operations meet its August 2020 Convention on Cluster Munitions (CCM) Article 4 deadline.
- If Montenegro begins to fall behind schedule on the project workplan, it should seek to increase clearance capacity immediately, making use of the additional clearance team which NPA has reported can be made available if required.
- However, if at any stage and for whatever reason, Montenegro believes it will not be in a position to complete CMR clearance by 1 August 2020, it must submit an Article 4 extension request immediately for consideration at the CCM Ninth Meeting of States Parties.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	7	Montenegro has a reasonable understanding of remaining CMR contamination, which is disaggregated from other types of explosive ordnance. Additional survey/re-survey is being conducted, as required, during land release operations. Montenegro should be more precise in recording and reporting CMR-contaminated areas as SHAs or CHAs.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	6	The Directorate for Emergency Situations, within the Ministry of Interior, is responsible for overseeing CMR survey and clearance, and provides an enabling environment. National resources (both technical and financial) are relatively limited, and the national authorities have benefitted from close partnership with NPA to help implement CCM Article 4.
GENDER (10% of overall score)	7	The capacity of the national mine action programme in Montenegro is small, but there is a gender policy in place, and both the national authorities and implementing partner, NPA, ensure equal access to employment for women and men. Furthermore, women and children are consulted during survey activities, and data is disaggregated by sex and age.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	5	No national information management system exists, but plans were being made to address this in 2019. Montenegro's reporting on information management would be strengthened by disaggregating CMR contamination data into SHAs and CHAs, and land release output into the amount released by clearance, technical survey, and non-technical survey, in its Article 7 transparency report.
PLANNING AND TASKING (10% of overall score)	8	While there is no national mine strategy in place, the Ministry of Interior and NPA do have a project workplan in place to complete survey and clearance of CMR contamination by 1 August 2020.
LAND RELEASE SYSTEM (20% of overall score)	7	While no national mine action standards exist, survey and clearance operations are conducted in accordance to international mine action standards and to national standing operating procedures (SOPs). While the small current survey and clearance capacity, which also includes the use of explosive detection dogs (EDDs), is thought sufficient to enable Montenegro to complete CMR clearance by 1 August 2020, NPA says that an additional manual clearance team can be made available if necessary.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	6	After five years without CMR clearance, save for a few submunitions found during construction work, Montenegro now has funding to complete CMR clearance. Survey and clearance began in October 2018 and are scheduled to be completed by 1 August 2020, but there is no margin for any unforeseen delays.
Average score	6.6	Overall programme performance: AVERAGE

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- The Directorate for Emergency Situations, Ministry of Interior

NATIONAL OPERATORS

- The Department for UXO (within the Directorate for Emergency Situations)

INTERNATIONAL OPERATORS

- Norwegian People's Aid (NPA)

OTHER ACTORS

- None

UNDERSTANDING OF CMR CONTAMINATION

Montenegro has estimated that almost 1.72km² of land contains CMR, across three municipalities (Golubovic, Rožaje, and Tuzi).¹ CMR-contaminated areas are located in Podgorica airport; Golubovic; Mataguži; Šipëanik and Tuzi; Njeguši and Jablanica (Rožaje municipality); and Bjelaja and mount Prokletije (Plav municipality).² Of the total CMR-contaminated area, 29.98% is reported to be agricultural land, 6.26% forested area, 0.62% rivers and canals, and 63.14% infrastructure and utilities, which includes a military base at Podgorica airport.³

Contamination as at the end of 2018 was a slight reduction on the year before.⁴ The contamination was identified during detailed non-technical survey conducted between December 2012 and April 2013. During the survey, NPA made 87 polygons of suspected or confirmed hazardous areas across 11 locations in three municipalities. Contamination was found to affect five communities.⁵ Due to snow, it was not possible to survey two suspected areas of CMR contamination during the 2012–13 survey, at Bogajice and Murino in Plav municipality.⁶

With new funding secured, CMR land release operations re-started in late 2018, and hazardous areas are being re-surveyed through non-technical survey, prior to tasking of technical survey and clearance.⁷ The two hazardous areas at Bogajice and Murino not surveyed in 2012–13 were due to be investigated by the non-technical survey team in May 2019.⁸

Montenegro became contaminated with explosive remnants of war (ERW), mainly unexploded ordnance (UXO), as a result of conflicts during the break-up of the former Socialist Federal Republic of Yugoslavia in the 1990s.⁹ North Atlantic Treaty Organization (NATO) air strikes in Montenegro between March and June 1999 included use of 22 cluster munitions of four different types: AGM-154A JSOW guided missiles, BL755s, CBU-87/Bs, and MK-20 Rockeye IIs. These scattered a total of some 4,000 submunitions (BLU-97A/B, BL755, MK-1, and MK118).¹⁰ In addition, there is CMR contamination in Rožaje, which is the result of the dumping of cluster munitions by the Yugoslav army.¹¹

Some unexploded submunitions were collected by Yugoslav army units immediately after the NATO air strikes. This initial clearance was carried out in haste, without applying international standards for ERW clearance, and for the most part only visible submunitions were destroyed.¹² Following Montenegro's independence, CMR removal was conducted by the Ministry of Interior in response to notifications from the public.¹³

To date, CMR clearance according to international standards has only been carried out in one of the three affected municipalities in Montenegro. In 2007, UXB Balkans conducted clearance operations in two locations within the communities of Besnik and Njeguši (in the municipality of Rožaje). In total, some 378,000m² was cleared with the destruction of 16 MK-1 submunitions.¹⁴

Montenegro's initial CCM Article 7 transparency report had claimed that, as at 27 January 2011, "there are no contaminated areas in Montenegro."¹⁵ In July 2011, however, the director of the Regional Centre for Divers' Training and Underwater Demining (RCUD) confirmed that unexploded submunitions had been found in 2007.¹⁶ Montenegro informed a CCM intersessional meeting in 2012 that clearance by military units after the air strikes in 1999, during which more than 1,800 submunitions were collected, had not been conducted "fully according to humanitarian mine action standards" and that it planned to conduct a survey to assess the remaining threat.¹⁷ This led to the 2012–13 NPA survey described above.¹⁸

OTHER EXPLOSIVE REMNANTS OF WAR

Montenegro is also heavily contaminated by other ERW, with items of UXO discovered daily throughout the country, on land as well as in rivers and the sea.¹⁹ The NATO Science for Peace and Security (SPS) project, which was launched in Montenegro in 2014 to provide the UXO clearance team of the Directorate for Emergency Situations with technical capacity and training in the detection and destruction of UXO, ended in December 2017.²⁰

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The Directorate for Emergency Situations, established in 2006 by the Ministry of Interior, is responsible for mine action in Montenegro, performing the role of a national mine action centre.²¹ Prior to 2017, due to lack of human resources and equipment, the role of the national mine action centre had previously been undertaken by RCUD, which was set up in 2002.²²

In December 2017, NPA organised a workshop in cooperation with the Ministry of Interior of Montenegro's Directorate for Emergency Situations, on the "Application of standard operating procedures for technical survey and clearance of areas contaminated with cluster munition remnants with special emphasis on internal and external quality control". The aim of the workshop was to familiarise Directorate staff

with standing operating procedures (SOPs) relating to technical survey and clearance of CMR and to train them on how to undertake quality control (QC) of those operations. The five participants from the Directorate successfully completed the training.²³ The Directorate is responsible for external quality monitoring and issuing of QC certificates in operations on CMR-contaminated area.²⁴ In addition, in 2018, personnel from the Directorate were trained by NPA in non-technical survey.²⁵

A Memorandum of Understanding (MoU) was signed in July 2018 between the Ministry of Interior and NPA for a Norwegian funding project to complete CMR clearance. Cooperation and collaboration between the Directorate for Emergency Situations, its UXO Department, and

NPA, is reported to be effective and professional, with clear division of roles and responsibilities and an enabling environment for mine action.²⁶ NPA has provided capacity development support to national authorities regarding refresher training on destruction of BLU-97 and MK118 Rockeye submunitions, and the development of new SOPs for both non-technical and technical survey.²⁷

All activities performed by the Ministry of Interior team, including destruction of submunitions and external QC, are nationally funded. In 2018, the government of Montenegro provided €50,000 for external quality assurance (QA) and QC of the CMR clearance and technical survey.²⁸

GENDER

National authorities in Montenegro reported that a gender policy is in place, and that procedures for conducting non-technical survey include ensuring a gender-balanced approach to survey teams and consulting with all members of the community, including women and children.²⁹

There is equal access to employment for qualified women and men in survey and clearance teams in Montenegro, and women account for 20% of operational roles, and 25% of managerial level/supervisory positions.³⁰

Implementing partner, NPA, has a gender equality policy in place and reported that it was also looking to conduct training in gender in 2019 for all staff engaged in the programme. NPA's Programme Manager and Administration Officer in Montenegro are female, and the Operations Manager, Site Manager, while all members of the survey and clearance team are male.³¹

In addition, relevant data is disaggregated data by sex and age by both the Ministry of Interior and NPA.³²

INFORMATION MANAGEMENT AND REPORTING

There is no national information management system in place, such as the information management system for mine action (IMSMA), but as at early 2019, there were efforts underway to create an indigenous mine action information management system.³³

Although Montenegro submitted its Article 7 transparency report (for 2018) in a timely manner, the quality and accuracy of information on CMR contamination as well as on survey and clearance outputs, could be improved. In its Article 7 report, the total area of remaining CMR contamination was not separated into SHAs and CHAs, and the area released by survey in 2018 was not disaggregated by amount of land cancelled by non-technical survey and that reduced by technical survey, even though this data is available

and was reported to Mine Action Review. Furthermore, the amount of land released through clearance, was not included in Montenegro's Article 7 transparency report, but was reported to Mine Action Review.³⁴

Montenegro has not prepared an Article 4 deadline extension request for consideration by states parties at the Ninth Meeting of States Parties in September 2019, because it expects to complete CMR clearance ahead of its deadline of 1 August 2020. If, for any reason, Montenegro believes it will not meet that deadline, it must submit an Article 4 extension request as soon as possible for consideration at the Ninth Meeting of States Parties, to avoid being in violation of the CCM as at 1 August 2020, if CMR clearance were not completed by this date.

PLANNING AND TASKING

RCUD and NPA signed an MoU in December 2012 under which NPA agreed to fund and implement a two-phase project – the "Cluster Munition Convention Completion Initiative for Montenegro". This involved first, non-technical survey, and then, technical survey and clearance of areas where the presence of CMR was confirmed. NPA agreed to set up a database and to develop capacity for non-technical survey and quality management.³⁵ The non-technical survey was completed but funding for the second phase of the project involving technical survey and clearance, originally expected to start in 2013 and continue throughout 2014,³⁶ was not secured.

In May 2018, in a welcome development, Norwegian government funding was secured for the CMR survey and clearance operations necessary for Montenegro to release remaining CMR-contaminated areas and

complete its CCM Article 4 obligations. An MoU between the Ministry of Interior and NPA was signed in July with CMR land release operations beginning in October 2018. In collaboration with NPA, there is a work plan in place aimed at completion of Montenegro's Article 4 clearance obligations of 1 August 2020. Plans for realisation of the CMR completion project were entered into the medium-term workplan of the Montenegro government.³⁷

Following the signature of the MoU, a joint working group was established to support the planning, prioritisation, and collaboration for CMR tasks.³⁸ Criteria for prioritising CMR-contaminated areas for clearance have been agreed between the national authorities and NPA,³⁹ and are designed to enable access based on national priorities, including aviation needs, geographic locations and linkages, and weather conditions.⁴⁰

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

In March 2018, the Directorate for Emergency Situations reported that it had prepared a rule book on the destruction of UXO and was currently working on drafting national mine action legislation.⁴¹ In February 2019, it reported that mine action legislation was in place.⁴²

No national standards exist for survey and clearance of CMR in Montenegro, but operations are being conducted according to the International Mine Action Standards (IMAS) and to national SOPs developed for non-technical survey, technical survey, clearance, and use of EDDs (explosives detection dogs).⁴³ Aviation security procedures require that SOPs for CMR survey and clearance operations at Podgorica airport be adapted to meet specific international standards.⁴⁴

OPERATORS

The Department for UXO within the Directorate for Emergency Situations has only five staff, who are primarily dedicated to clearance of UXO other than submunitions, which comprises the bulk of ERW contamination in Montenegro.⁴⁵ Due to lack of funding, responsibility for explosive ordnance disposal (EOD) has remained with the police.⁴⁶

Having previously completed a nationwide non-technical survey in April 2013, NPA, re-started CMR land release operations in 2018, thanks to Norwegian government funding.⁴⁷

Non-technical survey capacity in Montenegro totals five personnel, comprising one NPA staff, working with four trained personnel from the Ministry of Interior.⁴⁸ NPA technical survey/clearance capacity comprised six personnel.⁴⁹

In addition, in May 2019, NPA deployed a team with two dog handlers and two explosive detection dogs (EDDs), supported by a team leader, working alongside the manual team for technical survey. NPA planned to deploy the dog team for three months and to review progress accordingly.⁵⁰

Furthermore, NPA reported that there is also an opportunity to bring in another manual team, if additional capacity is required, and that this option is under constant review.⁵¹

OPERATIONAL TOOLS

The main method of CMR land release in Montenegro is manual survey and clearance, though as noted, NPA began deployment of an EDD team in May 2019 for three months, to assist with technical survey.⁵²

In addition, in late February 2019, NPA/Ministry of Interior received a thermal camera drone for six months, to assist with non-technical survey.⁵³

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

A total of 124,783m² of CMR contaminated area was released in 2018, of which 17,430m² was cleared, 92,190m² was reduced by technical survey, and 15,163m² was cancelled by non-technical survey.⁵⁴

SURVEY IN 2018

A total of 107,350m² of CMR-contaminated area was released by survey in 2018, in the municipality of Rožaje.⁵⁵

Non-technical survey conducted by NPA/Ministry of Interior cancelled 15,163m² of CMR-contaminated area and technical survey conducted by NPA reduced 92,190m².⁵⁶

Prior to 2018, no CMR survey had taken place since 2015, when a small amount of non-technical survey was conducted around the airport; and before then no survey had taken place since NPA's nationwide non-technical survey was completed in April 2013.⁵⁷

CLEARANCE IN 2018

In October 2018, NPA cleared 17,430m² of cluster munition-contaminated area in Rožaje municipality, during which six MK-1 submunitions were found by NPA and destroyed in-situ by the Ministry of Interior.⁵⁸ The 2018 clearance output was not included in Montenegro's CCM Article 7 transparency report for 2018, as national documentation was submitted after the report.⁵⁹ This marks an increase on 2017, when no CMR clearance took place.⁶⁰

ARTICLE 4 DEADLINE AND COMPLIANCE

**CCM ENTRY INTO FORCE
FOR MONTENEGRO: 1 AUGUST 2010****ARTICLE 4 DEADLINE: 1 AUGUST 2020****ON TRACK TO MEET ARTICLE 4 DEADLINE: YES,
BUT WITH NO MARGIN FOR UNFORESEEN DELAY.**

Under Article 4 of the CCM, Montenegro is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 August 2020. Both the national authorities and implementing partner, NPA, report that Montenegro is on track to complete its Article 4 clearance obligations by this deadline.⁶¹ However, the timeline is extremely tight and there is no margin for unforeseen delays to the completion workplan. If, for any reason, Montenegro believes it will not complete CMR clearance by its Article 4 deadline, it must submit an extension request for consideration at the Ninth Meeting of States Parties in 2019.

Prior to 2018, and with the exception of destruction of a very small number of submunitions discovered during construction work and project-based survey, there was no planned clearance of CMR in the previous four years (see Table 1).

Table 1: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (km ²)
2018	0.02
2017	0
2016	0
2015	0
2014	0
Total	0.02

Funding for the remaining CMR survey and clearance, through to completion, was secured in May 2018, from the Government of Norway, to be conducted in partnership with NPA. An MoU between NPA and the Ministry of Interior was signed in July 2018, and survey and clearance operations began in October 2018.

While the national authorities and NPA plan to complete clearance by August 2020,⁶² in compliance with Montenegro's legal obligation under the CCM, there is no margin for unforeseen delays.

- 1 Article 7 Reports (for 2017 and 2018), Form F; and statement of Montenegro on clearance, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 2 Article 7 Report (for 2018), Form F.
- 3 Statement of Montenegro on clearance, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018; and email from Alyson Lewin, Programme Manager, NPA, 27 February 2019.
- 4 Article 7 Reports (for 2017 and 2018), Form F; and emails from Milovan Joksimović, Head, Department for UXO, Directorate for Emergency Situations, Ministry of Interior, 28 March 2018 and 25 February 2019.
- 5 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 26.
- 6 Ibid.; and interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017; and email, 28 March 2018.
- 7 Article 7 Report (for 2018), Form F; and email from Alyson Lewin, NPA, 27 February 2019.
- 8 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 9 Interview with Veselin Mijajlovic, Regional Centre for Divers' Training and Underwater Demining (RCUD), Bijela, 14 March 2007.
- 10 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 21.
- 11 Interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017.
- 12 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 22.
- 13 Ibid., p. 21.
- 14 Ibid., p. 23.
- 15 Article 7 Report (for 1 August 2010 to 27 January 2011), Form F.
- 16 Telephone interviews with Veselin Mijajlovic, RCUD, 19 and 25 July 2011.
- 17 Statement of Montenegro, CCM intersessional meetings (Clearance and Risk Reduction Session), Geneva, 17 April 2012.
- 18 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 26.
- 19 Interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017.
- 20 NATO, "NATO tests Science for Peace and Security projects in Montenegro", 4 November 2016, at: <https://bit.ly/2KUVh3w>; and email from Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 28 March 2018.
- 21 Article 7 Report (for 2016); and interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017.
- 22 Email from Veselin Mijajlovic, RCUD, 29 July 2012; and Sluzbeni list RCG (Official Gazette of Montenegro), No. 66, pp. 28-32.
- 23 Email from Goran Šehić, Deputy Programme Manager, NPA Bosnia and Herzegovina, 3 July 2018.
- 24 Ibid.; and email from Milovan Joksimović, Directorate for Emergency Situations, 4 July 2018.
- 25 Email from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019.
- 26 Email from Alyson Lewin, NPA, 27 February 2019.
- 27 Ibid.
- 28 Article 7 Report (for 2018), Form I.
- 29 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 30 Email from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019.
- 31 Email from Alyson Lewin, NPA, 27 February 2019.
- 32 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019, and Alyson Lewin, NPA, 27 February 2019.
- 33 Ibid.
- 34 Article 7 Report (for 2018), Form F; and emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 35 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 9.
- 36 Ibid., p. 6.
- 37 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 38 Email from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019.
- 39 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 40 Email from Alyson Lewin, NPA, 27 February 2019.
- 41 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
- 42 Email from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019.
- 43 Email from Alyson Lewin, NPA, 27 February 2019.
- 44 Ibid.
- 45 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
- 46 Ibid.
- 47 Email from Alyson Lewin, NPA, 27 February 2019.
- 48 Ibid.
- 49 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 50 Email from Alyson Lewin, NPA, 4 June 2019.
- 51 Email from Alyson Lewin, NPA, 27 February 2019.
- 52 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February and 4 June 2019.
- 53 Ibid.
- 54 Ibid.
- 55 Article 7 Report (for 2018), Form F; and emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 56 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 57 Emails from Darvin Lisica, Programme Manager, Bosnia and Herzegovina, NPA, 3 March 2015; and Veselin Mijajlovic, RCUD, 13 May 2016; interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017; and Article 7 Report (for 2015), Form F.
- 58 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 59 Email from Milovan Joksimović, Directorate for Emergency Situations, 4 June 2018.
- 60 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
- 61 Statement of Montenegro on clearance, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018; and emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.
- 62 Emails from Milovan Joksimović, Directorate for Emergency Situations, 25 February 2019; and Alyson Lewin, NPA, 27 February 2019.

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 MARCH 2026
NOT ON TRACK TO MEET DEADLINE / UNCLEAR

KEY DATA

**CLUSTER MUNITION
CONTAMINATION: LIGHT**

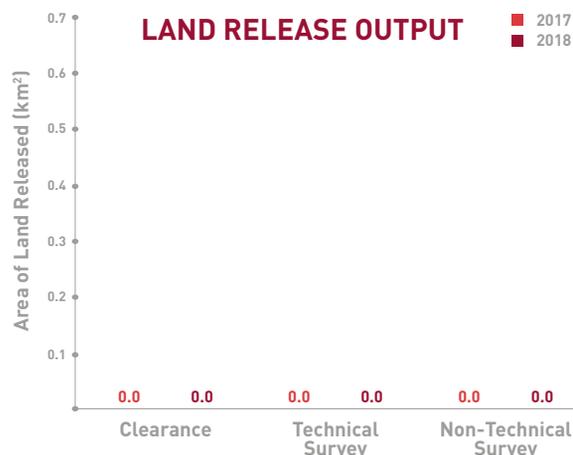
<5 KM²

SUBMUNITION
CLEARANCE IN 2018

0 KM²

SUBMUNITIONS
DESTROYED IN 2018

0



KEY DEVELOPMENTS

Somalia has made no progress in implementing its obligations under Article 4 of the Convention on Cluster Munitions (CCM), since becoming a state party in 2015. No overview of the extent of contamination from cluster munition remnants (CMR) exists. No survey specific to CMR was conducted and no clearance of CMR was reported again in 2018, as in previous years, although Somali Explosive Management Authority (SEMA) stated it would be able to report on an established baseline of CMR contamination in 2019, following the completion of a review of database survey records. There continues to be a need for much greater support for SEMA to operate effectively and greater priority on the implementation of mine action operations.

RECOMMENDATIONS FOR ACTION

- Somalia should ensure timely survey and clearance of CMR in accordance with its CCM obligations, alongside efforts to address mines and explosive remnants of war (ERW) other than CMR.
- Somalia should elaborate a plan to fulfil its Article 4 survey and clearance obligations.
- Somalia should commit resources for mine action operations.
- SEMA's status within the Federal Government of Somalia should be officially recognised and national resources budgeted annually for its operating costs.
- SEMA should ensure that bureaucratic blockages to operations are lifted and permissions and authorisation to carry out mine action activities facilitated.
- Continued efforts should be undertaken to support SEMA to manage the Information Management System for Mine Action (IMSMA) database. Regular updates from the database should be shared with all implementing partners.
- The Federal Government of Somalia should formally endorse Somalia's new National Mine Action Strategic Plan 2017–2020.
- Somalia should develop a resource mobilisation strategy and initiate dialogue with development partners on long-term support for mine action, including to address CMR.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	3	No baseline of CMR contamination has been established.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	4	Progress was made towards more effective management of the mine action programme through ongoing capacity development work with SEMA. The Somali Government has still to formally recognise SEMA as a government institution and provide funding for its operations.
GENDER (10% of overall score)	5	Somalia's National Mine Action Strategic Plan 2017–2022 includes provisions on gender and SEMA has pledged to address gender-related issues.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	5	SEMA has assumed full ownership and responsibility for the national mine action database, resulting in improvements in information management. Somalia has yet to submit its initial CCM Article 7 report, however, due in August 2016.
PLANNING AND TASKING (10% of overall score)	5	Operators reported that SEMA's ability to manage planning and tasking increased in 2018, however external factors such as the security situation continue to prevent access to certain areas of the country and hampered the deployment of mine action teams.
LAND RELEASE SYSTEM (20% of overall score)	5	A process to revise Somalia's National Technical Standards and Guidelines was ongoing in 2018 and due to be completed in 2019, but they do not contain CMR specific provisions for survey or clearance.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	2	No CMR contamination was surveyed or cleared again in 2018, and no progress towards addressing CMR contamination has been reported in the past five years, primarily due to lack of funding and the security situation. It is unclear if Somalia will meet its Article 4 deadline by 2026.
Average score	3.9	Overall programme performance: VERY POOR

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Somali Explosive Management Authority (SEMA)
- Mine Action Department, within the Somaliland Ministry of Defence (formerly the Somaliland Mine Action Centre, SMAC)

NATIONAL OPERATORS

- SEMA federal state consortium national non-governmental organisation partners

INTERNATIONAL OPERATORS

- The HALO Trust
- Norwegian People's Aid (NPA)
- Ukroboronservice

OTHER ACTORS

- United Nations Mine Action Service (UNMAS)

UNDERSTANDING OF CMR CONTAMINATION

In 2019, mine action management in Somalia continued to be divided into two geographical regions: in the five federal states of south-central Somalia under the SEMA, and in the self-declared region of Somaliland under the Mine Action Department, within the Somaliland Ministry of Defence (formerly, the Somaliland Mine Action Centre, SMAC). There is no reported CMR contamination in Somaliland.

The extent of CMR contamination in Somalia is unknown. In 2013, dozens of PTAB-2.5M submunitions and several AO-1-Sch submunitions were found within a 30km radius of the town of Dolow on the Somali-Ethiopian border in south-central Somalia.¹ CMR were also identified around the town of Galdogob in the north-central Mudug province of Puntland, further north on the border with Ethiopia.² More contamination was expected to be found in south-central Somalia's Lower and Upper Juba regions.³

In May 2019, SEMA reported that no confirmed areas of CMR contamination were recorded in the national mine action database. It informed Mine Action Review that it expected to be able to report a baseline estimate of remaining CMR contamination during 2019, following the completion of a review of information in the national database, previously maintained by the United Nations Mine Action Service (UNMAS).⁴ SEMA stated that following the transition of ownership of the national database from UNMAS, verification of survey information was ongoing, including a review of old survey reports of questionable quality, in order for SEMA to prepare plans for survey and clearance. SEMA reported that a clearance plan for 2020 would be drafted by the end of 2019, identifying priority areas of cluster munition and anti-personnel mine contamination to be addressed by state.⁵

SEMA confirmed that no new areas of CMR contamination were recorded in 2018. However, according to SEMA, CMR contamination is suspected in areas along the border with Kenya, in the north of Jubaland state. It stated that in the old version of the national database managed by UNMAS, five areas suspected to contain CMR contamination were recorded in Jubaland.⁶ No further survey of CMR contaminated areas has been possible in recent years, primarily due to lack of funding, according to SEMA.⁷

Submunitions have been sporadically found in previous years, including most recently in 2017, when UNMAS reported that it was shown two photos of the body of a BL755 submunition being used in what it assessed to be an improvised explosive device (IED) in Kismayo, Lower Juba region.⁸ Previously, three reports of CMR were made in 2016: several BL755 submunitions were reportedly found near Bu'ale, Middle Juba region in January, which were claimed by Somali media to have been recently used; a modified BL755 submunition was found in Bardera (Baardheere), Gedo region in

March; and one PTAB-2.5M submunition was reportedly found in Dinsoor, Bay region in September.⁹ In 2015, UNMAS reported that eight reports were submitted in September from Raddhure, in Bakool region of South West state, showing empty RBK-250-275 cluster bomb containers, which can contain both AO-1-Sch and PTAB-2.5M submunitions.¹⁰

The Ethiopian National Defence Forces and the Somali National Armed Forces are thought to have used cluster munitions in clashes along the Somali-Ethiopian border during the 1977-78 Ogaden War.¹¹ The Soviet Union supplied both Ethiopia and Somalia with weapons during the conflict. PTAB-2.5 and AO-1-Sch submunitions were produced by the Soviet Union on a large scale.¹²

In January 2016, Somali media reports alleged that the Kenyan Defence Forces (KDF) had used cluster munitions during an intensive bombing campaign in Gedo region, in response to an attack on KDF forces at an African Union Mission in Somalia (AMISOM) base in El Adde in which 150 Kenyan soldiers were reportedly killed.¹³ Photos appeared to show that the KDF used United Kingdom (UK)-manufactured BL755 submunitions in the area of Bu'ale, and subsequently it was reported that al-Shabaab had discovered unexploded submunitions of the same BL755 type, which it used in the manufacture of IEDs, seized in a weapons cache in March 2016.¹⁴

A UN Monitoring Group investigated whether Kenyan forces had used cluster munitions but was unable to conclude that the KDF had dropped the BL755 submunitions during airstrikes on Gedo in January 2016. It noted, however, the absence of reports of unexploded BL755 submunitions among legacy unexploded ordnance (UXO) contamination in Somalia.¹⁵ Kenya denied using cluster munitions in the January 2016 air campaign, calling the Monitoring Group's report "at best, a fabricated, wild and sensationalist allegation".¹⁶

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Somalia is heavily contaminated with ERW other than CMR, primarily as a result of conflict in 1990-2012. Contamination exists across its three major regions: south-central Somalia (including Mogadishu), Puntland (a semi-autonomous administration in the north-east), and Somaliland (a self-proclaimed, though unrecognised, state that operates autonomously in the north-west). Landmines along the border with Ethiopia, mainly as a result of legacy minefields, also exist in south-central Somalia. Contamination in Somaliland consists of mines and ERW (see Mine Action Review's *Clearing the Mines* report on Somalia and Somaliland for further information of the mine problem).¹⁷

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Mine action management in Somalia continues to be divided into two geographical regions: south-central Somalia and Somaliland. The respective centres responsible for mine action in each of these areas are SEMA and the Mine Action Department, within the Somaliland Ministry of Defence (formerly, the MCICA, and before that the Somaliland Mine Action Centre, SMAC) in Somaliland.¹⁸ SEMA maintains a presence across Somalia through its five Federal State members: the SEMA Puntland State Office, SEMA Galmudug State Office, SEMA Hirshabelle State Office, SEMA South West State Office, and SEMA Jubaland Office.¹⁹ Under each of the five members is an independent consortium of national non-governmental organisations (NGOs) implementing mine action activities.

SEMA was established in 2013 as the mine action centre for southern Somalia, replacing the Somalia National Mine Action Authority (SNMAA) created two years earlier.²⁰ SEMA's aim was to assume full responsibility for all explosive hazard coordination, regulation, and management by December 2015.²¹ However, SEMA's legislative framework was not approved by the Federal Parliament in 2016 as expected, and progress was further stalled by elections in February 2017 that resulted in a period of government paralysis.²² Due to this lack of parliamentary approval, SEMA has not received funding from the Federal Government of Somalia since the expiry of its grant in 2015.²³

In May 2019, SEMA informed Mine Action Review that no further progress had been made in the Somali Parliament towards the formal adoption of SEMA's legislative framework, though it was hopeful that this could be achieved by the end of 2019. It reported that it did not receive any national funding or support from the government again in 2018; however, it also stated that efforts were underway to secure government funding for its operations in 2019.²⁴

SEMA continued to face external challenges posed by the security situation. In July 2018, the SEMA office at the Ministry of Internal Security in Mogadishu was attacked and significantly damaged, some of its staff members injured, and much of SEMA's office materials, including computers and documents, destroyed.²⁵ UNMAS reported in May 2019 that efforts to restore the office were ongoing with its support.²⁶ As at June 2019, NPA was providing office space for SEMA in its country office and would continue to do so until SEMA is able to move into new offices provided by UNMAS.²⁷ In 2018, as an implementing partner under a United Kingdom Department for International Development (DFID) grant led by The HALO Trust, and with additional internal funding and funding from the Norwegian Ministry

of Foreign Affairs, Norwegian People's Aid (NPA) continued its capacity development work with SEMA. NPA reported that capacity building of SEMA and their national consortium partners was closely monitored in 2018 by milestones developed and agreed upon between NPA and SEMA. Key focus areas were information management support; support for operational planning, prioritisation, and tasking of available clearance resources; and increasing capacity within the senior SEMA management team.²⁸ UNMAS reported that it also provided capacity-building support to SEMA's headquarters and state offices in 2018.²⁹

NPA reported that positive progress was observed throughout the year, especially with regard to SEMA taking ownership of its coordination/tasking role, but also with its capacity to participate in global treaty meetings. In NPA's view, without support from the Federal Government at present, capacity development support remains critical to ensure national ownership of the mine action programme and a sustainable national capacity in Somalia.³⁰

SEMA began conducting quarterly meetings with all mine action implementing partners in November 2018, with a focus on monitoring of operations. Operators reported that this as a major step forward towards improving the cooperation, consultation, and coordination between SEMA and the clearance operators within Somalia.³¹

PUNTLAND

The SEMA Puntland State Office, formerly known as PMAC, was established in Garowe with UN Development Programme (UNDP) support in 1999. Since then, on behalf of the regional government, the SEMA Puntland State Office has coordinated mine action with local and international partners, including Danish Demining Group (DDG) and Mines Advisory Group (MAG).³² It runs the only police explosive ordnance disposal (EOD) team in Puntland, which is responsible for collecting and destroying explosive ordnance.³³

SOMALILAND

As part of a larger process of government reform in early 2018, the Somaliland Mine Action Centre (SMAC), which was responsible for coordinating and managing demining in Somaliland since 1997, was restructured and renamed the Mine Clearance Information and Coordination Authority (MCICA), and underwent a change of line ministry from the Office of the Vice President to the Ministry of Defence.³⁴ It was renamed the Mine Action Department in January 2019.³⁵

GENDER

Somalia's National Mine Action Strategic Plan 2017–2020 recognises gender and diversity as cross-cutting issues for the national mine action programme, and in line with Somalia's National Development Plan objectives to “implement gender equality in education and mainstream gender in all of its programmes with a focus on adolescent girls”. The National Mine Action Strategic Plan stipulates that the mine action programme must reflect gender objectives and ensure that the specific needs of women, girls, boys, and men are taken into account, including through delivery of gender equality programming, and insistence on the adoption of a gender-sensitive approach by consortia and implementing partners. It also recognises the importance of conducting context analyses in areas of mine action operations to clarify important gender and diversity issues, such as clan affiliation, movement patterns of local populations, and barriers to participation for different gender and age groups.³⁶

In May 2019, SEMA informed Mine Action Review that it does not have an internal gender policy or implementation plan. It acknowledged that this was “unfortunate”, and pledged that it would strive for gender balance in the future, by ensuring equal employment opportunities for qualified men and women.³⁷

SEMA also reported that within the federal state national mine action NGO consortia, there was a large focus on gender and gender balance in survey and community liaison teams to ensure the inclusive participation of all affected groups, including women and children. It confirmed that data collection was disaggregated

by sex and age, and gender taken into account in the prioritisation, planning, and tasking of survey and clearance activities.³⁸

NPA reported that the gender balance within its programme staff increased in 2018, up from 16% female and 84% male staff in January, to 23% female and 77% male staff by December, and with a 50/50 gender balance within its senior management team. NPA provided three trainings on gender mainstreaming and sexual harassment for SEMA staff and consortium partners from each of the federal states. The results were surprisingly positive, with open and frank discussions during the trainings, particularly within SEMA's and NPA's management teams.³⁹

The HALO Trust reported that in its operations in 2018, 13% of operations staff were female, and that two out of fifteen management staff were women. It confirmed that survey and mine risk education (MRE) teams regularly liaised with different community groups, with a focus for certain MRE efforts on children. It reported that all MRE teams and most of its EOD teams had at least one woman, who could effectively reach out to women in local communities to ensure their voices were heard.⁴⁰

The HALO Trust informed Mine Action Review that while gender was a priority focus for survey activities to ensure that a clear and holistic understanding of contamination is gained through reaching men, women, girls, and boys, gender was not a consideration in prioritisation of tasks (see Planning and tasking section on page 98).

INFORMATION MANAGEMENT AND REPORTING

In 2017, ownership of the national IMSMA database was fully transferred from UNMAS to SEMA, with support and capacity building from NPA.⁴¹ NPA reported that IMSMA operators within SEMA were carrying out data verification and entry. Reporting forms were standardised throughout the mine action sector during the year, ensuring that all operators were using the same reporting forms.⁴² Under the database reporting formats, CMR are recorded separately from other types of ERW.⁴³

Somalia's national mine action strategic plan places considerable emphasis on remedying shortcomings in information management. It also sets objectives for SEMA to build on improvements in information management to enable a focus on improving its prioritisation of tasks based on better knowledge of humanitarian needs of affected communities, operational capacities, and the changing needs of IDPs.⁴⁴ According to the Plan, a specific national mine action standard on information management was developed in 2018.⁴⁵

In May 2019, SEMA informed Mine Action Review that a process to verify the historical data contained in the UNMAS database was ongoing, with assistance from NPA's capacity development project. It stated that a coordination process had been initiated with regard to pending reports from the federal states and that

communication was ongoing to ensure all information is shared with operators. These efforts will help to give a better understanding and estimate of the size of explosive contamination in the country, and help SEMA to develop a list of priorities for clearance in its workplan for 2020, it said.⁴⁶

NPA and HALO both noted improvements in SEMA's information management capacity in 2018. HALO stated that it would welcome a process for regular review of the IMSMA database and data sharing with implementing partners, to ensure staff are not put at risk if new minefields are identified. NPA pledged to continue capacity development support for SEMA on information management through 2020, whereafter SEMA information management staff are expected to fully manage the database independently, barring any significant staff turnover.⁴⁷

Somalia's national mine action strategic plan stipulates the submission of annual transparency reports for the CCM, along with those under the Anti-Personnel Mine Ban Convention (APMBC). It had not, however, submitted any CCM Article 7 transparency reports as at May 2019, despite the initial report being due on 31 August 2016. SEMA has said it will submit its first Article 7 report upon completion of the review of historic survey records in the database and once it has established a baseline for CMR contamination.⁴⁸

PLANNING AND TASKING

Somalia's National Mine Action Strategic Plan 2017–2020, developed with input from SEMA, UNMAS, international operators, national NGO consortia, and international institutions in late 2017, was awaiting final approval by the Somali Minister of Internal Security throughout 2018. SEMA informed Mine Action Review that a review of the final draft of the document was scheduled for June 2019, following additional input from relevant in-country stakeholders to ensure the strategy reflects as up-to-date information as possible, as the approval of the strategy had been delayed for more than 12 months.⁴⁹

The plan focuses on setting achievable goals over the next three-year period, taking into account the challenges faced by the Somali national mine action programme. Five strategic goals are elaborated, along with corresponding strategic objectives and action plans. The critical need to improve information management is highlighted as underpinning many of the challenges the programme faces at every level.

The strategy notes Somalia's status as a state party to the CCM and its reporting obligations and commits to complying with the Convention, but does not contain specific provisions on survey and clearance of CMR. The strategy's five goals, identified by SEMA, are as follows:

- To enhance the capacity and capability of SEMA to lead, direct, and enable effective and efficient mine action and explosives management in Somalia.
- To develop the Somali mine action consortia into a wholly national capacity delivering appropriate mine action support to all member states, safely, efficiently, and in accordance with national and international standards, expectations and requirements.
- To engage with stakeholders in order to understand, and better respond to, their needs and expectations in relation to the impact of mines/ERW in Somalia.
- To reduce the risks faced by the people of Somalia to a level that allows them to go about their lives free from the impacts of mines and ERW.
- To comply as much as practicable, with the obligations of those treaties to which Somalia is a "signatory" and which are relevant to the mine and explosives management programme.

In February 2018, an updated second "phase" of the five-year "Badbaado Plan for Multi-Year Explosive Hazard Management", first developed in 2015 by SEMA, UNMAS, and the UN Assistance Mission in Somalia (UNSOM), was officially launched in Geneva. The updated "Badbaado Plan" does not contain a reference to CMR contamination.

SEMA reported it was developing a comprehensive mine action workplan for 2020, in cooperation with the SEMA state offices, which would be officially presented as Somalia's first ever annual workplan during the upcoming treaty meetings of the CCM and APMB in the second half of 2019.⁵⁰

The HALO Trust reported that it was implementing monthly, rather than annual workplans, as the security situation was too dynamic and required frequent updates and adjustment to planning.⁵¹ It stated that with regard to prioritisation of tasks, all confirmed hazardous areas are categorised as low, medium, or high priority on the basis of a number of factors, including: number of accidents, number of beneficiaries, post-clearance land use, and access to water, markets, hospitals, schools, and grazing land. The HALO Trust noted, however, that it was a constant struggle to balance addressing high priority tasks with the security situation and areas where work could be safely carried out within clan boundaries versus unstable political regions and the presence of al-Shabaab.⁵²

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

There is no national mine action legislation in Somalia. UNMAS developed National Technical Standards and Guidelines (NTSGs) for Somalia in 2012–13.⁵³ The NTSGs, which did not include specific guidance for CMR survey or clearance, were also not specific to the Somali context, and in 2017, there were calls for the NTSGs to be reviewed and revised to ensure they represent best practices for tackling the particular mine and CMR

threat in Somalia.⁵⁴ In May 2019, SEMA reported that a review of the NMAS had been carried out in 2018. It stated that nothing in the NTSGs was changed as a result, though chapters on information management and victim assistance were added.⁵⁵ Final approval of the revisions was expected by mid 2019, following consultations with all mine action stakeholders.⁵⁶

OPERATORS

In 2018, two international NGOs conducted clearance operations in Somalia and Somaliland, The HALO Trust and NPA, along with UNMAS contracted commercial clearance company, Ukroboronservice.⁵⁷

While The HALO Trust's mine clearance programme in Somaliland has been ongoing since 1999, in the first half of 2015, the organisation opened a new programme in south-central Somalia. At the start of 2018, The HALO Trust deployed had 12 manual mine clearance teams for clearance of anti-personnel mine tasks in Somalia. In March, eight teams were suspended for security reasons, and the remaining four were sent to a battle area clearance (BAC) task, which was still ongoing in May 2019. HALO also deployed four weapon and ammunition disposal (WAD) teams, which it said were primarily occupied with EOD call-outs during the year.⁵⁸

NPA continued mine clearance throughout the year within the disputed area between Somaliland and Puntland, with two manual mine clearance teams and one survey/MRE team. It is the only international operator accepted to work in the disputed area by the different local clans. In addition, throughout the first quarter of the year, five survey/MRE teams were deployed across all five federal states of South-Central Somalia, until the completion of a UK DFID grant at the end of March.⁵⁹

NPA reported that a new field office was established within the capital of Puntland to accommodate the arrival and in-country training of mine detection dogs (MDD) and the capacity development of SEMA state personnel and consortium partners from Puntland and Galmudug states, as well as forward field support for planned survey and clearance and police EOD activities in 2019.⁶⁰

UNMAS continued to contract Ukroboronservice to carry out mine action activities in 2018 though its four mobile multi-task teams conducting ERW clearance across four of Somalia's federal states, with the exception of Puntland; 56 community liaison officers to deliver risk education and liaison activities; and two 18-strong manual clearance teams. During the year, the number of manual clearance teams increased from two to six, all of which were deployed along the border with Ethiopia in Bakool and Hiran regions from September 2018.⁶¹

OPERATIONAL TOOLS

Only manual clearance of ERW is conducted in Somalia.

DEMINER SAFETY

In September 2018, a member of The HALO Trust's staff was reportedly lightly injured during an EOD demolition. HALO Trust reported that the staff member made a full recovery and that the accident had been investigated by HALO senior staff and a full accident report shared with SEMA.⁶²

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

There was no reported release of land contaminated with CMR in 2018. No new contamination from CMR was reported.⁶³

SURVEY IN 2018

No overview of areas suspected to contain CMR exists in south-central Somalia, and in 2018, no national CMR survey had been conducted.⁶⁴ According to SEMA, the primary reason that no national CMR survey had been carried out was a lack of funding for activities.⁶⁵ The security situation across the country has also been a factor.⁶⁶

The last reported CMR found by operators during survey was a single CMR fragment found by HALO Trust in Hiran region of Hirshabelle state during 2015–16 surveys of Hirshabelle state, along the Ethiopian border in the Galguduud region of Galmudug state, and in the Bakool region of South-West state.⁶⁷ Neither NPA nor HALO Trust reported encountering any CMR in survey operations in 2018, as was the case in 2017.⁶⁸

CLEARANCE IN 2018

No CMR clearance occurred in south-central Somalia in 2018, as was also the case the previous year.⁶⁹

The HALO Trust's activities in 2018 in Somalia were focused on BAC and EOD call-outs. It did not conduct any CMR clearance, and reported a drastic shrinking in its area of operations due to the shifting security situation. In March 2018, a large portion of Hiraan state became too dangerous to carry out operations in due to al-Shabaab attacks. HALO was forced to refocus operations in Galmudug state as a result, deploying four teams on a BAC task from July 2018 onwards.⁷⁰

NPA discontinued BAC operations at the end of 2016, and did not encounter any CMR in its survey and mine clearance operations in 2018.⁷¹

ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR SOMALIA: 1 MARCH 2016

ARTICLE 4 DEADLINE: 1 MARCH 2026

**ON TRACK TO MEET ARTICLE 4 DEADLINE:
NO / UNCLEAR**

Under Article 4 of the CCM, Somalia is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 March 2026.

It is too soon to say whether Somalia will meet its Article 4 deadline. SEMA has informed Mine Action Review that key challenges which could prevent Somalia from meeting its 2026 deadline, based on current capacity, are a lack of funding and the fact that Somalia as of yet has not conducted a general survey to have a comprehensive picture of remaining CMR contamination.⁷²

HALO Trust echoed these concerns, stating that survey is far from complete due to limited field access, with large areas of the country yet to be addressed, combined with the fact that active conflict continues in the country, resulting in extremely limited access and a highly volatile security situation to which operators have to constantly adapt. It raised further concerns about the lack of SEMA's governmental recognition.⁷³

At the same time, NPA reported that it still remained possible that Somalia can meet its Article 4 obligations, as contamination from CMR is believed to be relatively low and manageable, provided that access to suspected areas is permitted and the availability of funding for the implementation of activities.⁷⁴

Table 1: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (m ²)
2018	0
2017	0
2016	0
2015	0
2014	0
Total	0

- 1 Emails from Mohamed Abdulkadir Ahmed, Director, SEMA, 14 June 2016; and Mohammad Sediq Rashid, Project Manager, United Nations Mine Action Service (UNMAS) Somalia, 8 June 2017. UNMAS reported in June 2017 had these items had since been cleared.
- 2 Response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.
- 3 Presentation by Mohamed Abdulkadir Ahmed, National Director, Somali National Mine Action Authority (SNMAA), "Somalia Weapons Contamination: Addressing Key Challenges to Meeting Clearance Deadlines under the Mine Ban Convention and Convention on Cluster Munitions", African Union and International Committee of the Red Cross (ICRC) workshop, Addis Ababa, 5 March 2013.
- 4 Email from Abdulkadir Ibrahim Mohamed Hoshow, Director, SEMA, 9 May 2019.
- 5 Ibid.
- 6 Ibid.
- 7 Ibid.
- 8 Emails from Ghirmay Kiros, ETM Operations Officer, UNMAS, 27 June and 29 June 2018.
- 9 Ibid.
- 10 Email from Mohammad Sediq Rashid, UNMAS, 8 June 2017.
- 11 Email from Mohamed Abdulkadir Ahmed, SNMAA, 17 April 2013.
- 12 Ibid.
- 13 "Letter dated 7 October 2016 from the Chair of the Security Council Committee pursuant to resolutions 751 (1992) and 1907 (2009) concerning Somalia and Eritrea addressed to the President of the Security Council", UN doc. S/2016/919, 31 October 2016, pp. 171–73.
- 14 Ibid.
- 15 According to the Cluster Munition Monitor, Kenya was not known to have ever used, produced, or stockpiled cluster munitions. The UN Monitoring Group report noted, however, that the F-5 aircraft used by the KDF in Somalia can be modified to deliver BL755 munitions.
- 16 "Letter dated 7 October 2016 from the Chair of the Security Council Committee pursuant to resolutions 751 (1992) and 1907 (2009)", pp. 171–73.
- 17 UNMAS, "UN-suggested Explosive Hazard Management Strategic Framework 2015–2019", undated, pp. 6 and 12.
- 18 Email from Mohamed Abdulkadir Ahmed, SEMA, 14 October 2016.
- 19 Ibid.
- 20 Interview with Mohamed Abdulkadir Ahmed, SEMA, in Geneva, 9 April 2014; and email from Kjell Ivar Breili, UNMAS, 12 July 2015.
- 21 Response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.
- 22 Emails from Mohamed Abdulkadir Ahmed, SEMA, 14 June 2016; and Hilde Jørgensen, NPA, 3 May 2017.
- 23 Emails from Terje Eldøen, NPA, 22 October 2016; and Mohamed Abdulkadir Ahmed, SEMA, 14 October 2016.
- 24 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 25 Email from Chris Pym, Deputy Head of Region (Africa), HALO Trust, 9 May 2019.
- 26 Email from Hussein Ibrahim Ahmed, Project Manager, UNMAS, 22 May 2019.
- 27 Email from Claus Nielsen, Programme Manager, NPA, 23 June 2019.
- 28 Emails from NPA, 13 April and 23 June 2019.
- 29 Email from Hussein Ibrahim Ahmed, UNMAS, 22 May 2019.
- 30 Email from Claus Nielsen, NPA, 13 April 2019.
- 31 Emails from Chris Pym, HALO Trust, 9 May 2019; and Claus Nielsen, NPA, 13 April 2019.
- 32 UNMAS, "UN-suggested Explosive Hazard Management Strategic Framework 2015–2019", p. 9.
- 33 Response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.
- 34 Email from Chris Pym, HALO Trust, 9 May 2019.
- 35 Email from Chris Pym, HALO Trust, 2 June 2019.
- 36 SEMA, "Somalia National Strategic Plan, 2019", pp. 21–22.
- 37 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 38 Ibid.
- 39 Email from Claus Nielsen, NPA, 13 April 2019.
- 40 Email from Chris Pym, HALO Trust, 9 May 2019.
- 41 Email from Claus Nielsen, NPA, 22 March 2018.
- 42 Ibid.
- 43 Email from Claus Nielsen, NPA, 13 April 2019.
- 44 "Somalia National Mine Action Strategic Plan", Draft Version, February 2018, p. 5.
- 45 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019; and "Somalia National Mine Action Strategic Plan", Draft Version, February 2018.
- 46 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 47 Email from Claus Nielsen, NPA, 13 April 2019.
- 48 Ibid.
- 49 Emails from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019; and Claus Nielsen, NPA, 13 April 2019.
- 50 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 51 Email from Chris Pym, HALO Trust, 9 May 2019.
- 52 Ibid.
- 53 Email from Terje Eldøen, Programme Manager, NPA, 5 June 2016; and response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.
- 54 Email from Tom Griffiths, HALO Trust, 19 May 2017.
- 55 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 56 Ibid.
- 57 Danish Demining Group (DDG) and Mines Advisory Group (MAG) continued to have operations in Somalia and Somaliland in 2018, but did not carry out demining activities.
- 58 Email from Chris Pym, HALO Trust, 9 May 2019.
- 59 Email from Claus Nielsen, NPA, 13 April 2019.
- 60 Ibid.
- 61 Emails from Hussein Ibrahim Ahmed, UNMAS, 22 May 2019; and Ghirmay Kiros, UNMAS, 20 and 24 June 2018.
- 62 Email from Chris Pym, HALO Trust, 9 May 2019.
- 63 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 64 Emails from Anna Roughley, NPA, 23 May 2017; Bill Marsden, MAG, 27 April 2018; and Claus Nielsen, NPA, 22 March 2018; and UNMAS, "2017 Portfolio of Mine Action Projects, Somalia".
- 65 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 66 Emails from Anna Roughley, NPA, 23 May 2017; Bill Marsden, MAG, 27 April 2018; and Claus Nielsen, NPA, 22 March 2018; and UNMAS, "2017 Portfolio of Mine Action Projects, Somalia".
- 67 Email from Tom Griffiths, HALO Trust, 19 May 2017.
- 68 Emails from Chris Pym, HALO Trust, 9 May 2019; and Claus Nielsen, NPA, 13 April 2019.
- 69 Emails from Chris Pym, HALO Trust, 14 May 2018; Bill Marsden, MAG, 27 April 2018; and Claus Nielsen, NPA, 22 March 2018.
- 70 Email from Chris Pym, HALO Trust, 9 May 2019.
- 71 Email from Claus Nielsen, NPA, 13 April 2019.
- 72 Email from Abdulkadir Ibrahim Mohamed Hoshow, SEMA, 9 May 2019.
- 73 Email from Chris Pym, HALO Trust, 9 May 2019.
- 74 Email from Claus Nielsen, NPA, 13 April 2019.

UNITED KINGDOM (FALKLAND ISLANDS)

MINE
ACTION
REVIEW

CLEARING CLUSTER
MUNITION REMNANTS
2019

CONVENTION ON CLUSTER MUNITIONS ARTICLE 4 DEADLINE: 1 NOVEMBER 2020
NOT ON TRACK TO MEET DEADLINE / UNCLEAR
(THE UNITED KINGDOM DOES NOT CONSIDER IT HAS AN OBLIGATION UNDER CCM ARTICLE 4)

KEY DATA

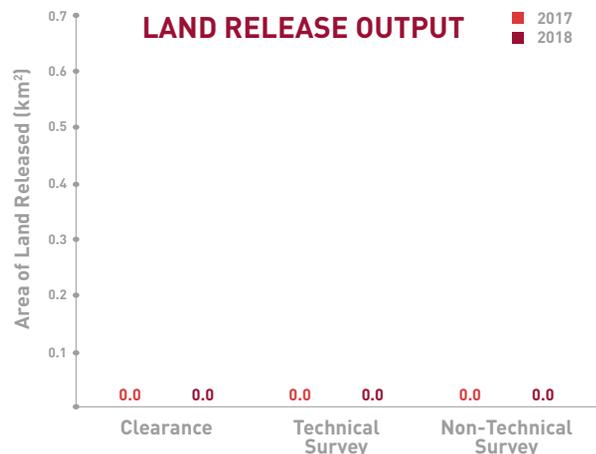
**CLUSTER MUNITION
CONTAMINATION:
UNKNOWN, BUT LIKELY
TO BE LIGHT**

SUBMUNITION
CLEARANCE IN 2018

0 KM²

SUBMUNITIONS
DESTROYED IN 2018

0



KEY DEVELOPMENTS

As part of its demining efforts, the United Kingdom destroys cluster munition remnants (CMR), as well as other explosive remnants of war (ERW), that are discovered during mine survey and clearance operations. Since October 2009, the United Kingdom has destroyed a total of 21 submunitions and 1 cluster munition dispenser.

The United Kingdom is making significant progress in the release of mined areas on the Falkland Islands as part of its Anti-Personnel Mine Ban Convention (APMBC) Article 5 obligations, and, as a consequence, has been reducing the number of mined areas that might also contain CMR. The United Kingdom predicts that only eight mined areas, covering an estimated 163,460m², will remain by the end of March 2020, all located in the Yorke Bay area of the Islands.¹ However, as the United Kingdom has not specified which, if any, of the remaining mined areas may contain CMR based on analysis of UK bombing data, it is unclear whether or not these areas could also contain CMR. The fact that any remaining CMR contamination might be located in fenced minefields or other suspected hazardous areas (SHAs) does not negate the United Kingdom's obligations under Article 4 of the Convention on Cluster Munitions (CCM).

RECOMMENDATIONS FOR ACTION

- The United Kingdom should analyse its bombing data to determine the likelihood of CMR being present in the remaining mined areas and other SHAs on the Falkland Islands. In particular, the United Kingdom should assess whether or not cluster munitions were dropped on the Yorke Bay area. This would help determine whether the eight remaining mined areas expected to remain by the end of the current phase of demining in March 2020 might also contain CMR.
- If an analysis of bombing data reveals that CMR may be present in such areas, the United Kingdom should present detailed plans and timelines for survey and, where contamination is found, clearance, in accordance with its CCM Article 4 obligations. If an analysis of bombing data reveals that cluster munitions were not used in those areas, the United Kingdom could declare fulfilment of its Article 4 obligation.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2018)	Performance commentary
UNDERSTANDING OF CLUSTER MUNITION REMNANT (20% of overall score)	5	Any submunitions remaining in the Falkland Islands are likely to be in fenced minefields or SHAs, which are being addressed under the Anti-Personnel Mine Ban Convention (APMBC). The United Kingdom has not revealed whether it has analysed its cluster munition bombing data to determine the likelihood of cluster munition remnants (CMR) being present in these or other areas on the Falkland Islands. Therefore, Mine Action Review maintains that the United Kingdom may have an unfulfilled Article 4 obligation, which requires every effort be made to identify if any CMR-contaminated areas still exist.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	8	There is strong national ownership of mine action on the Falkland Islands, with oversight from a National Mine Action Authority, a Demining Project Office and land release contractor, and 100% national funding for all survey and clearance. However, while the United Kingdom is making good progress in implementing its obligations under Article 5 of the APMBC, it considers it has made every effort to identify all cluster munition-contaminated areas under its jurisdiction or control, and believes any remaining CMR, if found to exist, to be residual.
GENDER (10% of overall score)	7	Good gender policies and procedures are in place to cover mine action in the Falkland Islands, including at the level of the UK FCO, the National Mine Action Authority, the land release contractor (currently SafeLane Global), and the Demining Project Office (currently Fenix Insight). While one third of management positions in SafeLane Global in the Falkland Islands are held by women, none of the survey or clearance personnel is female. This is despite equal employment opportunities.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	6	The United Kingdom has its own well-functioning information management system in place, to record and monitor progress in land release operations on the Islands. However, the amount of land released by technical survey is not disaggregated from that released by clearance in the United Kingdom's reporting.
PLANNING AND TASKING (10% of overall score)	6	The United Kingdom has a clear workplan in place to address remaining mined areas and SHAs on the Islands. However, the UK government has not revealed whether it has analysed its cluster munition bombing data to determine the likelihood of CMR remaining in those areas on the Islands.
LAND RELEASE SYSTEM (20% of overall score)	7	The United Kingdom does not have its own national mine action standards, but survey and clearance operations on the Islands are said to meet or exceed the International Mine Action Standards (IMAS). However, there are indications that the land release methodology may be overly risk-averse, based on full clearance of eleven uncontaminated areas, despite technical survey prior to clearance. While no animal detection systems are deployed, mechanical assets are used in addition to manual survey and clearance.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	4	The United Kingdom does not consider itself to have an obligation under Article 4 of the CCM. However, until analysis of bombing data is made public, it is possible that remaining minefields and SHAs in the Falklands may contain CMR. The United Kingdom will address these areas under its APMBC Article 5 obligation, for which the deadline is 1 March 2024. However, it is likely that not all the remaining mined areas and SHAs, which may also contain CMR, will be released prior to the United Kingdom's CCM Article 4 deadline of 1 November 2020.
Average score	5.9	Overall programme performance: AVERAGE

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- National Mine Action Authority (chaired by the United Kingdom Foreign and Commonwealth Office (FCO) and comprised of representatives from the Ministry of Defence, the Falkland Islands government, and a strategic advisor)
- Fenix Insight (current Demining Project Office)

NATIONAL OPERATORS

- SafeLane Global (formally Dynasafe BACTEC, and current Land Release Contractor)

INTERNATIONAL OPERATORS

- None

OTHER ACTORS

- None

UNDERSTANDING OF CMR CONTAMINATION

CMR may remain on the Falkland Islands² as a result of use of BL755 cluster bombs by British forces against Argentine positions during the 1982 armed conflict. In February 2009, the Ministry of Defence stated that: "According to historical records either 106 or 107 Cluster Bomb Units (CBU) were dropped by British Harriers and Sea Harriers during the conflict. Each CBU contains 147 BL755 submunitions and using the higher CBU figure (107), a total of 15,729 submunitions were dropped. Using a 6.4% failure rate assessed during in-service surveillance over 15 years, we would estimate that 1,006 would not explode. Given that 1,378 BL755s were cleared in the first year after the conflict and that a further 120 have been found and disposed of since (totalling 1,498), clearly there was a slightly higher failure rate. Even if the rate had been closer to 10% and 1,573 had failed, we can only estimate that some 70 remain but that due to the very soft nature of the peat found on the islands, many of these will have been buried well below the surface. We believe that the majority of those remaining are now contained within existing minefields and these will be cleared in due course."³

In 2015, the United Kingdom affirmed that no known areas of CMR contamination exist outside SHAs on the islands, in particular mined areas, all of which are fenced and marked.⁴ In 1982–84, battle area clearance (BAC) was undertaken over large areas looking for submunitions and other unexploded ordnance (UXO). The United Kingdom conducted CMR clearance in the aftermath of the Falklands conflict, along with comprehensive perimeter marking of mined areas potentially containing remaining CMR. Based on bombing data, areas where unexploded submunitions were expected to be found were targeted "very quickly", and a large number were located and destroyed. Demining operations involved both surface and subsurface clearance.⁵

The United Kingdom has stated that potential CMR contamination has, in part, been taken into account during mine clearance operations on the Islands, with two areas, Fox Bay 8W and Goose Green 11, selected for clearance partly based on records indicating that cluster munitions had been dropped there. No CMR were found in these two areas.⁶

In 2010, the United Kingdom reported destruction of two submunitions in Stanley Area 3, during clearance operations across four mined areas in 2009–10.⁷ In June 2015, it reported destruction of 19 submunitions during clearance operations in January to April 2015, also in Stanley Area 3.⁸ UK records suggest that four cluster bombs were dropped in this area.⁹ As at March 2019, no further CMR have been encountered during survey or clearance operations in the Falkland Islands,¹⁰ but in June 2017, the main body of a BL755 cluster munition container was found in "minefield GG08", during BAC in the Goose Green region. GG08 has now been declared cleared of all explosive ordnance.¹¹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

As referenced previously, the Falkland Islands is also contaminated by anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on the United Kingdom for further information) and other ERW. These explosive threats are the focus of the United Kingdom's demining efforts.

Since 2009, mine clearance and BAC in the Falkland Islands have been conducted in a series of phases. Phase 5(b) began in April 2018 and is expected to conclude at the end of March 2020.¹² At the end of this Phase, it is expected that only eight mined areas will remain, covering an estimated 163,460m², all located in Yorke Bay.¹³ Technical survey of Yorke Bay, which will be carried out during Phase 5(b), will inform the planning and costing for the release of the remaining eight mined areas.¹⁴

As previously noted, mine clearance operations in the Falkland Islands have, to date, resulted in the destruction of 21 submunitions and 1 cluster munition container.¹⁵ BAC operations conducted thus far resulted in 7.85km² of SHA being cleared, with the destruction of 87 items of UXO and no submunitions.¹⁶

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

A National Mine Action Authority (NMAA) was established in 2009 to regulate, manage, and coordinate mine action on the Falkland Islands. The NMAA is chaired by United Kingdom Foreign and Commonwealth Office (FCO) and comprises representatives from the Ministry of Defence, the Falkland Islands government, and a strategic advisor. It meets "as required" (at least once every six months), and the land release contractor (SafeLane Global (formally, Dynasafe BACTEC)) and the Demining Project Office (currently Fenix Insight), are invited "where appropriate".¹⁷

In addition, there is a Suspect Hazardous Area Land Release Committee (SHALARC), which is a body based on the Falkland Islands, comprising a wide range of local officials and a representative of the United Kingdom military. The SHALARC provides a forum for the contractors to discuss issues of concern or interest to the committee, and includes explanation of the land release process, including when land has been released for public use.¹⁸

However, while the United Kingdom is making good progress in implementing its obligations under Article 5 of the APMB, it does not consider itself to have an obligation under Article 4 of the CCM. It considers that it has made every effort to identify all cluster munition

contaminated areas under its jurisdiction or control, and believes any remaining CMR, if found to exist, to be residual.

Survey and clearance operations in the Falkland Islands are entirely funded by the UK Government.¹⁹

GENDER

The NMAA requires SafeLane Global and Fenix Insight to meet contractual conditions to prevent unlawful discrimination either directly or indirectly on protected characteristics such as race, colour, ethnic or national origin, disability, sex or sexual orientation, religion or belief, or age. The provisions also set out that the Contractor shall adhere to the current relevant codes of practice or recommendations published by the Equality and Human Rights Commission.²⁰

Fenix Insight holds a gender policy which it applies, though there is limited opportunity to pursue given the deployed team is composed of only one (male) person. SafeLane Global has an equal opportunities policy and selects employees based on qualification and experience, without gender restrictions. Of management

level positions employed by SafeLane Global in the Falkland Islands, one third is occupied by a woman, but none of the survey or clearance staff is female.²¹

In 2018, the UK Government wrote to suppliers setting out safeguarding policies and procedures in light of sexual exploitation and abuse in the aid sector, which raised questions regarding the ethical behaviour of organisations being funded by UK taxpayers' money and the safeguarding of the communities across the world that it is intended to support. The contractors working to deliver the UK's Falkland Islands Demining Programme were contacted as part of this wider engagement.²²

Women are involved in key positions at the UK FCO, such as Senior Responsible Officer, Deputy Senior Responsible Officer and Project Manager.²³

INFORMATION MANAGEMENT AND REPORTING

The information management system is managed at two levels. The Strategic Advisor maintains the public statement of progress through a "Cumulative Totals" spreadsheet (as demonstrated in the attached annex to the United Kingdom's 2018 extension request). This forms the basis of the declarations to the APMB Meetings of States Parties. Also, the Demining Project Office and the Land Release Contractor use an

operational-level planning and information management tool which guides the work and ultimately leads to the Handover Certificate at the conclusion of each task.²⁴

Historically, the United Kingdom has not collated data on area cancelled and on area reduced,²⁵ and does not disaggregate land released by technical survey from land released by clearance in its reporting.²⁶

PLANNING AND TASKING

At present, the United Kingdom is undertaking the fifth phase of demining operations in the Falkland Islands. The government has committed to spend more than £27 million on this Phase (2016–20), which aims to release 79 mined areas measuring an estimated total of just under 10.86km².²⁷

The current stage of demining, Phase 5(b), which began in April 2018, is due to conclude by the end of March 2020.²⁸ At the end of this Phase, it is expected that only eight mined areas will remain, covering an estimated 163,460m², and located in the environmentally sensitive beach and sand dune area known as Yorke Bay.²⁹ Technical survey of Yorke Bay, which will be carried out during Phase 5(b), will inform the planning and costing for the release of the remaining eight mined areas.³⁰

There is no reference to suspected CMR-contaminated areas in either the United Kingdom's CCM Article 7 transparency report for 2018, or in its 2018 APMB Article 5 deadline extension request. It is unclear whether analysis of United Kingdom bombing data could provide evidence as to whether or not the eight mined areas in Yorke Bay forecast to still remain as at March 2020 could also contain CMR.

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

The United Kingdom does not have its own national mine action standards, but survey and clearance operations on the Falkland Islands are reported to meet or exceed the International Mine Action Standards (IMAS), by adapting IMAS to meet the specifics of the situation on the Falkland Islands.³¹ Each project's Statement of Requirement contains the standards specific to the tasks being addressed.³² Applicable environmental standards are agreed on in coordination with the Falkland Islands Government Environmental Planning Department to minimise damage to the fragile environment and to aid remediation.³³

However, it is possible that the land release methodology adopted in the Falkland Islands might be overly risk adverse, based on the fact that eleven mined areas in 2018 were technically surveyed, but were then fully cleared, and found to contain no anti-personnel mines. According to the United Kingdom, full clearance was undertaken of these areas (which were included in the original 122 fenced and marked areas) for "full assurance", because of the lack of minefield records, and to ensure all reasonable effort was taken.³⁴

OPERATORS

The Land Release Contractor in the Falkland Islands is selected by international competitive tender prior to each phase, as required by the European Union. SafeLane Global (formally Dynasafe BACTEC), was awarded the land release contract for the current fifth phase of demining operations in the Falkland Islands, as for the previous four phases.³⁵ Capacity for Phase 5 operations was increased from previous phases, with a total of 108 personnel. Mechanical equipment includes one anti-vehicle mine machine, three anti-personnel mine machines, and two armoured excavators, in addition to the required transportation equipment.³⁶

The Demining Project Office, which implements the policies of the NMAA and monitors the land release operations on the Falkland Islands, is also awarded through competitive tender. Fenix Insight has been awarded responsibility for the Demining Project Office for all five stages of demining so far.³⁷

OPERATIONAL TOOLS

In addition to manual survey and clearance, mechanical assets are deployed as part of land release operations on the Falkland Islands.³⁸

Drones have been used for reconnaissance over large areas not accessible behind minefield fences and for aerial mapping. Mechanical systems are extensively used: flails and tillers to aid technical survey; and excavators, bulldozers, dumper trucks, and sand-sifting machines on sand areas such as Yorke Bay.³⁹

No animal detection systems are used in the Falkland Islands.⁴⁰

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

No submunitions were found in the Falkland Islands in 2018,⁴¹ but 619 anti-personnel mines were destroyed during survey and clearance operations which saw the release of 24 SHAs.⁴²

SURVEY AND CLEARANCE IN 2018

Phase 5(a) of survey and clearance operations lasted from October 2016 to March 2018, with a three-month stand down over the winter on the Islands.⁴³ No CMR were encountered during Phase 5(a), but the United Kingdom did report that the main body of a BL755 container was found in June 2017 in "minefield GG08", during BAC in the Goose Green region of the Falkland Islands. However, as already noted, no submunitions were found and GG08 has now been declared clear.⁴⁴

ARTICLE 4 DEADLINE AND COMPLIANCE

**CCM ENTRY INTO FORCE FOR
UNITED KINGDOM: 1 NOVEMBER 2010****ARTICLE 4 DEADLINE: 1 NOVEMBER 2020****ON TRACK TO MEET ARTICLE 4 DEADLINE:
NO / UNCLEAR****(IN THE ABSENCE OF DATA ON WHICH, IF ANY,
REMAINING MINEFIELDS OR SHAS MAY CONTAIN CMR
AND WHEN THESE ARE SCHEDULED FOR CLEARANCE)**

Under Article 4 of the CCM, the United Kingdom is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 November 2020. In the absence of information from the United Kingdom on the mapping of target bombing data to determine which, if any, remaining minefields or SHAs may contain CMR and when these are scheduled for clearance, Mine Action Review finds that the United Kingdom is not on track to meet this deadline.

The United Kingdom does not consider itself to have an obligation under Article 4 of the CCM, and maintains that it considers that it has made every effort to identify all cluster munition contaminated areas under its jurisdiction or control, and believes any remaining CMR, if found to exist, to be “residual.”⁴⁵ Any CMR-contaminated area that might exist is within existing mined areas or SHAs on the Falkland Islands, which the United Kingdom is addressing under its APMB Article 5 obligations.

However, Article 4(2)(a) of the CCM stipulates that each state party shall, “as soon as possible ... [s]urvey, assess and record the threat posed by cluster munition remnants, making every effort to identify all cluster munition contaminated areas under its jurisdiction or control”. Mine Action Review believes that the United Kingdom has still to fulfil this obligation. In particular, the United Kingdom has not revealed whether it has analysed its cluster munition bombing data to determine the likelihood of CMR being present in the mined areas and SHAs that remain in the Falkland Islands. If bombing data reveals there are still remaining mined areas or SHAs which could contain CMR, the United Kingdom should conduct survey and clearance of these areas. Accordingly, an assertion that the remaining threat from CMR is only residual is purely speculative. If bombing data reveals that remaining mined areas were not subject to CMR strikes, then it can be determined that the United Kingdom does not have an obligation under Article 4.

If the United Kingdom proceeds according to the workplan laid out in its 2018 draft APMB Article 5 deadline extension request, only eight mined areas in Yorke Bay, totalling an estimated 163,460m², will remain as at the end of March 2020. March 2020 falls ahead of the United Kingdom’s CCM Article 4 deadline of November 2020. However, the United Kingdom has not specified which, if any, of the remaining mined areas may contain cluster munition remnants based on bombing data, and it is therefore unclear whether these eight remaining mined areas could potentially contain CMR, or whether the United Kingdom can be confident from bombing data that Yorke Bay is not contaminated with CMR. As such, it is difficult to ascertain whether or not the United Kingdom is on track to meet its November 2020 Article 4 deadline. Under APMB Article 5, the United Kingdom has committed to complete release of the remaining mined area deadline by 1 March 2024.⁴⁶

Finally, there are two further areas, Don Carlos Bay and Beatrice Cove, which have never been considered as mined, and which were not included in the 122 mined areas established in the feasibility study in 2007, but which are located behind the long Murrell Peninsula fence. This area has been out of bounds to all persons on the Islands since 1982, so it has not been possible to check whether these two areas were mined. If these two areas are found to require clearance, they will be added to the list of mined areas, and the United Kingdom expects they could be cleared within the five-year extension period.⁴⁷ Again, due to the absence of analysis of United Kingdom bombing data, it is not known whether these two further areas may or may not contain CMR.

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- 1 Second APMBC Article 5 deadline Extension Request (2018), p. 14.
 - 2 There is a sovereignty dispute with Argentina, which also claims jurisdiction over the islands, which it refers to as the Malvinas. Argentina is not, though, a state party to the CCM.
 - 3 Letter to Landmine Action from Lt.-Col. Scott Malina-Derben, Ministry of Defence, 6 February 2009; and email correspondence from a Foreign Office Official, Conventional Arms Policy Officer, Arms Export Policy Department, Foreign and Commonwealth Office (FCO), 11 June 2015.
 - 4 Email from an official in the Arms Export Policy Department of the FCO, 1 July 2015.
 - 5 Ibid.
 - 6 Ibid.
 - 7 Statement of United Kingdom, APMBC Tenth Meeting of States Parties, Geneva, 1 December 2010.
 - 8 Email from an official in the Arms Export Policy Department of the FCO, 11 June 2015.
 - 9 Email from an official in the Arms Export Policy Department of the FCO, 1 July 2015.
 - 10 Emails from an official in the Arms Export Policy Department of the FCO, 4 May 2016 and 15 March 2019; and interview with an official in the Arms Export Policy Department of the FCO, London, 19 April 2018.
 - 11 Emails from an official in the Arms Export Policy Department of the FCO, 22 and 23 June 2017.
 - 12 Second APMBC Article 5 deadline Extension Request (2018).
 - 13 Ibid., pp. 7 and 14.
 - 14 Ibid., p. 14.
 - 15 Ibid., p. 6.
 - 16 Ibid., Annex A.
 - 17 Ibid., p. 8.
 - 18 Ibid., p. 9.
 - 19 Second APMBC Article 5 deadline Extension Request (2018).
 - 20 Email from an official in the Arms Export Policy Department of the FCO, 24 April 2019.
 - 21 Ibid.
 - 22 Ibid.
 - 23 Ibid.
 - 24 Email from an official in the Counter Proliferation and Arms Control Centre, FCO, 21 August 2018.
 - 25 Second APMBC Article 5 deadline Extension Request (2018), Annex A.
 - 26 APMBC Article 7 Report (for 2018), Form F; and email from an official in the Arms Export Policy Department of the FCO, 15 March 2019.
 - 27 Additional Information to the Second APMBC Article 5 deadline Extension Request (2018), received 6 August 2018, Annex 3 (update to the UK Extension Request).
 - 28 Second APMBC Article 5 deadline Extension Request (2018), p. 7; and email from an official in the Arms Export Policy Department of the FCO, 15 March 2019.
 - 29 Second APMBC Article 5 deadline Extension Request (2018), pp. 7 and 14.
 - 30 Ibid., p. 14.
 - 31 Email from an official in the Arms Export Policy Department, FCO, 26 June 2018; Second APMBC Article 5 deadline Extension Request (2018), pp. 3 and 7; and APMBC Article 7 Report (for 2016), Form F.
 - 32 Email from an official in the Arms Export Policy Department, FCO, 15 July 2016.
 - 33 APMBC Article 7 Report (for 2016), Form F.
 - 34 Email from an official in the Arms Export Policy Department of the FCO, 24 April 2019.
 - 35 Second APMBC Article 5 deadline Extension Request (2018), p. 9.
 - 36 Email from an official in the Arms Export Policy Department of the FCO, 28 July 2017.
 - 37 Second APMBC Article 5 deadline Extension Request (2018), p. 9.
 - 38 Email from an official in the Arms Export Policy Department, FCO, 28 July 2017.
 - 39 Email from an official in the Arms Export Policy Department, FCO, 24 April 2019.
 - 40 Email from an official in the Arms Export Policy Department, FCO, 28 July 2017.
 - 41 Email from an official in the Arms Export Policy Department of the FCO, 15 March 2019.
 - 42 APMBC Article 7 Report (for 2018), Forms F and G.
 - 43 Email from an official in the Arms Export Policy Department of the FCO, 2 June 2017.
 - 44 Emails from an official in the Arms Export Policy Department of the FCO, 22 and 23 June 2017; and interview, London, 19 April 2018.
 - 45 Interview with an official in the Arms Export Policy Department of the FCO, and with Lt.-Col. John Stroud-Turp, Security Policy and Operations, Ministry of Defence, in Geneva, 22 June 2015; and email from an official in the Arms Export Policy Department of the FCO, 15 March 2019.
 - 46 Second APMBC Article 5 deadline Extension Request (2018).
 - 47 Second APMBC Article 5 deadline Extension Request (2018), p. 13.

SIGNATORIES

The background of the page is composed of several overlapping, angular shapes in two shades of red: a vibrant, medium red and a darker, more muted red. These shapes create a complex, layered geometric pattern that fills the entire page. The word "SIGNATORIES" is positioned in the upper left quadrant, rendered in a clean, white, sans-serif font.

RECOMMENDATIONS FOR ACTION

- Angola should ratify the Convention on Cluster Munitions (CCM) as a matter of priority.
- Angola should confirm whether it believes that cluster munition remnants (CMR) remain on its territory.
- Angola should comply with its obligations under international human rights law to clear CMR on territory under its jurisdiction or control as soon as possible.
- Angola should clarify if a national capacity and plan to address any residual contamination from CMR is in place.

UNDERSTANDING OF CONTAMINATION

The extent to which Angola is affected by CMR is still unclear. There are no reports of confirmed contamination, but abandoned cluster munitions or isolated unexploded submunitions appear to remain.

According to Angola's national mine action authority, the National Intersectoral Commission for Demining and Humanitarian Assistance (Comissão Nacional Intersectorial de Desminagem e Assistência Humanitária, CNIDAH), 18 submunitions were found and destroyed in 2018, and a total of 164 submunitions were found and destroyed in 2017.¹

CNIDAH has not previously reported on the discovery of submunitions prior to 2017, and the figures reported for 2017 are considerably higher than the findings of the international demining non-governmental organisations (NGOs) working in Angola over the past decade combined.

According to Norwegian People's Aid (NPA), which was providing capacity development support to CNIDAH in 2018, the submunitions reported by CNIDAH were found and destroyed as a result of explosive ordnance disposal (EOD) spot tasks and community call-outs. It confirmed that no CMR-specific survey or clearance had been carried out in Angola and that the national database does not contain any polygons pertaining to areas of CMR contamination.² This was confirmed by CNIDAH to Mine Action Review in May 2019.³

None of the international mine action operators working in Angola has reported finding any significant areas of CMR contamination or submunitions since 2008.⁴

In 2018, in November, Mines Advisory Group (MAG) reported that a single Russian-made AO-1-Sch submunition was brought in for destruction by a local community member to its operations near to Kapuluta village, Luvuei commune, in Moxico province. As at April 2019, community liaison teams had been sent to survey the surrounding farmlands for further information,

but MAG did not have any evidence that additional CMR would be found.⁵

Previously, the last reported instance of an international mine action NGO locating CMR was in August 2016, when The HALO Trust found two Alpha submunitions in Cunene province. The submunitions were reported by local residents to a HALO Trust survey team during re-survey operations.⁶ Prior to this, HALO Trust reported finding and destroying 12 submunitions in 2012. The HALO Trust informed Mine Action Review that these were isolated cases and noted that it had seen very little evidence of cluster munition strikes in Angola. With these exceptions, as at May 2019, NGO clearance operators in Angola had not found any other CMR in more than ten years.

The HALO Trust has also reported that the majority of CMR destroyed over the course of its operations were the result of the disposal of old or unserviceable cluster munitions identified by HALO Trust's Weapons and Ammunition Disposal (WAD) teams in military storage areas, some of which were earmarked for destruction by the Angolan Armed Forces. Between 2005 and 2012, HALO Trust WAD teams reported destroying a total of 7,284 submunitions.⁷ In 2018, The HALO Trust confirmed it had not been asked by the military to do any further destruction of cluster munition stockpiles since 2012.⁸

CMR contamination was a result of the decades of armed conflict that ended in 2002, although it is unclear when, or by whom, cluster munitions were used in Angola.⁹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Angola is heavily contaminated with landmines and explosive remnants of war (ERW) other than CMR (see Mine Action Review's *Clearing the Mines* report on Angola for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Angola's national mine action programme is managed by two mine action structures. CNIDAH serves as the national mine action authority. It reports to the Council of Ministers or, in effect, to the Presidency of the Republic. The other coordination body, the Executive Commission for Demining (Comissão Executiva de Desminagem, CED), reports to the newly created Ministry of Social Action, Family, and Women's Promotion (Ministério da Acção Social, Família e Promoção da Mulher, MASFAMU, formerly the Ministry of Social Assistance and Reintegration, or MINARS).

In 2002, in order to separate coordination and operational responsibilities, Angola established the National Demining Institute (Instituto Nacional de Desminagem, INAD), which is responsible, under the auspices of the CED and MASFAMU, for demining operations and training.

In 2018, NPA initiated a capacity development project to assist CNIDAH to better manage the national mine action programme, including in key areas such as information and quality management. The project, which is scheduled to run through March 2020, was initiated with funding from the United Kingdom's Department for

International Development (DFID), as part of a joint grant to the three largest mine action NGOs, The HALO Trust, MAG, and NPA.

Angola's government has provided funding for survey and clearance operations for national and commercial operators working under the CED. It has not, however, provided funding for humanitarian demining in recent years, leaving the most vulnerable, mainly poor, rural communities, the most at risk from mines and ERW.¹⁰

International NGOs continued to report lengthy bureaucratic obstacles in securing visas for expatriate mine action personnel, compounded by a new tax law that entered into force in August 2018 and which added further tariffs to those already applied to the importation of equipment.¹¹ Funding for mine action operations carried out by the international NGOs remained critically low for much of 2018, with serious gaps in funding resulting in the reduction of capacity and threatening the closure of international mine action operations. The situation improved significantly with the securing of DFID funding in September 2018 through the partnership grant.

GENDER

Gender is not referenced in Angola's 2019–25 Anti-Personnel Mine Ban Convention (APMBC) mine action workplan, nor is it included in Angola's national mine action standards in place in 2018.

International NGO operators reported, however, that gender- and age-related concerns are taken into account during survey and clearance operations

to ensure that views and needs of different age and gender groups are reflected in the conduct of demining operations. They further reported taking into consideration gender balance in the hiring of staff in mine action operations, ensuring that a mix of male and female staff were employed in operational roles in the field, as well as in managerial positions.¹²

INFORMATION MANAGEMENT AND REPORTING

Angola's mine action programme has long suffered from significant problems with information management and the poor quality of the CNIDAH national database. This is exacerbated by the lack of integration of mine action data held by the CED. During the year, an NPA Capacity Development Adviser was embedded in the CNIDAH team and focused on establishing an up-to-

date and more accurate database, with assistance from operators. NPA reported that, as a result, discrepancies between operator reports from the field and the records contained in the national database were being addressed and consequently, the accuracy of the data recorded in the database and reporting began to improve as well.¹³

PLANNING AND TASKING

As at May 2019, there was no specific strategy or workplan to address CMR contamination in place in Angola.¹⁴ In November 2018, Angola submitted a detailed annual workplan to meet its APMBC Article 5 deadline extension request, for 2019–25. The workplan does not, however, mention CMR or related survey or clearance.

As at May 2019, operators reported that there was no plan pertaining to the management of residual mine or ERW contamination in place.¹⁵ The GICHD will start supporting Angola with developing its next national strategy in August 2019. The new strategy will address all contamination, including CMR.¹⁶

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

National Mine Action Standards were in place in Angola in 2018. They do not contain provisions specific to CMR survey or clearance. NPA reported no significant developments with regard to the standards in 2018, but said they would be addressed as part of the capacity development project with CNIDAH in 2019.¹⁷

OPERATORS

Four international NGOs conducted demining for humanitarian purposes in Angola in 2018: APOPO, The HALO Trust, MAG, and NPA.¹⁸ A number of national organisations and commercial companies, accredited by CNIDAH and mostly employed by the state or other private companies, also operate in Angola.

At its peak, NPA deployed seven manual demining teams, and one mine detection rat team, in a partnership with APOPO, which reduced to three manual teams and the mine detection rat team, as a result of the completion of a donor-funded project and subsequent termination of funding. However, the deployment of two additional manual teams in September 2018 was made possible by new funding under the DFID grant.¹⁹ APOPO reported that one six-person manual demining team and one mine detection rat team of six handlers and 15 mine detection rats during the year.²⁰ MAG deployed three manual demining teams, one rapid response team with an EOD capacity, and three mechanical assets in 2018, a slight increase resulting from additional funding. The HALO Trust reported deploying a total of 19 manual teams, 2 survey/community liaison teams, and 2 weapons and ammunition disposal teams.²¹

OPERATIONAL TOOLS

Only manual clearance of ERW, including CMR, is conducted in Angola.

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

No land containing CMR contamination was reported to have been released by clearance or survey in 2017.

SURVEY IN 2018

There was no reported survey of CMR-contaminated area carried out in 2018, as was the case in 2017.

CLEARANCE IN 2018

No reported clearance of CMR-contaminated area occurred in 2018, as was the case in 2017.

As stated above, CNIDAH reported that 18 submunitions were found and destroyed in 2018, while a total of 164 submunitions were found and destroyed in 2017.²² CNIDAH reported the identification and destruction of these submunitions for the first time in 2019. According to NPA, all 18 submunitions were destroyed as a result of EOD spot tasks in Cabinda province by a national operator, and not the result of CMR-specific clearance.²³

MAG reported that in November 2018, it encountered one Russian-made AO-1-Sch submunition near to Kapuluta village, Luvuei commune, in Moxico province. It stated that a farmer had found it a few kilometres away from a task where MAG teams were working and brought the item to the teams to be destroyed. MAG did not have an indication at the time as to whether the individual submunition was part of a cluster strike footprint or if more submunitions were expected to be found in the area. It reported that a community liaison team had been sent to the area to begin survey and as at April 2019, had yet to report further information.²⁴

The HALO Trust informed Mine Action Review in May 2019 that it remained unable to deploy any capacity to address the area around the two Alpha bomblets it identified during the re-survey of Cunene province in August 2016 due to a lack of funding.²⁵

PROGRESS TOWARDS COMPLETION

As at May 2019, Angola was a signatory, but not a state party, to the CCM. In addition to its legal obligations as a treaty signatory, Angola has obligations under international human rights law to clear any CMR on its territory as soon as possible. It has not publicly reported a date as to when it might be able to declare its territory free of CMR contamination.

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- 1 CNIDAH, "Angola Mine Action Programme 2019–2025", Newsletter, 1st Edn, February 2019, at: <http://bit.ly/2E2HVfo>. The CNIDAH newsletter reported that 85 submunitions were found and destroyed in 2018; however this was later clarified to have been misreported in the database and that a total of 18 submunitions were found in 2018. Emails from Robert Iga Afedra, Capacity Development Advisor, NPA, 27 April, 19 May, and 4 July 2019.
- 2 Emails from Robert Iga Afedra, NPA, 27 April and 19 May 2019.
- 3 Interview with Dr. Adriano Gonçalves, Focal Point, CNIDAH, Geneva, 24 May 2019.
- 4 Prior to this, as at February 2008, NPA reported clearing 13 submunitions in Kwanza Sul province; MAG reported clearing 140 submunitions in Moxico province; and The HALO Trust reported clearing 230 submunitions in Bié province. NPA reported finding no CMR during its operations in northern Angola, with the exception of a small number of submunitions found in 2008. Menschen gegen Minen (MgM) reported that no CMR had been discovered in its areas of operations in south-east Angola from 1997 through to May 2016 including near Jamba, an area in the south-east of the province where contamination might have been expected. Response to questionnaire by Gerhard Zank, Programme Manager, HALO Trust, 19 March 2013; and emails from Vanja Sikirica, Country Director, NPA, 11 May 2016; Kenneth O'Connell, Technical Director, MgM, 5 May and 15 June 2016; Gerhard Zank, HALO Trust, 17 May 2016; Bill Marsden, Regional Director, East and Southern Africa, MAG, 18 May 2016; and Mohammad Qasim, United Nations Development Programme (UNDP)/CNIDAH, 22 February 2008.
- 5 Email from Shadrack Njamba, Programme Operations Coordinator, MAG, 18 April 2019.
- 6 A number of damaged bomb casings were also found but, according to The HALO Trust, it was unclear if the bombs had been fired at a target in the area or if they were jettisoned after an unsuccessful mission and the bomblets scattered on the ground. The Alpha bomblet was developed in Rhodesia in 1970 and later in South Africa in the 1980s. It was produced to be incorporated into the CB470 cluster bomb, which contained 40 Alpha submunitions each and were designed to be dropped from baskets or "hoppers" in the bomb bays of bomber aircraft. Email from Gerhard Zank, HALO Trust, 2 May 2017; and Weapons Systems, "CB470", at: <http://bit.ly/2Jd01hl>.
- 7 Response to questionnaire by Gerhard Zank, HALO Trust, 19 March 2013.
- 8 Email from Gerhard Zank, HALO Trust, 17 May 2018.
- 9 Interviews with Jose Antonio, Site Manager, Cuando Cubango, HALO Trust; and with Coxe Sucama, Director, INAD, in Menongue, 24 June 2011.
- 10 Email from Gerhard Zank, HALO Trust, 17 May 2018.
- 11 Email from Joaquim da Costa, Deputy Programme Manager, NPA, 6 May 2019.
- 12 Ibid.; and emails from Shadreck Njamba, MAG, 22 May 2019; and Ralph Legg, Programme Manager, HALO Trust, 21 May 2019.
- 13 Email from Joaquim da Costa, NPA, 6 May 2019.
- 14 Ibid.
- 15 Ibid.
- 16 Email from Rory Logan, GICHD, 4 July 2019.
- 17 Email from Joaquim da Costa, NPA, 6 May 2019.
- 18 MgM closed its operations in November 2015 upon completion of its last task in Cuando Cubango which formed part of a European Union-funded project. Previously, DanChurchAid (DCA) was forced to close its operations in early 2015 due to lack of funding. M. P. Moore, "Angola Avante – Onward Angola", Landmines in Africa blog, 26 February 2016, at: <http://bit.ly/2Hem3jx>.
- 19 Email from Joaquim da Costa, NPA, 6 May 2019.
- 20 Email from Ashley Fitzpatrick, APOPO, 9 May 2019.
- 21 Emails from Shadreck Njamba, MAG, 22 May 2019; and Ralph Legg, HALO Trust, 21 May 2019.
- 22 CNIDAH, "Angola Mine Action Programme 2019–2025", Newsletter, 1st Edn, February 2019; and emails from Robert Iga Afedra, NPA, 27 April, 19 May, and 4 July 2019.
- 23 Emails from Robert Iga Afedra, NPA, 27 April, 19 May, and 4 July 2019.
- 24 Email from Shadrack Njamba, MAG, 18 April 2019.
- 25 Emails from Ralph Legg, HALO Trust, 21 May 2019; and Gerhard Zank, HALO Trust, 17 May 2018 and 3 May 2017. After finding the two Alpha bomblets in August 2016, The HALO Trust had been planning to carry out limited battle area clearance around the reported area until fade-out. They had intended to perform this work, subject to funding, in July or August 2017, during Angola's dry season when items can be more easily seen. This did not occur.

DEMOCRATIC REPUBLIC OF CONGO

MINE
ACTION
REVIEW

CLEARING CLUSTER
MUNITION REMNANTS
2019

RECOMMENDATIONS FOR ACTION

- The Democratic Republic of Congo (DRC) should ratify the Convention on Cluster Munitions (CCM) as a matter of priority.
- DRC should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- The DRC should prioritise completing clearance of the newly identified CMR-contaminated areas on its territory. Far greater efforts should also be made to ensure the accuracy of survey by national operators, with precise reporting of the type of devices identified along with the size of suspected hazardous areas (SHAs) and confirmed hazardous areas (CHAs).
- Significant efforts should be made to ensure the national mine action database is accurate, up to date, and effectively managed and resourced by the national authorities. Updated information should be regularly shared with all mine action stakeholders.
- Mine action data should be recorded and reported according to International Mine Action Standards (IMAS) land release terminology.
- The national mine action authority, the Centre Congolais de Lutte Antimines (CCLAM), should enhance collaboration with, and support for the work of, international mine action organisations.

UNDERSTANDING OF CONTAMINATION

According to CCLAM, at the start of 2019, six CHAs in the DRC contained CMR, covering a total size of just over 81,000m². CCLAM reported that these areas were newly recorded in the national database in 2018 and early 2019.¹

Table 1: CMR contamination by province (at end 2018)²

Province	Territory	CHAs	Area (m ²)
Ituri	Aru	3	40,750
South-Kivu	Shabunda	1	719
Tanganyika	Kalemie	1	37,000
Tshopo	Bangelema	1	3,015
Totals		6	81,484

Mine Action Review, however, believes that at least three of these areas, amounting to more than half of estimated total contamination, have already been cleared.

The CCLAM reported that a national survey of CMR was carried out in tandem with a survey of anti-personnel mine contamination in 2013–14, with the exception of Aru, a territory in Ituri province, and Dungu, a territory in Haut Uele province. In both cases, security concerns prevented the survey covering these two territories.

At the end of the survey, five areas were confirmed as containing CMR, with a size of 17,590m² in Equateur and Tanganyika provinces. Of these, all four CHAs in Equateur province were cleared. The area identified in Kalemie territory, Tanganyika province originally thought to have a size of 5,250m² was underestimated and later increased to 40,800m²; however according to CCLAM, clearance of the area was suspended after just 3,800m² by Mines Advisory Group (MAG) due to lack of funding. As at June 2019, the CCLAM reported that the 37,000m² remaining had still to be addressed.³

In April 2018, the United Nations Mine Action Service (UNMAS) reported that four PM-1 submunitions had been found in a previously unrecorded hazardous area in Shabunda in South Kivu province. Evidence from eyewitnesses and past experiences of cluster munition contamination in the DRC indicated these came from a cluster munition strike in the 1980s.⁴

Despite this, UNMAS said there were no plans to conduct a specific survey of CMR contamination in 2018, though it also informed Mine Action Review that “the discovery of CM [cluster munitions] in a location previously thought to be not contaminated would lead UNMAS to believe that the CM hazard is still present”.⁵ At the end of June 2018, UNMAS reported that technical survey of the area was being carried out to determine the footprint and size of the area of contamination. It further stated, however, that it did not have sufficient resources to conduct clearance of the area following completion of technical survey.⁶

In June 2019, UNMAS informed Mine Action Review that the area identified in Shabunda territory was cleared in early 2019. UNMAS stated that it was planning to start clearance activities in the confirmed hazardous area in Kalemie territory in the second half of 2019.⁷

Prior to this, the last known recorded area containing CMR in the DRC, covering 3,900m², was cleared in May 2017. At the start of 2017, only two areas known to contain CMR remained to be addressed in Bolomba, Equateur province, in the north-west of the country.⁸ One SHA (of unrecorded size) was cancelled by Norwegian People’s Aid (NPA) in April 2017, while NPA completed clearance of the other area, with a size of 3,900m², on 12 May 2017, with the destruction of a total of 241 submunitions.⁹

Throughout 2018, the DRC’s national mine action programme continued to be hampered by a lack of coordination between stakeholders and critical information management issues. Its ability to produce a clear and accurate estimate of remaining mines and ERW from the national database remained open to question.

The DRC’s most recent National Mine Action Strategy 2018–2019, developed with the support of GICHD and finalised in November 2017, states that in addition

to mines and ERW, “some areas contaminated by submunitions have also been reported but the areas affected remain negligible”.¹⁰ The Strategy included among its objectives completion of survey of mine and CMR contamination in Aru and Dungu by the middle of 2018.¹¹ While this objective was not met, as at June 2019 survey was underway in Aru.¹²

In 2018, NPA discussed with MAG and DanChurchAid (DCA) the possibility of a joint national resurvey of SHAs remaining in the country as reported by CCLAM. In May 2019, NPA reported that it had started the resurvey on its own, and that as at mid-June 2019, a total of 115,000m² had been cancelled in South Ubangi province. It considered this to be evidence that many of the remaining suspected hazardous areas will be either discredited or at least significantly reduced in size. However, NPA reported that it was likely that more explosive ordnance, potentially including CMR and landmines, would be found in the eastern parts of the country (including Bas Uelele, Haut Uelele, Ituri, North Kivu, and Lubero provinces) due to the intensity and duration of armed conflicts affecting those regions. As such, NPA stated that these areas would be priorities for operations on the basis of humanitarian impact, and that it was still attempting to secure resources for expanding the resurvey activities as at June 2019.¹³

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

DRC is affected by other ERW and a small number of landmines, as a result of years of conflict involving neighbouring states, militias, and rebel groups (see Mine Action Review’s *Clearing the Mines* report on the DRC for further information). Successive conflicts have also left the country with significant quantities of abandoned explosive ordnance.

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

CCLAM was established in 2012 with support from the UN Mine Action Coordination Centre (UNMACC) and UNMAS.¹⁴ Subsequently, UNMAS provided capacity-building support to CCLAM for its operations until the transfer of responsibility for coordinating mine action activities to CCLAM was completed in early 2016.¹⁵ In 2018, however, UNMAS continued to provide guidance and operational support to the CCLAM.¹⁶ Law 11/007 of 9 July 2011 underpins the national mine action programme.¹⁷

Previously, UNMACC, established in 2002 by UNMAS, coordinated mine action operations through offices in the capital, Kinshasa, and in Goma, Kalemie, Kananga, Kisangani, and Mbandaka.¹⁸ UNMACC was part of the UN Stabilization Mission in the DR Congo (MONUSCO). In accordance with Security Council Resolution 2147 (2014), humanitarian mine action was removed from MONUSCO’s mandate.¹⁹ In 2018, UNMAS was assisting MONUSCO operations and mitigating the threat from ERW through explosive ordnance disposal (EOD) operations and risk education under MONUSCO’s Protection of Civilians mandate.²⁰

Although CCLAM took over responsibility from UNMAS as the national focal point for demining in early 2016, its capacity to carry out accreditation, issue task orders, and report remained very limited in 2018. Its lack of capacity to manage an up-to-date national database and carry out quality management activities continued to be highlighted by operators as critical areas of concern.²¹ In 2018, NPA continued its support to develop CCLAM’s capacity through training and in-kind assistance.²²

CCLAM reported that in 2018, as in previous years, the Government of the DRC provided more than US\$530,000 for its operating expenses. The government did not, though, provide any funding for mine action operations. CCLAM reported that priorities for the national programme in 2019 were improving the national database, conducting a new national contamination survey, organising a workshop to develop an annual mine action workplan, and capacity building for operational staff.²³

In 2018, operators and UNMAS reiterated concerns over a continuing decline in funding for mine action operations in the DRC. They reported that with the deteriorating political climate in the country, donors were reluctant to support mine action, prioritising

instead support to address other higher-impact humanitarian crises such as cholera and yellow fever, flooding, and internally displaced persons.²⁴ In 2019, this was compounded by new humanitarian crises from Ebola and continuing armed conflict.

GENDER

The DRC's national mine action strategy for 2018–19 includes a section on gender. It stipulates that all activities of the mine action programme, particularly those related to risk education and victim assistance, must reflect the different needs of individuals according to age and gender groups, in a non-discriminatory manner. It also states that the principles of non-discrimination against women as set out in the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and UN Security Council Resolution 1325 (2000) are to be respected, ensuring that women are involved in all essential stages of mine action (planning, implementation, monitoring, and evaluation), and that activities take into account the special needs of women and girls.²⁵

According to CCLAM, mine action survey teams in 2018 were gender balanced, and efforts were undertaken to ensure that all community groups, including women and children, were consulted. It also noted, however, the ongoing need for awareness-raising within certain communities on gender equality as local customs can discriminate against women undertaking certain

categories of work. CCLAM reported that approximately 30% of operational staff in survey and clearance teams were female in 2019, but only around 7% of managerial or supervisory positions were held by women, reportedly due in part to barriers presented by local customs about women's employment roles.²⁶

NPA's demining staff were 50% female in 2018. It reported that it was able to hire five women in operational roles (four deminers and one medic) during the year, following an awareness-raising seminar on women's opportunities in mine action and demining training. It offered flexible working hours for parents (especially female staff) and encouraged women to enrol in training programmes aimed at improving their chances for managerial positions. An internal women's network was formed as a subset of the programme's staff union, with a particular focus on women's rights and gender, improving work-life balance, awareness-raising about parental rights, ensuring equal pay, and increasing maternity and paternity leave beyond the legal minimum requirements.²⁷

INFORMATION MANAGEMENT AND REPORTING

CCLAM assumed responsibility from UNMAS for information management in January 2016. Subsequently, despite many years of capacity-building support from UNMAS, and again from NPA in 2018, serious concerns persisted over the quality of the database and CCLAM's capacity and resources to manage it. Gaps in the data, a lack of maintenance, a lack of capacity to extract and share information from the database, and the absence of coordination meetings with operators, all remained evident in 2018.²⁸

In 2019, NPA elaborated that ongoing information management issues included a lack of reporting according to land release terminology, the misreporting of items of unexploded ordnance (UXO) as mines (resulting in new areas of contamination being incorrectly added to the database as mined areas), and a lack of verification of incoming reports.²⁹

NPA held refresher training courses on information management and use of the Information Management System for Mine Action (IMSMA) database and geographic information system (GIS) for CCLAM staff during 2018. It reported that while CCLAM had competent technical staff, its limited administrative and financial resources continued to adversely affect its ability to maintain the database and that, as a consequence, a system of parallel reporting to CCLAM and UNMAS had developed.³⁰

In 2018 and the first half of 2019, UNMAS reported that, through extra budgetary funds, it provided assistance to CCLAM to develop a work plan on information management, including provision of IT equipment and support in assessing needs based on the DRC's mine action strategic priorities.³¹

In June 2019, the CCLAM informed Mine Action Review that while progress on information management had been achieved in recent years, the national programme still experienced difficulties in recording CMR separately from other types of ERW. It stated that additional capacity-building support for managing the national database would be welcomed.³²

PLANNING AND TASKING

The DRC's national mine action strategy for 2018–19 focuses on fulfilling the DRC's Anti-Personnel Mine Ban Convention (APMBC) Article 5 obligations by 2020, one year ahead of its extended 2021 deadline.³³

The strategy contains the following three strategic pillars: effective and efficient management of the explosive threat; ensuring the national programme has the capacity to manage residual contamination in a sustainable manner; and that the legal framework of the mine action programme is strengthened through the adoption of national laws and other implementing measures and adherence to relevant treaties.³⁴ The strategy does not contain specific provisions on or timeframes for the completion of clearance of CMR.³⁵

DRC's previous national mine action strategy for 2012–16 had set the goal of clearing all areas contaminated with anti-personnel mines or unexploded submunitions by the end of 2016.³⁶ It failed to meet these goals.

NPA informed Mine Action Review that it operates on a province-by-province approach to tasks, rather than prioritising clearance of one type of contamination over another, as remaining hazardous areas are sparsely located and more efficiently addressed by geographic location.³⁷ As noted above, it raised concerns, however, about wasting resources in non-contaminated areas due to misreporting in the database, particularly the addition of new mined areas without evidence of the presence of anti-personnel mines, and a lack of a robust overview of the remaining contaminated areas to be addressed.³⁸

In June 2019, CCLAM reported that as a result of the unexpected identification of several areas of CMR contamination, an annual plan for the release these areas was needed and would be developed in the near future.³⁹

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

In June 2019, CCLAM reported that DRC's National Technical Standards and Guidelines (NTSGs) had been revised during 2018, with the main areas of revisions made to standards on demining techniques and safety of deminers in the workplace. It stated that the NTSGs contained specific provisions on the clearance of CMR.⁴⁰

In 2018 and the first half of 2019, UNMAS reported providing technical and logistical support to CCLAM on monitoring, coordinating, and assessing quality of activities conducted by mine action implementing partners.⁴¹

OPERATORS

Four international operators carried out mine action operations in DRC in 2018: non-governmental organisations (NGOs) DCA, MAG, and NPA, and commercial operator, The Development Institute (TDI).⁴² A number of national operators also carried out non-technical survey and risk education activities during the year.

In 2018, NPA's teams focused on manual clearance, EOD spot tasks, non-technical survey, and risk education in partnership with a local organisation APPEI, and impact assessment in the north-west of DRC in North and South Ubangi provinces. It deployed three operational teams, which carried out clearance and EOD spot tasks.⁴³

MAG ended its demining activities in the DRC in August 2018 following the completion of a Netherlands-funded clearance project under which it deployed two multi-task teams (MTTs) and two community liaison teams in North

and South Ubangi provinces. MAG reported that while the clearance project had been successful, overcoming the many challenges and complexities of working in the DRC, combined with the lack of anti-personnel mines being discovered along with the low density of ERW, contributed to making further demining operations in the DRC a lower priority for the allocation of global resources. Following discussions with NPA and DCA, it was agreed that MAG would cease its demining operations, but that NPA would continue survey and clearance in the north and north-west of DRC, while DCA would continue to operate in the central-eastern areas.⁴⁴

MAG informed Mine Action Review that it would continue to work together with CCLAM, NPA, DCA, and UNMAS to develop a strategy to address residual contamination in the DRC, and that it was committed to working closely with CCLAM and to finding resources to carry out any activities if deemed necessary.⁴⁵

UNMAS continued to contract TDI in support of MONUSCO operations in 2018. It deployed three six-person MTTs to conduct EOD spot tasks in areas where MONUSCO was operational and also to carry out destruction of obsolete weapons and ammunition held by the Armed Forces of the DRC or Troop-/Police-Contributing Countries operating as part of MONUSCO. In 2018, through extra budgetary funds, UNMAS also contracted national organisations to conduct risk education in complement with TDI's activities.⁴⁶

OPERATIONAL TOOLS

Only manual clearance of ERW, including CMR, is conducted in the DRC.

LAND RELEASE OUTPUT AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUT IN 2018

According to CCLAM, a total of two areas of CMR contamination with a size of just over 43,000m² were cleared with the destruction of 44 submunitions in 2018.⁴⁷

SURVEY IN 2018

According to CCLAM, TDI carried out non-technical survey operations in Ituri province in 2018, which as at June 2019 were still underway and the results yet to be reported.⁴⁸ CCLAM also reported that a series of targeted surveys were conducted in Shabunda territory, South Kivu province. CCLAM stated that it had become clear as a result that the initial survey of CMR contamination in the DRC had “had many flaws and underestimated the size of certain areas”.⁴⁹ CCLAM also raised concerns to Mine Action Review about the level of knowledge and capacity of mine action operators on the ground to accurately identify CMR in survey operations.⁵⁰

Previously in 2017, NPA cancelled one of the two areas of CMR contamination remaining to be addressed in Bolomba, Equateur province.⁵¹ NPA reported having offered assistance to CCLAM and the Congolese armed forces to conduct a survey to confirm and verify that all known and suspected CMR-contaminated areas have been addressed, in order to declare itself fully compliant with the obligations in Article 4 of the CCM.⁵² It reported, however, that as at June 2019, CCLAM and the Congolese armed forces had not responded to its offer of assistance and raised the possibility that additional CMR-contaminated areas might be found in the eastern parts of the country.⁵³

As reported above, in the first half of 2019, NPA initiated resurvey activities on its own, and as at mid June, had cancelled a total of 115,000m² in South Ubangi province, in the north-west of DRC. It expected that many of remaining SHAs will be discredited or significantly reduced in size following new survey.⁵⁴

CLEARANCE IN 2018

According to CCLAM, a total of two areas with a size of just over 43,000m² were cleared with the destruction of 44 submunitions and 5,631 items of UXO: clearance of 3,015m² of CMR contamination by DCA in Tshopo province, with the destruction of four submunitions; and clearance of 40,000m² by TDI with the destruction of 40 submunitions in Ituri province.⁵⁵

In 2017, a total of 3,900m² of CMR contamination was cleared by NPA, and a total of 242 submunitions were destroyed.⁵⁶ NPA completed clearance of the last remaining area of CMR contamination identified in Bolomba, Equateur province on 12 May 2017.⁵⁷ It cleared a total of 3,900m², destroying 239 submunitions in the task area. It reported that the submunitions were of the type PTAB-1M, which it said are usually dispensed from a container that holds 268 submunitions. NPA found only submunitions, however, and not the container. It also destroyed an additional two submunitions in EOD spot tasks.⁵⁸ It did not expect more CMR to be found in Equateur province.⁵⁹

PROGRESS TOWARDS COMPLETION

As at June 2019, DRC was a signatory to the CCM. In addition to its obligations as a treaty signatory, it is bound by international human rights law to clear CMR as soon as possible.

DRC's national mine action strategy for 2018–19 set a date for the completion of ratification of the CCM by the end of 2018 and for the development of a law on its implementation by 2019.⁶⁰ As at June 2019, neither objective had been realised, and CCLAM informed Mine Action Review that as DRC was still not a state party to the CCM, no deadline for the completion of CMR clearance had been established.⁶¹

- 1 Email from Maître Sudi Alimasi Kimputu, Coordinator, CCLAM, 3 June 2019.
- 2 Ibid.
- 3 Ibid.
- 4 Emails from Steven Harrop, Chief of Operations, UNMAS, 23 April and 8 June 2018.
- 5 Ibid.
- 6 Email from Steven Harrop, UNMAS, 19 June 2018.
- 7 Email from Aurelie Fabry, Programme Officer, UNMAS, 20 June 2019.
- 8 Emails from Jean-Denis Larsen, Country Director, Norwegian People's Aid (NPA), 19 May 2017; Matthieu Kayisa Ntumba, Operations Manager, NPA, 18 and 20 June 2017; Colin Williams, Chief of Operations, UNMAS, 12 June 2017; and Pehr Lodhammar, Programme Manager, UNMAS, 14 April 2017.
- 9 Emails from Jean-Denis Larsen, NPA, 23 May 2017; and Matthieu Kayisa Ntumba, NPA, 18 and 20 June 2017 and 14 June 2018. NPA reported that 239 submunitions were destroyed in the task area. The submunitions were type is PTAB-1M, which are dispensed from a container that normally contains 268 submunitions. NPA reported that it only found individual submunitions and not the container itself. Two additional submunitions were found and destroyed as explosive ordnance disposal (EOD) spot tasks.
- 10 "Stratégie Nationale de Lutte Antimines en République Démocratique du Congo 2018-2019", CCLAM, November 2017, p. 8.
- 11 Ibid., pp. 18-19.
- 12 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 13 Skype interview with Jean-Denis Larsen, NPA, 24 April 2019; and emails, 24 May and 26 June 2019.
- 14 Response to Cluster Munition Monitor questionnaire by Michelle Healy, UNMACC, 29 April 2013.
- 15 UNMAS, "About UNMAS Support of One UN and the GODRC", March 2016, at: <http://bit.ly/2Wty0A>.
- 16 UNMAS, "Portfolio of Mine Action Projects, Democratic Republic of Congo, 2019", at: <http://bit.ly/2wHkvt>.
- 17 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 18 UNMAS, "DRC, Overview", updated August 2013.
- 19 UN Security Council Resolution 2147, 28 March 2014; and UNMAS, "DRC Overview", updated April 2014, at: <http://bit.ly/31d6lYm>.
- 20 UNMAS, "Support to one UN and the GO of DRC", March 2018, at: bit.ly/31d6lYm; and email from Aurelie Fabry, UNMAS, 20 June 2019.
- 21 Emails from Jean-Denis Larsen, NPA, 5 March 2018; Bill Marsden, Regional Director, East and Southern Africa, MAG, 11 May 2018; and Guillaume Zerr, Programme Director DR Congo, Humanity and Inclusion, (formerly Handicap International, HI), 24 May 2018.
- 22 Skype interview with Jean-Denis Larsen, NPA, 24 April 2019; and email, 24 May 2019.
- 23 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 24 Emails from Jean-Denis Larsen, NPA, 5 March 2018; Bill Marsden, MAG, 11 May 2018; Guillaume Zerr, HI, 24 May 2018; and Pehr Lodhammar, UNMAS, 5 April 2017.
- 25 CCLAM, "Stratégie Nationale de Lutte Antimines en République Démocratique du Congo 2018-2019" ("National Mine Action Strategic Plan in DRC, 2012-2016"), November 2017, pp. 15-16.
- 26 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 27 Skype interview with Jean-Denis Larsen, NPA, 24 April 2019; and email, 24 May 2019.
- 28 Ibid.
- 29 Ibid.
- 30 Email from Jean-Denis Larsen, NPA, 18 April 2017.
- 31 Email from Aurelie Fabry, UNMAS, 20 June 2019.
- 32 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 33 "Plan Stratégique National de Lutte Antimines en République Démocratique du Congo, 2012-2016" Kinshasa, November 2011.
- 34 Ibid., p. 5.
- 35 Ibid., pp. 18-19. It also erroneously claims (p. 12) that in the period 2012-16 a total of only three submunitions had been cleared.
- 36 "Plan Stratégique National de Lutte Antimines en République Démocratique du Congo, 2012-2016", Kinshasa, November 2011, p. 28.
- 37 Skype interview with Jean-Denis Larsen, NPA, 24 April 2019; and email, 24 May 2019.
- 38 Ibid.
- 39 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 40 Ibid.
- 41 Email from Aurelie Fabry, UNMAS, 20 June 2019.
- 42 Email from Julien Kempeneers, Deputy Desk Officer, Mine Action Department, HI, 14 April 2016.
- 43 Skype interview with Jean-Denis Larsen, NPA, 24 April 2019; and email, 24 May 2019.
- 44 Email from Bill Marsden, MAG, 20 May 2019. MAG reported that its arms management and destruction operations continued, in cooperation with the national police, the FARC, and the new government administration in the DRC.
- 45 Email from Bill Marsden, MAG, 20 May 2019.
- 46 Emails from Philippe Renard, Head of Programme, UNMAS, 20 May 2019; and Aurelie Fabry, UNMAS, 20 June 2019.
- 47 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 48 Ibid.
- 49 Ibid. In 2018, CCLAM reported that one area with a size of 40,000m² was confirmed to contain CMR by technical survey in Aru while a second area in Tshopo province with a size of 3,015m² was also confirmed by technical survey.
- 50 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 51 Emails from Jean-Denis Larsen, NPA, 19 May 2017; and Matthieu Kayisa Ntumba, NPA, 18 and 20 June 2017.
- 52 Email from Jean-Denis Larsen, NPA, 23 May 2017.
- 53 Email from Jean-Denis Larsen, NPA, 26 June 2019.
- 54 Ibid.
- 55 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.
- 56 Emails from Jean-Denis Larsen, NPA, 19 May 2017 and 5 March 2018; Matthieu Kayisa Ntumba, NPA, 18 and 20 June 2017, and 14 June 2018; Bill Marsden, MAG, 11 May 2018; and Gerard Kerrien, MAG, 4 June 2018.
- 57 Emails from Jean-Denis Larsen, NPA, 19 and 23 May 2017; Matthieu Kayisa Ntumba, NPA, 18 and 20 June 2017; Colin Williams, UNMAS, 12 June 2017; and Pehr Lodhammar, UNMAS, 14 April 2017.
- 58 Email from Jean-Denis Larsen, NPA, 5 March 2018.
- 59 Emails from Jean-Denis Larsen, NPA, 19 and 23 May 2017; Matthieu Kayisa Ntumba, NPA, 18 and 20 June 2017; Colin Williams, UNMAS, 12 June 2017; and Pehr Lodhammar, UNMAS, 14 April 2017.
- 60 DRC, "Stratégie Nationale de Lutte Antimines en République Démocratique du Congo 2018-2019", November 2017, pp. 14 and 25. It states that DR Congo's law to ratify the CCM had been adopted by both chambers of Parliament and awaited promulgation by the President of the Republic after verification from the Constitutional Court.
- 61 Email from Maître Sudi Alimasi Kimputu, CCLAM, 3 June 2019.

STATES NOT PARTY

RECOMMENDATIONS FOR ACTION

- Azerbaijan should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Azerbaijan should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.

CLUSTER MUNITION REMNANT CONTAMINATION

The precise extent of contamination from CMR in Azerbaijan is unknown, as Armenian forces currently occupy a significant area of the country, where the contamination exists. There may also be some residual contamination in territory under government control.¹

Large quantities of cluster munitions were dropped during the 1988 conflict between Azerbaijan and Armenia. Following the cease-fire in 1994, tensions flared up again in April 2016 when fighting broke out briefly along the Line of Contact (LOC). While ground fighting was confined to areas close to the LOC, artillery fire penetrated more than 10km into Nagorno-Karabakh, and included use of cluster munitions. The HALO Trust has calculated the four days of hostilities added 2.4km² of CMR contamination, all of which has now been cleared.² However, no CMR contamination has been reported on the Azerbaijan-controlled side of the LOC (see the Mine Action Review *Clearing Cluster Munition Remnants* report on Nagorno-Karabakh for further information).

In 2007, the Azerbaijan Campaign to Ban Landmines (AzCBL) surveyed CMR contamination in the non-occupied border regions of Azerbaijan. It concluded that cluster munitions (among other ordnance) had been used in the Aghdam and Fizuli regions.³ In addition, significant quantities of CMR have been identified in and around Nagorno-Karabakh.⁴

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Other areas are confirmed or suspected to contain explosive remnants of war (ERW): both unexploded ordnance (UXO) and abandoned explosive ordnance (AXO). These include former military testing areas and a former shooting range.⁵ Azerbaijan is also contaminated with landmines, the extent of which is unknown (see Mine Action Review's *Clearing the Mines* report on Azerbaijan for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The Azerbaijan National Agency for Mine Action (ANAMA), the de facto mine action authority and mine action centre, is tasked with planning, coordinating, managing, and monitoring mine action in the country. It also conducts demining operations, along with two national operators it contracts: Dayag-Relief Azerbaijan (RA) and the International Eurasia Press Fund (IEPF). No commercial company is active in mine action in Azerbaijan.⁶

The United Nations Development Programme (UNDP) provides capacity development to ANAMA and will continue to do so until 2020. The five core result areas of the project are i) maximizing socio-economic impact, ii) supporting the institutional capacity of ANAMA for mine/UXO clearance according to international and national mine action standards, iii) promoting ANAMA as an international mine action centre, iv) procurement

and upgrading of equipment, and v) introducing a gender sensitive approach to mine action to Azerbaijan.⁷ According to ANAMA, as at end April 2019, project outputs include improvements made to ANAMA's regional structure, enhanced international training services, upgraded training equipment, and support for the sustainability of the training centre.⁸

As at April 2019, Azerbaijan was still in the process of adopting a national mine action law, with draft legislation under review by the Cabinet of Ministers.⁹ Once adopted, it will regulate mine action in Azerbaijan, governing issues such as licensing, accreditation, quality assurance (QA), and tender procedures.¹⁰

The Azerbaijani government funds 90% of ANAMA's operating costs and 90% of all survey and clearance activities in Azerbaijan.¹¹

GENDER

ANAMA does not have a gender policy. There are no women working in any operational roles in survey and clearance in Azerbaijan. However, women do participate in mine risk education sessions and are consulted during survey.¹²

One of the goals of the UNDP-ANAMA capacity strengthening project is to introduce a gender-sensitive approach to mine action to Azerbaijan.¹³ This is defined as delivering train-the-trainer sessions to mine action staff on a gender-sensitive approach to working with affected populations and the development of an accompanying training manual.¹⁴ No further information on progress towards this goal has been provided by ANAMA or UNDP.

INFORMATION MANAGEMENT AND REPORTING

ANAMA uses an old version of the Information Management System for Mine Action (IMSMA) database.¹⁵ According to ANAMA, no modifications or improvements were made to the database in 2018.¹⁶

PLANNING AND TASKING

The current mine action strategy is for 2013–18.¹⁷ Its main aims are said to be to continue ERW clearance in support of government development projects, and to provide safe conditions for the local population in affected regions.¹⁸

ANAMA is integrated into the State Social and Economic Development programme and mine action is reported to be an integral part of the new state socio-economic development plan developed for 2019–22.¹⁹

ANAMA has an annual workplan for 2018 and 2019. In 2019, ANAMA was intending to continue mine clearance operations in Agdam and Agjabedi, Fizuli, Heybet, Jabrayil, and Terter regions. Tasks are prioritised according to the state development plan and state orders.²⁰

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Azerbaijan has its own National Mine Action Standards (NMAS), which were adopted in 2001 and subsequently revised in 2003, 2004, and 2010 in accordance with the International Mine Action Standards (IMAS) and best practice.²¹ No major modifications to the standards were made in 2018.²²

ANAMA also has standard operating procedures (SOPs) in place, which were reviewed in 2018.²³

OPERATORS

In 2018, ANAMA employed 613 operational and administrative staff across six regional centres (including the Regional Mine Action Resource and Training Centre).²⁴

The Training, Survey and Quality Assurance Division continued its quality management (QM)-related activities during 2018 quality assurance (QA) and quality control (QC) sampling inspections. QA and QC were carried out on both ANAMA's operations and the operations by the two national NGOs.²⁵

OPERATIONAL TOOLS

Mine detection dogs (MDDs) and mechanical assets are used to support reduction by technical survey and manual clearance operations.²⁶ In 2018, Azerbaijan had 48 MDDs and 6 machines.

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

No CMR survey or clearance took place in 2018.

Battle Area Clearance in 2018

In 2018, clearance operations continued across the country with the majority of ANAMA's clearance assets deployed for emergency clearance of the Khizi ammunition depot explosion; for clearance of the shooting range in Jeyranchel, Agstafa region; and for the clearance of the Jojuq Marjanli village following liberation from Armenian occupation.²⁷ In 2018, 45.5km² was cleared and 11,743 items of UXO, 29 anti-personnel mines, and 17 anti-vehicle mines were found and destroyed.²⁸

In June 2018, ANAMA completed the final phase of the three-phase Azerbaijan National Action Plan (NAP)/ NATO Partnership for Peace (PfP) Trust fund project, at the former Soviet artillery shooting range in Jeyranchel, in the Agstafa region, on the border with Georgia. Phase III lasted for 18 months and resulted in the clearance of 22km² with 2,146 mines and UXO found and destroyed.²⁹

No target date has been set for the completion of CMR clearance in Azerbaijan.³⁰ ANAMA's long-term strategy is to be ready to start clearance of the occupied territories as and when this is possible.³¹ In May 2019, Azerbaijan stated that it will only accede to the CCM once all of its territories are liberated from occupation by Armenia and all internally displaced persons and refugees return to their lands.³²

1 Email from Sabina Sarkarova, Public Relations Officer, Azerbaijan National Agency for Mine Action (ANAMA), 2 April 2019.

2 Emails from Amasia Zargarian, Programme Support Officer, HALO Trust, 4 May 2018; and Asqanaz Hambardzumyan, HALO Trust, 26 April 2019.

3 AzCBL, "Information Bulletin", January 2008.

4 Interview with Nazim Ismayilov, Director, ANAMA, Baku, 2 April 2010; see also Human Rights Watch and Landmine Action, *Banning Cluster Munitions: Government Policy and Practice*, Mines Action Canada, Ottawa, 2009, p. 188.

5 ANAMA, "Azerbaijan National Agency for Mine Action 2018", p. 17.

6 Email from Tural Mammadov, Operations Officer, ANAMA, 19 October 2016.

7 UNDP, "Review & Recommendation to Azerbaijan National Agency for Mine Action (ANAMA) in Support of its Transformation into International Centre for Demining assessment 2018", 17 July 2018.

8 Email from Sabina Sarkarova, ANAMA, 2 April 2019.

9 Ibid.

10 Email from Parviz Gidayev, ANAMA, 20 May 2015; and ANAMA, "Azerbaijan National Agency for Mine Action 2014".

11 Email from Sabina Sarkarova, ANAMA, 2 April 2019.

12 Ibid.

13 UNDP, "Review & Recommendation to Azerbaijan National Agency for Mine Action (ANAMA) in Support of its Transformation into International Centre for Demining assessment 2018", 17 July 2018.

14 UNDP, "Project Document: Azerbaijan", undated but for project period 3 November 2017 to 31 December 2020, p. 5.

15 ANAMA, "Azerbaijan National Agency for Mine Action 2017", p. 32.

16 Ibid.

17 Email from Parviz Gidayev, Planning & Development Manager, ANAMA, 20 May 2015; and ANAMA, "Azerbaijan National Agency for Mine Action 2017", p. 10.

18 Email from Sabina Sarkarova, ANAMA 2 May 2018.

19 Email from Sabina Sarkarova, ANAMA, 2 April 2019.

20 Ibid.

21 Email from Tural Mammadov, ANAMA, 19 October 2016.

22 Email from Sabina Sarkarova, ANAMA, 2 April 2019.

23 Ibid.

24 ANAMA, 2018 report, undated.

25 Ibid.

26 Email from Sabina Sarkarova, ANAMA, 2 April 2019.

27 Email from Sabina Sarkarova, ANAMA, 2 May 2018.

28 ANAMA, 2018 report, undated.

29 Ibid.

30 Email from Sabina Sarkarova, ANAMA, 2 April 2019.

31 ANAMA, "Azerbaijan National Agency for Mine Action 2014"; and GICHD, "Transitioning Mine Action Programmes to National Ownership: Azerbaijan", March 2012, Executive Summary.

32 Email from Sabina Sarkarova, ANAMA, 21 May 2019.

RECOMMENDATIONS FOR ACTION

- Cambodia should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Cambodia should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Cambodia should work with operators to elaborate a specific strategy for survey and clearance of CMR, with realistic annual targets for land release.
- Cambodia should improve CMR planning and prioritisation guidelines and implement them systematically.
- Cambodia should continue to work to establish an up-to-date and accurate national database that is open to all mine action stakeholders.
- Cambodia should set up a Technical Reference Group on CMR survey and clearance, sharing best practice and facilitating improvements to the implementation of the new standard on Cluster Munition Remnants Survey (CMRS).

CLUSTER MUNITION REMNANT CONTAMINATION

Cambodia has extensive CMR contamination but the full extent is not known. At the end of 2018, CMR contamination was estimated at 738km² but it is thought this figure will rise as a result of completion of the national baseline survey (BLS) and the resolution of a data backlog.¹ This is an increase from the estimate at the end of 2017 of 624km² in 18 provinces.² Cambodia’s National Mine Action Strategy 2018–2025 states that known CMR contamination covers 645km².³

As at June 2019, the Cambodian Mine Action and Victim Assistance Authority (CMAA) reported CMR contamination in the eight eastern provinces close to the border with Vietnam, which are believed to account for most of the problem, at 433km². This is a 5% decrease from its estimate of 457km² a year earlier. Two provinces, Kratie and Stung Treng, accounted for almost half of the CMR total.⁴

Table 1: ERW survey of eight eastern provinces (BLS) in 2009–18⁵

Province	CMR-contaminated area (m ²)	Area with other UXO (m ²)	Total ERW-contaminated area (m ²)
Kampong Cham	35,907,219	11,065,474	46,972,693
Kratie	82,391,996	34,543,290	116,935,286
Mondolkiri	18,702,666	10,616,449	29,319,115
Prey Veng	31,437,996	55,673,912	87,111,908
Rattanakiri	54,269,131	1,272,322	55,541,453
Stung Treng	129,479,524	30,297,009	159,776,533
Svay Rieng	49,472,574	50,047,288	99,519,862
Tboung Khmum	31,016,660	21,223,130	52,239,790
Totals	432,677,766	214,738,874	647,416,640

ERW = Explosive remnants of war

The BLS was implemented between 2009 and 2012 across 124 districts. As at May 2019, BLS activities were ongoing across districts that were not surveyed or were only partially surveyed during the original implementation period. As at end 2018, 23 districts had been surveyed and the remaining 50 were expected to be surveyed by 2020.⁶ In the eight provinces in the east and north-east of Cambodia, where most of the CMR are concentrated, the national database indicates that, as at April 2019, 1,490 villages within 27 districts were pending for the BLS. However, the exact number will only be clear once the Cambodian Mine Action Centre's (CMAC) data backlog has been resolved. CMAC, with support from Norwegian People's Aid (NPA), is working to upload over 5,000 records onto the national database. As at July 2019, a total of 86% of the backlog had been uploaded. The remaining records are explosive ordnance disposal (EOD) tasks conducted by CMAC in eastern Cambodia that are missing supporting documentation. CMAC and CMAA are in the process of working out how this data will be reported but this will not hinder the drafting of the plan to make eight targeted provinces in eastern Cambodia free from the humanitarian impact of ERW.⁷

The BLS employed a landmine survey methodology, resulting in exaggerated and inaccurate CMR polygons. Operators report that some polygons are found to contain little or no CMR and that they have found significant contamination outside BLS polygons. For example in Ratanakiri province, operators have an understanding of contamination from multiple sources

overlaying BLS data with United States (US) bombing data, data on accidents and explosive ordnance disposal (EOD) call-outs as well as information from ongoing survey and clearance operations. However, even with this information, operators are frequently receiving reports of newly found surface and subsurface CMR contamination. According to the World Bank, Cambodia is among the fastest growing economies in the world, and new contamination is being encountered due to increased demand for land, mechanisation of the agricultural sector, and changes in land use.⁸

CMR resulted from intensive bombing by the United States during the Vietnam War, concentrated in north-eastern provinces along the borders with the Lao People's Democratic Republic and Vietnam. The US Air Force dropped at least 26 million explosive submunitions, between 1.9 million and 5.8 million of which are estimated to have not exploded.⁹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Cambodia estimated that in 2018 it had around 468km² of explosive remnants of war (ERW) contamination apart from CMR and more than 890km² of mined area.¹⁰ Landmines are concentrated in, though not limited to, west and north-west Cambodia (see Mine Action Review's *Clearing the Mines* report on Cambodia for further information). ERW, including air-dropped bombs and ground artillery, is heaviest in the eastern provinces.

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The CMAA, was established by Royal Decree No.177 with the mandate to regulate, monitor and coordinate the mine action sector in Cambodia.¹¹ Set up in September 2000, the CMAA's responsibilities include regulation and accreditation of all operators, preparing strategic plans, managing data, conducting quality control, and coordinating risk education and victim assistance.¹² Cambodian Prime Minister Hun Sen is the CMAA President and Senior Minister Ly Thuch its First Vice-President, overseeing the authority. Former CMAA Secretary-General, Prum Sophakmonkol, who was moved to the Ministry of Foreign Affairs in 2016, was reappointed to the position with effect from the start of January 2018 bringing extensive experience and knowledge of mine action to planning and operations.

CMAC was established in 1992, ostensibly as the mine action centre, but preceding the existence of CMAA it had the responsibilities of the mine action authority to regulate and coordinate the sector, as well as undertaking clearance activities.¹³ CMAC's current core activities are survey and clearance of landmines and ERW, mine risk education, and training in mine action.¹⁴ CMAC conducts both humanitarian and commercial demining within Cambodia and is the country's largest operator.¹⁵ Historically there has been a lack of clarity between the roles and responsibilities of the CMAA and CMAC. However, it has been reported that the CMAA has strengthened over the past two years, roles and responsibilities are now more clearly defined, and the CMAA is functioning well.¹⁶

The Cambodian government established the Technical Working Group on Mine Action (TWG-MA) as a consultative mechanism between the government and development partners. The Mine Action Coordination Committee (MACC) and several Technical Reference Groups (TRGs) have been established by the CMAA to cover areas such as survey and clearance, mine risk education, victim assistance, information management, gender, and capacity development to facilitate coordination and feedback at a strategic and technical level.¹⁷ Consultation is built into every stage of Cambodia's Three Year Implementation Plan 2018–20 and operators provide input into key strategic documents through open discussion forums and written feedback.¹⁸ However, it has been reported that at times the process can be rather superficial, with feedback not necessarily taken into account.¹⁹

The operating environment in Cambodia is very permissive, with the Cambodian government open to the presence of international operators and supportive in administrative functions such as granting visas, approval of MoUs and import procedures, as well as, being open to the trialling and use of innovative clearance methods and tools to improve efficiency.²⁰

The United Nations Development Programme (UNDP), NPA, and the Geneva International Centre for Humanitarian Demining (GICHD) all provide capacity development support to CMAA. NPA, as part of a UK Department for International Development

(DFID)-funded consortium that includes MAG and The HALO Trust, focuses on information management, planning and prioritisation, gender mainstreaming, quality management, and strategic planning.²¹ UNDP is in the third phase of its Clearing for Results programme, which was ending in 2019. Its key capacity development deliverables are to support the development of the National Mine Action Strategy 2018–2025, establish a programme performance monitoring system that links human development to mine action, and strengthen the CMAA's international and national participation in relevant fora.²² The GICHD provides information management and risk management support to the CMAA.²³ In 2018, the GICHD presented a case study on the Management of Residual ERW in Cambodia, and

hosted a Long Term Risk Management workshop, which included participation from the CMAA and operators, and an exchange visit between the CMAA and the NMAC in Sri Lanka.²⁴

The Cambodian government contributes funding towards clearance and the management of the sector. The government also takes responsibility for the import tax of mine clearance equipment certified and approved by CMAA.²⁵ Cambodia included a resource mobilisation strategy for 2018–19 in its second extension request to achieve the goals outlined in its National Mine Action Strategy 2018–2025, which includes a specific goal for CMR clearance (see Planning and Tasking section below for details).²⁶

GENDER

CMAA has developed a Gender Mainstreaming in Mine Action Plan (GMAP 2018–22), an objective of the National Mine Action Strategy 2018–2025, which consists of six goals. These include:

- Preparation of guidelines to aid gender mainstreaming across all mine action
- Capacity building of relevant stakeholders to implement the GMAP
- Female representation and participation in planning and prioritisation, mine risk education, and in mine action and advocacy at all levels.²⁷

The Three Year Implementation Plan 2018–20 sets out activities in support of these goals.²⁸ NPA, as part of its capacity development, will support the CMAA with training on gender mainstreaming in mine action, on implementation of the GMAP and the development of associated guidelines, and on using sex and age-disaggregated data in planning and prioritisation processes.²⁹

CMAC provides equal employment opportunities to both men and women. As at April 2019, women made up 10.5% of CMAC's workforce. CMAC operates in accordance with Cambodian Labour Law and are actively recruiting women to reach 15% female employment. Women currently work across all levels of the organisation including in managerial level/supervisory positions. As at April 2019, two of the six directors were women.³⁰

NPA and Mines Advisory Group (MAG) both have organisational gender policies. NPA's policy states that they will mainstream a gender perspective in the design, implementation, monitoring, and evaluation of their programmes, in order to work towards and achieve gender equality. NPA is working towards achieving gender equality in Cambodia both in the composition of its survey and clearance teams and in the consultation of all groups affected by CMR contamination.³¹

Within MAG, Cambodia's staff handbook contains guidelines on equal opportunities but, as at May 2019, no specific national policy or implementation plan had been elaborated. One of MAG Cambodia's key strategic objectives, in 2019–20, is to focus on "meaningful" gender mainstreaming and gender equity within the programme. The programme will closely review recruitment policies and procedures to identify areas in which MAG can further encourage the recruitment and retention of women, as well as their development and promotion into more senior positions.³²

As at May 2019, more than 60% of NPA's operational staff were women and more than 50% of NPA's staff in managerial level/supervisory positions were female.³³ In Ratanakiri province, NPA has two all-female CMRS teams, which include women from local minority ethnic groups.³⁴

MAG's community liaison teams are gender balanced to ensure full representation of all groups during data-collection and community liaison activities. In MAG's survey and clearance teams 42% of staff are female, while 21% of their managerial level/supervisory positions are staffed by women.³⁵

INFORMATION MANAGEMENT AND REPORTING

The CMAA upgraded to operating the Information Management System for Mine Action (IMSMA) New Generation in 2014. The CMAA database unit (DBU) is responsible for collecting, storing, analysing and disseminating data in support of planning and prioritisation of activities.³⁶ Completing clearance of the CMR data backlog, due to occur by mid 2019, should improve accuracy of the data in the database.

CMAA have introduced a new reporting form following the endorsement of the national standard on CMRS in November 2018.³⁷ The new reporting form, the CMTS, in conjunction with the standard, should aid the improvement of both the effectiveness of the CMRS and the reporting of the survey results to the national database.³⁸

CMAA shares all available data with operators on a monthly basis. In 2018, the DBU set up a virtual private network (VPN), which allows operators to send their daily data input directly to the DBU IMSMA database. The DBU controls the quality of all submitted reports and approves them via this online network.³⁹ However, information management remains an issue with incompatibilities between operator databases and the national database, high turnover of data management staff at CMAA, and inconsistencies between operator data and the data held by CMAA.⁴⁰

Strengthening the national information management system for mine action is an objective of Goal 8 of the National Mine Action Strategy 2018–2025. Achieving this involves enhancing Cambodia’s mine action information management capacity and ensuring sustainability of the national system; reviewing and enhancing relevant standards on information management; and diversifying the use of innovative technology to improve information management.⁴¹

PLANNING AND TASKING

Cambodia does not have a CMR-specific strategic plan. Since March 2018, however, the CMAA, NPA, and CMAC have been working together as part of a US-funded project to define and draft a comprehensive plan, that references the Cambodian National Mine Action Strategy 2018–2025, to make eight targeted provinces in eastern Cambodia free from the humanitarian impact of ERW, including CMR.⁴² The national mine action strategy, prepared in 2017 and formally adopted in May 2018, includes targets for tackling CMR contamination as the second of its eight goals. It called for “release of prioritised cluster munition-contaminated areas of 43.4km² of total 130.2km² by 2025” and specified two CMR-related objectives:⁴³

- Plan and prioritise CMR-contaminated areas to be released
- Conduct survey and release confirmed areas of CMR contamination, develop national standards for survey and clearance, implement the CMRS methodology and increase survey and clearance capacity.

The Three-Year Implementation Plan 2018–20 sets out the activities and indicators that will need to be completed in order to meet the goals and objectives of the National Mine Action Strategy 2018–2025, including for CMR. This includes the development of the planning and prioritisation guidelines on CMR which were

finalised by the CMAA in 2018, although according to operators, they lack clarity and are not systematically applied.⁴⁴ At a provincial level, operators work with the Mine Action Planning Unit (MAPU) and the Provincial Mine Action Committee (PMAC) to develop an annual workplan and prioritise tasks. This is based on the development needs in the province, as recommended by both the MAPU and the PMAC. The end use for most clearance tasks is agriculture and often the land is already being cultivated regardless of CMR contamination. This makes it difficult to produce clear prioritisation criteria, so the survey and the clearance plan is based on village-by-village, commune-by-commune, and district-by-district approaches.⁴⁵

Task dossiers are issued in a timely and effective manner through provincial authorities and the MAPUs. Task dossiers are mainly prepared by the operators with the support of local communities, provincial authorities, and MAPUs, with final approval from CMAA.⁴⁶

Goal seven of the national mine action strategy focuses on establishing a sustainable national capacity to address residual contamination after 2025. The objectives include developing a comprehensive national strategy and the necessary legal, institutional and operational frameworks. All of this is due to take place during the first implementation phase, in 2018–22.⁴⁷

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

The CMAA approved the CMRS methodology in principle in 2017 and endorsed a national mine action standard for CMRS (CMAS-16) in November 2018. CMAS-16 is based on the experience of other programmes implementing the CMRS method across the region. Implementation of CMAS-16 began in January 2019 and is ongoing. While the CMAA has reported some quality control issues with submunitions being found after land has been cleared by operators they are supporting the operators to improve CMRS processes and apply the methodology consistently.⁴⁸ For instance, the CMAA has recently agreed that operators can apply evidence-based technical survey methodologies to BLS/NTS polygons found in the database, which are often inflated, in order to reduce the area and ensure a more efficient use of resources.⁴⁹ Previously, operators were expected to fully clear the entire BLS polygon regardless of whether technical survey had defined a much smaller CHA within the original SHA. The CMRS methodologies were to be further discussed, reviewed, and defined during a planned regional workshop at the end of August 2019.⁵⁰

In 2019, the CMAA, with support from NPA, was planning to develop two new standards – on animal detection and mechanical demining – and to conduct a review of the standard on information management. All operators will be consulted as part of this process and will provide feedback on any proposed modifications.⁵¹

National standards are reflected in operators' standing operating procedures (SOPs).⁵² Updates to the SOPs are conducted as and when required, such as when a need is identified through the CMAA-led Technical Reference Group. Reviews are conducted in consultation with all operators, and against IMAS and best practice.⁵³

OPERATORS

National operator CMAC and The Royal Cambodian Armed Forces and its National Centre for Peace Keeping Forces, Mine and ERW Clearance (NPMEC) and international operators MAG and NPA all conducted CMR clearance in 2018.

In 2018, CMAC deployed 25 non-technical survey personnel across five teams, the same as in 2017. In 2019, there are no plans to deploy non-technical survey teams. CMAC also deployed a total of 202 technical survey personnel across 30 teams of between five and seven staff per team. This was an increase from the 187 staff deployed across 27 teams in 2017. In 2019, the number of technical survey personnel was planned to increase to 231 across 37 teams. In 2018, CMAC deployed 1,248 clearance personnel, an increase of 7% on the 1,164 clearance personnel deployed in 2017. This decreased to 1,037 clearance personnel in 2019.⁵⁴

NPMEC have conducted clearance in CMR-affected areas in previous years but had not reported the extent and results of their operations.⁵⁵ In 2018, NPMEC conducted clearance in Stung Treng province.⁵⁶

In 2018, NPA had one non-technical survey team of five staff in Ratanakiri province who responded to community requests based on new evidence of CMR. The non-technical survey team also conducted post clearance visits and were responsible for operating the drone. NPA also deployed two technical survey teams, with a total of ten staff, and one battle area clearance (BAC) team of five explosive detection dogs (EDDs) with handlers supported by four manual searcher and two trimmer operators cutting vegetation. The only change in capacity from 2017 was the addition of one EDD and handler, and NPA did not expect any major changes in 2019 unless funding increases, in which case they will increase both technical survey and BAC capacity.⁵⁷ NPA also provides oversight of survey conducted by CMAC teams, who are required to conduct CMRS, as part of a US-funded partnership project for CMR survey and clearance in the north-east, which is due to run until February 2020.⁵⁸

NPA and CMAC have an ongoing CMR survey and clearance partnership project in eastern Cambodia targeting the eight provinces which are believed to account for most of the CMR contamination. CMAC teams conduct CMRS and clearance while NPA is providing mentoring and monitoring of all aspects of the project which is funded by the United States until February 2020. The objectives of the project are to resolve the CMAC data backlog, complete baseline survey in the remaining districts allocated to NPA/CMAC, develop the capacity of CMAC staff to conduct CMRS in the targeted provinces, and to release prioritised CMR contaminated areas in the targeted provinces.⁵⁹

As well as having its main operational base in the west of the country focused on minefield survey and clearance, MAG also has an operations base in Ratanakiri province concentrating on CMR survey and clearance. In 2018, MAG deployed two community liaison staff who undertake non-technical survey and risk education alongside other activities. This is a newly established capacity. No change in capacity was expected in 2019. MAG also deployed a total of 94 personnel conducting CMR survey and clearance of whom 13 conducted technical survey and 67 people conducted BAC, with the remainder in supervisory roles. This is a change in capacity from 2017 as MAG added an additional clearance team and introduced its first technical survey team. No change in capacity was expected in 2019. MAG also deployed three EOD teams in Ratanakiri province, each consisting of five staff, who respond to reports of ERW including CMR. Approximately 51% of items removed by the EOD teams were CMR. MAG uses the data from these EOD tasks to plot initial CHAs using its Evidence Point Polygon (EPP) mapping approach pioneered in the Lao People's Democratic Republic.⁶⁰

The CMAA's quality management (QM) teams visit operations every month, conducting both quality assurance and quality control. Operators report that the CMAA has a strong and effective QM system in place.⁶¹

OPERATIONAL TOOLS

CMAC currently employs explosive detection dogs as the primary clearance tool for CMR-contaminated areas while machines provide support for field preparation and brush-cutting. In 2019, a pilot was planned for dogs to also conduct CMRS.⁶²

NPA's primary detection tool for BAC are EDDs, supported by searchers with metal detectors. NPA conducted an extensive trial in 2018 deploying EDDs for technical survey. The results were positive and NPA will use EDDs for technical survey in the near future, if funding permits. NPA is confident the efficiency and accuracy of technical survey can be increased if EDDs are included as part of the toolbox. NPA deploys drones for aerial mapping of both technical survey and BAC tasks. Drones are also used during EOD tasks and for

quality assurance. NPA has also been conducting field tests of all-terrain vehicles (ATVs) and have found them particularly useful in transporting personnel and EDDs in hard to reach areas.⁶³

MAG uses a wide variety of assets and methodologies as part of its operational toolbox, with the national authorities very open to the use and trialling of new technologies. In 2018, mechanical assets were used to conduct ground preparation. MAG also continues to trial advanced detection systems for CMR survey and clearance, provided by the US Humanitarian Demining Research and Development programme, and uses drones to conduct non-technical survey, task planning, and post-impact monitoring.⁶⁴

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

In 2018, operators cleared a total of over 39km² of CMR-contaminated area, destroying 8,365 submunitions in the process. A further 4,680 submunitions were destroyed during EOD spot tasks while 571 submunitions were destroyed during technical survey.

A total of 26km² was confirmed by operators through technical survey, while 8km² was reduced from the baseline survey.

SURVEY IN 2018

In 2018, 133 CHAs totalling almost 26.5km² were confirmed as containing CMR, as set out in Table 2.

NPA's technical survey outputs were slightly lower in 2018 compared with 2017. The main reason for this was a ban on the use of explosives for six weeks during the general election so all technical survey and BAC operations were halted during that period.⁶⁵ MAG only began technical survey operations in September 2018 so there were no outputs before then.⁶⁶

Table 2: Technical survey of CMR-contaminated area in 2018

Operator	Area surveyed (m ²)	CHAs identified	Area confirmed (m ²)	Area reduced from BLS (m ²)	Submunitions destroyed	Other UXO destroyed
NPA	3,542,500	25	4,479,481	0	313	2
MAG	362,500	13	1,235,000	0	17	1
CMAC	50,550,354	95	20,757,890	8,205,408	241	1,652
Totals	54,455,354	133	26,472,371	8,205,408	571	1,655

CLEARANCE IN 2018

In 2018, over 39km² was cleared by operators, a significant increase from the 23km² cleared in 2017. CMAC's reported clearance output increased by 56% from 21.9km² in 2017 to just over 34.2km² in 2018. CMAC attributed this to an increase in its clearance capacity along with an improved methodology and better information systems that allow their teams on the ground to better identify and make task selections for clearance.⁶⁷ NPA and MAG both marginally increased their respective clearance outputs in 2018. For NPA, this was mainly due to the introduction of drones, which improved task planning and increased efficiency.⁶⁸ MAG's 3% increase in clearance output is ascribed to a small increase in operational capacity.⁶⁹ NPMEC reported CMR clearance of more than 2.25km² for 2018.⁷⁰

Table 3: Clearance of CMR-contaminated area in 2018

Operator	Province	Areas cleared	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
NPA	Ratanakiri	6	981,839	448	2
MAG	Ratanakiri	12	2,163,551	679	*10
CMAC	Kampong Cham	36	7,415,199	1,733	244
CMAC	Kampong Chhnang	5	1,321,621	192	146
CMAC	Kampong Thom	17	3,024,413	373	73
CMAC	Kratie	15	2,673,205	307	190
CMAC	Preah Vihear	5	891,453	69	107
CMAC	Prey Veng	47	5,991,499	1,333	344
CMAC	Stung Treng	6	1,907,751	259	127
NPMEC	Stung Treng	3	2,250,030	454	152
CMAC	Svay Rieng	71	9,455,454	1,910	335
CMAC	Tboung Khmum	41	1,524,222	608	86
Totals		264	39,600,237	8,365	1,816

* MAG also destroyed 1 anti-personnel mine during BAC in Ratanakiri province.

During EOD spot tasks in 2018, NPA destroyed 220 submunitions, MAG destroyed 3,979 submunitions, and CMAC destroyed 481 submunitions.⁷¹

Cambodia has committed to address 80% of the total known CMR contamination by 2025: 499km² of an estimated total of 645km² in the National Mine Action Strategy 2018–2025. The remaining 20% of CMR will be categorised as “residual” contamination and dealt with accordingly. To reach the clearance goal Cambodia planned to release 62km² every year from 2018 to 2025, of which 30% would be through land reclamation/cancellation and the remaining 70% through land release methodology. Based on this analysis, Cambodia calculated that approximately 44km² will need to be released annually through technical survey and full clearance. From 2014 to 2016, Cambodia released an average of 11km² per year through technical survey and clearance, but it expected to achieve vastly increased clearance output through improved land release methodology, innovative technology, and animal detection systems.⁷²

Cambodia’s clearance output in 2018 was a dramatic improvement from 2017 and it has been estimated by operators that at current capacity around 30km² of CMR contaminated land could be released each year, leading to total release of some 200km² of CMR-contaminated land by 2025. The implementation of the new CMRS standard should mean that operators are more effective in their approach and focus clearance on CHAs while reducing SHAs through technical survey. However, the CMAA will need to ensure that the standard is being applied consistently by all operators and in the most efficient and effective way possible. The CMAA should facilitate the sharing of best practice and support adjustments and improvements to the methodology amongst operators. It is encouraging that there will be a regional meeting on CMRS in August 2019 with all operators and national authorities from Vietnam, Cambodia, and the Lao People’s Democratic Republic.⁷³

Cambodia is not yet a state party to the CCM but has made accession to the CCM by 2020 a goal of the National Mine Action Strategy 2018–2025.⁷⁴ In April 2019, the CMAA stated that the Cambodian government is ready to accede to the CCM, but “for security reasons” is not willing to do so until other countries in the region also accede.⁷⁵

- 1 Anti-Personnel Mine Ban Convention (APMBC) Article 5 Extension Request, 27 March 2019, p. 6; and interview with Prum Sophakmonkol, Secretary General, CMAA, Phnom Penh, 24 April 2019.
- 2 APMBC Article 7 Report (for 2017), Annex B; and email from the CMAA, 22 May 2018.
- 3 CMAA, National Mine Action Strategy 2018–2025, p. 9.
- 4 Email from CMAA, 22 May 2018.
- 5 Email from CMAA, 1 July 2019.
- 6 APMBC Article 5 Extension Request, 27 March 2019, p. 3.
- 7 Emails from Zlatko Vezilic, Interim Country Director, NPA, 4 April, 25 June, and 10 July 2019; and interview with Prum Sophakmonkol, CMAA, Phnom Penh, 24 April 2019.
- 8 Interviews with Sophorn Lim, Project Manager, NPA, 30 April 2019 and Ingemar Anderka, Technical Field Manager, MAG, 1 May 2019, Rattanakiri; World Bank, "The World Bank in Cambodia", at: <http://bit.ly/2YZA0rs>.
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- 10 APMBC Article 5 Extension Request, 27 March 2019, p. 6.
- 11 CMAA, "Legal framework and mandate", at: <http://bit.ly/2W7r3dJ>.
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- 14 CMAC, "20 Years' Achievement in Mine Action 1998-2018 and Path Ahead", 2018.
- 15 Interview with Heng Rattana, Director General, CMAC, Phnom Penh, 25 April 2019.
- 16 Interviews with Su Yeon Yang, Conflict Prevention Officer, and Tong Try, Senior National Project Officer, UNDP, 23 April 2019; and Rebecca Letven, Country Director, MAG, 25 April 2019, Phnom Penh.
- 17 CMAA, National Mine Action Strategy 2018–2025, p. 24; and email from Tong Try, UNDP, 18 June 2019.
- 18 APMBC Article 5 Extension Request, 27 March 2019, pp. 146–150; and email from Rebecca Letven, MAG, 9 May 2019.
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- 20 Emails from Zlatko Vezilic, NPA, 4 April 2019; and Rebecca Letven, MAG, 9 May and 28 June 2019.
- 21 Email from Zlatko Vezilic, NPA, 4 April 2019.
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- 26 Ibid, pp. 161–82.
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- 28 CMAA, "Three-year Implementation Plan 2018–2020", Phnom Penh, undated but 2018, p. 14.
- 29 DFID Capacity Development Report, Activity Detail Extract, 18 September 2018.
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- 31 Email from Zlatko Vezilic, NPA, 4 April 2019.
- 32 Email from Rebecca Letven, MAG, 9 May 2019.
- 33 Email from Zlatko Vezilic, NPA, 4 April 2019.
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- 35 Email from Rebecca Letven, MAG, 9 May 2019.
- 36 CMAA, National Mine Action Strategy 2018–2025, p. 22.
- 37 Emails from Zlatko Vezilic, NPA, 4 April 2019; and Rebecca Letven, MAG, 9 May 2019.
- 38 Email from Zlatko Vezilic, NPA, 2 July 2019.
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- 42 Email from Zlatko Vezilic, NPA, 25 June 2019.
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- 44 Email from Rebecca Letven, MAG, 9 May 2019; and Skype interview with Fredrik Holmegaard, Operations Manager, NPA, 30 May 2019.
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- 46 Ibid.
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- 48 Interview with Prum Sophakmonkol, CMAA, Phnom Penh, 24 April 2019.
- 49 Email from Rebecca Letven, MAG, 9 May 2019.
- 50 Email from Rebecca Letven, MAG, 28 June 2019.
- 51 Email from Zlatko Vezilic, NPA, 4 April 2019.
- 52 Emails from Zlatko Vezilic, NPA, 4 April 2019; and Rebecca Letven, MAG, 9 May 2019.
- 53 Email from Rebecca Letven, MAG, 9 May 2019.
- 54 Email from Prum Suonpraseth, Senior Director, CMAC, 21 June 2019.
- 55 See Mine Action Review *Clearing Cluster Munition Remnants* report for 2016.
- 56 Email from CMAA, 1 July 2019.
- 57 Emails from Zlatko Vezilic, NPA, 4 April and 10 July 2019.
- 58 Skype interview with Fredrik Holmegaard, NPA, 30 May 2019.
- 59 Ibid.; and emails from Prum Suonpraseth, CMAC, 21 June 2019; and Zlatko Vezilic, NPA, 2 July 2019.
- 60 Emails from Rebecca Letven, MAG, 9 May and 28 June 2019.
- 61 Ibid.
- 62 Email from Prum Suonpraseth, CMAC, 21 June 2019.
- 63 Email from Zlatko Vezilic, NPA, 4 April 2019.
- 64 Email from Rebecca Letven, MAG, 9 May 2019.
- 65 Email from Zlatko Vezilic, NPA, 4 April 2019.
- 66 Email from Rebecca Letven, MAG, 9 May 2019.
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- 68 Email from Zlatko Vezilic, NPA, 4 April 2019.
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- 70 See Mine Action Review *Clearing Cluster Munition Remnants* report for 2017.
- 71 Emails from Zlatko Vezilic, NPA, 4 April 2019; and Rebecca Letven, MAG, 9 May 2019; and response to questionnaire by CMAC, 7 June 2019.
- 72 National Mine Action Strategy 2018–2025, pp. 9–10.
- 73 Skype interview with Fredrik Holmegaard, NPA, 30 May 2019.
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- 75 Interview with Prum Sophakmonkol, CMAA, Phnom Penh, 24 April 2019.

RECOMMENDATIONS FOR ACTION

- Georgia should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.

CLUSTER MUNITION REMNANT CONTAMINATION

Georgia is believed to be free of cluster munition remnants (CMR), with the possible exception of South Ossetia, which is occupied by Russia and inaccessible to both the Georgian authorities and international non-governmental organisation (NGO) demining operators.¹

CMR contamination in Georgia resulted from the conflict over South Ossetia in August 2008, in which both Georgian and Russian forces used cluster munitions. After the end of the conflict and through to December 2009, The HALO Trust cleared some 37km² of submunitions and other explosive remnants of war (ERW) in Georgian-controlled territory.² In May 2010, Norwegian People's Aid (NPA) completed clearance of its tasked areas.³ In 2016, two submunitions were reported in the Shida Kartli region and then destroyed by the State Security Agency, as part of explosive

ordnance disposal (EOD) call-outs.⁴ In 2017, The HALO Trust conducted survey in the Shida Kartli region to investigate each of the call-outs.⁵ During survey, a three submunitions were found, which were identified as residual contamination and destroyed.⁶ One submunition was destroyed in 2018 (see Land Release Output section on page 135).

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Georgia remains contaminated by other unexploded ordnance (UXO), likely in South Ossetia and also within Georgia in former firing ranges, and by anti-vehicle and anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Georgia for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The Humanitarian Demining Control Division (HDCD), renamed after a reorganisation in January 2019, sits under the State Military Scientific Technical Centre, known as DELTA, within the Ministry of Defence (MOD).⁷ The primary task of the HDCD is to coordinate mine action in Georgia, including overseeing the national mine action strategy and quality assurance (QA)/quality control (QC), and facilitating the development and implementation of Georgian National Mine Action Standards, in accordance with the International Mine Action Standards (IMAS).⁸

For all mine action-related issues, The HALO Trust communicates with DELTA, which sits under the MOD.⁹

The Georgian authorities are supportive the granting of visas for international staff and the importation of equipment. HALO Trust submitted several requests to the MOD seeking access to the remaining minefields, the last of which was submitted in April 2018. As at May 2019, The HALO Trust had received permission to begin clearance of two of the five remaining minefields, at Khojali and Kadoeti, respectively.¹⁰

The Georgian government funds the running costs of the HDCD as well as the Engineering Brigade, which carries out some battle area clearance (BAC).¹¹

The national authority has received capacity development support from HALO Trust and the Geneva Centre for Humanitarian Demining (GICHD). The HALO Trust has provided training on clearance and survey techniques and, in 2018, donated a mine action vehicle to the HDCD.¹² The GICHD has provided training for HDCD staff on the Information Management System for Mine Action (IMSMA) database, IMAS, and ammunition storage.¹³

GENDER

DELTA and The HALO Trust both have gender policies. HALO Trust believes it is best practice for mixed-gender teams to conduct survey, which allows for greater engagement with women and children while in the field.¹⁴ For example, HALO currently uses mixed-gender teams in Abkhazia to conduct survey and for EOD call-outs. If HALO Trust is given permission to work in the remaining minefields in Tbilisi Administered Territories (TAT), community liaison, and survey teams will be mixed gender and inclusive of ethnic minorities.¹⁵

There is equal access to employment for qualified women and men in survey and clearance teams in Georgia, including for managerial level/supervisory positions although proportionately the number of women remains low. In Abkhazia, The HALO Trust collaborated with local women's organisations during its July 2018 recruitment drive in an effort to achieve gender parity. As at April 2019, 30% of its operational and management staff were female.¹⁶

INFORMATION MANAGEMENT AND REPORTING

The HDCD uses the IMSMA database and, according to The HALO Trust, the data is accurate. Data archives go back to 2009 and are regularly updated, based on HALO Trust's operation reports and on work completed by the Engineering Brigade.¹⁷ The IMSMA database is administered by a certified specialist within the HDCD, trained by the GICHD, who receives regular refresher training in the latest procedures.¹⁸ In 2018, to further improve the quality of data in the database, the GICHD delivered the IMSMA A2 training course to HDCD personnel, which usage of the collected data for mapping, statistics and reporting and as input to decision making.¹⁹

The data in the national information management system is accessible to The HALO Trust.²⁰ HALO Trust uses its own IMSMA-compatible data collection forms that DELTA have approved while the HDCD QA/QC team, also have their own forms.²¹

PLANNING AND TASKING

Georgia has a national mine action strategy. Its main aims and targets are focused on the remaining clearance of anti-personnel mines and other areas contaminated with ERW.²² The annual workplans for 2018 and 2019 centred on battle area and mine clearance within the Tbilisi Administered Territory (TAT).²³

As at April 2019, due to access not being granted to the remaining minefields, The HALO Trust has suspended all operations in Georgia, apart from one two-month task clearing abandoned ordnance at Chonto, near the Administrative Boundary Line with South Ossetia. The Abkhazia programme will continue operations at Primorsky and HALO will also respond to EOD callouts.²⁴

Georgia is said to have a residual risk capacity for CMR with plans in place for dealing with residual risk and liability.²⁵

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

As at April 2019, Georgian National Mine Action Standards and National Technical Standards and Guidelines were still under development. The International Mine Action Standards (IMAS) and International Ammunition Technical Guidelines (IATG) are in the process of being translated into the Georgian language.²⁶

The HALO Trust has standing operating procedures (SOPs) in place for all its activities, including survey, mine clearance, and EOD. No modifications or enhancements were made to these SOPs in 2018 or early 2019.²⁷

OPERATORS

The HALO Trust, which is the only international operator working in the country, conducts survey and both battle area clearance (BAC) and mine clearance.²⁸ DELTA retains a small demining and EOD capacity in TAT. The Engineering Brigade has been carrying out BAC in Gonio, a former military area in the Adjara region, and also responds to EOD call-outs. The State Security Service of Georgia also carries out EOD spot tasks. In Abkhazia, the emergency services (EMERCOM) have a small EOD capacity, though HALO Trust is generally relied upon to deal with all items of UXO.²⁹

Within The HALO Trust, operational staff deployed in 2018 were responsible for both survey and clearance. In TAT, HALO's operational staff decreased from 38 in 2017 to 18 in 2018. In 2019, HALO made all operational staff in TAT redundant. In Abkhazia, the programme began 2018 with 28 staff, which increased to 77 in July to cope with expanded operations at Primorsky. This was reduced to 35 staff at the beginning of 2019.³⁰

In TAT, quality management (QM) is conducted by DELTA. In Abkhazia, The HALO Trust is responsible for its own QM.³¹

OPERATIONAL TOOLS

In 2018, The HALO Trust had two mechanical assets deployed in Anaklia region in western Georgia, for UXO clearance. The Abkhazia programme also has two mechanical assets which it used for clearance at the site of the Primorsky ammunition storage area explosion. The HALO Trust also uses a drone to collect aerial footage of a task.³²

Mine detection dogs (MDDs) were used by the Engineering Brigade during BAC operations in the Gonio former military polygon, Adjara region. The State Security Service of Georgia has several MDD teams which it uses for EOD spot tasks.³³

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

No CMR survey or clearance took place in 2018. One submunition was destroyed during an EOD spot task but this was found to be residual contamination not evidence of a broader problem.³⁴

It is believed that, with the possible exception of South Ossetia, Georgia is now free from CMR. Georgia has reported that, in the areas cleared by The HALO Trust in Abkhazia which are currently outside its control, external QA/QC could not be completed. Georgia, therefore, cannot confirm whether this land is free of contamination.³⁵

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|----|---|----|---|
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| 2 | Explosive Remnants of War Coordination Centre, "Explosive Remnants of War Coordination Centre (ERWCC) in Facts and Figures", November 2009, p. 17. | 18 | Ibid. |
| 3 | Email from Jonathon "Gus" Guthrie, Programme Manager, NPA, 27 May 2010. | 19 | Email from Oleg Gochashvili, DELTA, 28 March 2019. |
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| 7 | Ibid.; Decree #897 issued by the Minister of Defence, 30 December 2010; and emails from Oleg Gochashvili, DELTA, 20 June 2016 and 10 June 2019; Convention on Certain Conventional Weapons (CCW) Protocol V Article 10 Report (for 21 March 2017 to 31 March 2018), Form A. | 23 | Ibid and email of 10 June 2019; and email from Matthew Walker, HALO Trust, 8 April 2019. |
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| 13 | Emails from Oleg Gochashvili, DELTA, 28 March and 10 June 2019. | 29 | Emails from Oleg Gochashvili, DELTA, 28 March 2019; and Matthew Walker, HALO Trust, 8 April 2019. |
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| 15 | Ibid. | 31 | Email from Oleg Gochashvili, DELTA, 28 March 2019. |
| 16 | Ibid. | 32 | Email from Matthew Walker, HALO Trust, 8 April 2019. |
| | | 33 | Ibid. |
| | | 34 | Email from Oleg Gochashvili, DELTA, 28 March 2019. |
| | | 35 | Email from Oleg Gochashvili, DELTA, 10 June 2019. |

RECOMMENDATIONS FOR ACTION

- Iran should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Iran should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Iran should report publicly on the extent and location of CMR and prepare a plan for their clearance and destruction.

CLUSTER MUNITION REMNANT CONTAMINATION

The extent of CMR contamination in Iran is not known. Some contamination is believed to remain from the Iran-Iraq war in 1980–88,¹ when cluster munitions were widely used in Khuzestan and to a lesser extent in Kermanshah. Iraqi forces used mostly French- and Russian-made submunitions in attacks on oil facilities at Abadan and Mah-Shahr, and Spanish munitions in attacks on troop positions at Dasht-e-Azadegan. Air Force explosive ordnance disposal (EOD) teams cleared many unexploded submunitions after attacks but

contamination remains around Mah-Shahr and the port of Bandar Imam Khomeini, according to a retired Iranian Air Force colonel.²

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Iran also has areas containing anti-personnel mines [see Mine Action Review's *Clearing the Mines* report on Iran for further information].

PROGRAMME MANAGEMENT

The Iran Mine Action Centre (IRMAC) was established as the national mine action centre in 2005, taking the place of a Mine Action Committee within the Ministry of Defence. IRMAC is responsible for planning, data, managing survey, procurement, and the accreditation of demining operators. It also sets standards, provides training for clearance operators, concludes contracts with demining operators (private companies, army engineers, and the Iranian Revolutionary Guard Corps), and ensures monitoring of their operations. It coordinates mine action with the General Staff of the Armed Forces, the Ministry of Interior, the Management and Planning Organisation of Iran, and other relevant ministries and organisations, and handles international relations.³ Several IRMAC staff are believed to be serving or former military personnel, including the Director of IRMAC, and the rest are civilians employed by the Ministry of Defence.

International operators are not believed to have been active in Iran since 2008.

In March 2019, Iran hosted a three-day international roundtable on "humanitarian mine action: challenges and best practices", attended by representatives from other states, national and international demining organisations, the International Committee of the Red Cross (ICRC), and the United Nations Mine Action Service (UNMAS). The aim of the roundtable was to share knowledge and experience on mine action, challenges, and best practices.⁴

INFORMATION MANAGEMENT AND REPORTING

IRMAC actively maintains a national mine action database but it is not known if it is comprehensive.

LAND RELEASE

No data was available on any CMR survey or clearance in 2018, as was the case in the previous year.

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 - 2 Interview with Air Force Colonel (ret.) Ali Alizadeh, Tehran, 8 February 2014.
 - 3 IRMAC PowerPoint Presentation, Tehran, 9 February 2014; and IRMAC, "Presentation of IRMAC".
 - 4 "Tehran hosts international roundtable on humanitarian mine action", *Mehr news agency*, 12 March 2019, at: <https://bit.ly/2Z4LslE>; and ICRC, "International roundtable on "humanitarian mine action: challenges and best practices"", 15 March 2019, at: <https://bit.ly/2QH3cR6>.

RECOMMENDATIONS FOR ACTION

- Libya should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Libya should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- All parties to the conflict in Libya should ensure that forces loyal to them do not use cluster munitions.
- As soon as political conditions permit, Libya should enact mine action legislation, establish an interministerial national mine action authority, and adopt a national mine action strategy.
- Libya should, at the earliest opportunity possible and as soon the security situation permits, conduct a baseline survey to identify the extent of contamination from cluster munition remnants (CMR) and begin systematic clearance.

CLUSTER MUNITION REMNANT CONTAMINATION

Contamination in Libya is the consequence of armed conflict in 2011 and renewed conflict since 2014, but the extent of CMR contamination is unknown. In 2011, armed forces used at least three types of cluster munition, including MAT-120 mortar projectiles, RBK-250 PTAB-2.5M cluster bombs, and DPICM-like submunitions delivered by 122mm cargo rockets.¹ Additional contamination by CMR occurred as a result of kick-outs from ammunition storage areas bombed by North Atlantic Treaty Organization (NATO) forces in 2011.²

In early 2015, fighting between Libya's rival armed groups saw reported use of cluster munitions, including RBK-250 PTAB-2.5M bombs, in attacks on Bin Jawad near the port of Es-Sidr in February, and in the vicinity of Sirte in March. The Libyan Air Force, controlled by the internationally recognised government of the time, had bombed both locations, though it denied using cluster bombs.³ According to Cluster Munition Monitor, while the last confirmed use of cluster munitions in Libya was in January 2015, there are indications that additional attacks may have occurred since that time, including in 2016, 2017, and 2018. For example, an aviation-focused blog has published various photographs and videos which reportedly show cluster bombs being mounted on aircraft or helicopter, or else on the tarmac of Libyan airbases, indicating that cluster munitions have been used on multiple occasions in those three years.⁴ According to the Monitor, further evidence of cluster munition use may have gone unrecorded due to a lack of media and independent reporting from the ground, and the Monitor was unable to independently verify and confirm this evidence of possible use.⁵

According to the Libyan Mine Action Centre (LibMAC), cluster munition contamination in Libya has been largely removed and remaining contamination is limited to a small number of areas.⁶ As at March 2019, Humanity and Inclusion (HI) reported being aware of three areas of CMR contamination, through its own operations. One cluster munition-contaminated area was confirmed in 2017, through non-technical survey in the Nafusa mountains region, near the town of Kikla, in north-west Libya. Then, in 2018–19, further cluster munition strikes were also discovered in Tawerga and Al Karareem.⁷

Most recently, LibMAC confirmed it had evidence of RBK-250-275 cluster bomb use in three areas: Al-Hira Bridge (Al-Sawani); the Bir al-Ghanam area south-west of Tripoli (Nafusa Mountains); and Aziziya (south of Tripoli).⁸

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Libya is also contaminated by other unexploded ordnance (UXO), anti-personnel mines including those of an improvised nature (see Mine Action Review's *Clearing the Mines* report on Libya for further information), and by other improvised explosive devices (IEDs).⁹ According to the United Nations Mine Action Service (UNMAS), ongoing conflict has resulted in significant explosive remnants of war (ERW) contamination in cities across Libya.¹⁰

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Mine action exists in a fragmented and violent political context. Following years of armed conflict, a new United Nations-backed “unity” government, the Government of National Accord, was formally installed in a naval base in Tripoli in early 2016. It has subsequently faced opposition from two rival governments and a host of militia forces. In April 2019, Khalifa Haftar, a military commander based in the west of the country, launched an offensive to take control of Tripoli and topple the Government of National Accord. As at May 2019, the offensive was ongoing, with combat in part of the city.¹¹

The LibMAC was mandated by the Minister of Defense to coordinate mine action in December 2011.¹² As at May 2019, it was operating under the UN-backed Government of National Accord. LibMAC’s headquarters are in Tripoli, in the west of the country, and it also has offices in Benghazi¹³ and Misrata.¹⁴ The operating costs and salaries for the LibMAC are funded by the United States Department of State and administered by ITF Enhancing Human Security (ITF).¹⁵

GENDER

LibMAC is not thought to have a gender policy for mine action in place.

HI reported that it has a gender policy in place and that it planned to elaborate an implementation plan in 2019.¹⁶ It also reported that it disaggregates data by sex and age. HI’s risk education team, who also act in a community liaison role, is gender balanced. While two of its project managers and two project officers are female, HI reported that unfortunately women are not currently employed in survey and clearance, as it is deemed culturally unacceptable for now.¹⁷

INFORMATION MANAGEMENT AND REPORTING

LibMAC receives technical support for the Information Management System for Mine Action (IMSMA) from the Geneva Centre for Humanitarian Demining (GICHD) and UNMAS. In March 2019, HI reported that LibMAC had recently announced details of a new effort to make IMSMA up-to-date and reliable.¹⁸ IMSMA is accessible to clearance organisations and data collection forms are reported to be consistent and enable collection of necessary data.¹⁹

PLANNING AND TASKING

There is no national mine action strategy for Libya.

LibMAC does, however, prioritise survey and clearance operations and is responsible for issuing task orders. Prioritisation is, in part, informed by data collected and reported to LibMAC by operators such as the Danish Demining Group (DDG), during non-technical survey or explosive ordnance disposal (EOD), and by reports from the local community.²⁰ According to an international clearance operator, LibMAC generally task according to geographic area and the nearest available assets.²¹

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

There is no national mine action legislation in Libya, but National Mine Action Standards (LibMAS), in Arabic and English, have been elaborated with the support of the GICHD and UNMAS, and were approved by the Government of National Accord in August 2017. The LibMAS are available on the LibMAC website.²² According to an international clearance operator, the national mine action standards are aligned to the International Mine Action Standards (IMAS).²³

HI has updated its standing operating procedures (SOPs) for Libya in line with the NMAS.²⁴

OPERATORS

Mine action operations have been conducted by the army engineers, a police unit, and the Ministry of Interior’s National Safety Authority (NSA), also known as Civil Defence.²⁵ The NSA is mandated to conduct EOD in civilian areas.²⁶ These institutions liaise with LibMAC but are not tasked or accredited by them, nor do they provide clearance reports to the Centre.

The deteriorating security situation resulted in the withdrawal of UNMAS and international mine action operators from Libya in mid 2014. As at February 2019, international clearance operators active in Libya included DanChurchAid (DCA), DDG, HALO Trust, HI, and GCS.²⁷ National NGO operator, Free Fields Foundation (3F), was also operational and another national operator, the Libyan Demining Group (LDG) was in the process of becoming established as at February 2019.²⁸ Local organisations, Peace Organization from Zintan, and World Without War (3W) from Misrata, who has previously been trained by HI in 2016 and received accreditation for non-technical survey,²⁹ subsequently had their operations suspended for not fully following standards and in addition, neither organisation had secured funding.³⁰

UNMAS has been operating from Tunis since November 2014, from where it provides institutional and operational capacity-building, training, including in EOD, and support and advice to LibMAC, including in establishing processes for the accreditation and activities of mine action actors in Libya.³¹ Despite the relocation of the programme to Tunisia due to poor security in 2014, UNMAS Libya continues to coordinate with national authorities and implementing partners and

to carry out mine action activities and provide technical advice and advisory support on arms and ammunition management. The UNMAS Libya Programme is an integral part of the UN Support Mission in Libya (UNSMIL).³²

Since 2015, UNMAS has trained more than 70 Civil Defence operators and Military Engineers in advanced EOD, 30 officers from eastern Libya in non-technical survey, and provided advanced medical first-responder training to 72 EOD operators from Benghazi and several operators addressing the threat from explosive ordnance in Sirte.³³ Military engineers reportedly lack mine detectors and are working with basic tools.³⁴

DCA is operational in Libya clearing ERW and providing risk education. Now in its eighth year of working in Libya, DCA has offices in Benghazi, Misrata, and Tripoli.³⁵

DDG set up its Libya mine action programme remotely from Tunisia in 2014, but in early 2017 it relocated to Libya. DDG is operational in three areas of Libya: Benghazi, in the east of the country; Sabha, in the south-west; and Tripoli, in the west.³⁶ DDG set up in Benghazi in December 2017 and spent the first quarter of 2018 obtaining accreditation and putting in place necessary policies and procedures before becoming operational. DDG hoped to expand non-technical survey and EOD capacity in Benghazi from the late summer of 2018. In Sabha, DDG had one non-technical survey team and one EOD team, which it was managing remotely. Security issues in the south continue to disrupt mine action operations and prevent continuous operations. In Tripoli, DDG works through its national implementing partner, 3F. 3F operates under DDG's accreditation and SOPs, and has an operational personnel of 37, composed in three EOD teams and one non-technical survey team.³⁷

GCS is working in partnership with Libyan NGO, 3F, to clear ERW from an ammunition storage area on a military airbase in Misrata. The area comprises 37 bunkers destroyed by NATO airstrikes in 2011.³⁸

The HALO Trust has been present in Libya since November 2018, and as at June 2019, had offices in Misrata and Sirte, in addition to a small administrative office in Tripoli. The HALO Trust is working in partnership with DCA in Sirte, with HALO leading on mechanical clearance and DCA providing the supporting EOD capacity, along with a joint non-technical survey team and mine risk education (MRE) team. HALO Trust and DCA have conducted a socio-economic assessment of Sirte and a field assessment for areas of possible mine and ERW contamination which potentially require mechanical clearance.³⁹

As at June 2019, HALO Trust was in the process of armouring two machines for mechanical clearance and was set to begin training of two mechanical teams and one non-technical survey team. Ongoing conflict in Tripoli and delays in registration prevented HALO from becoming operational in June, as planned, but HALO expected to begin clearance activities over the summer. HALO also planned to begin training of a further two mechanical teams later in 2019; to introduce additional technical assets; and to work with LibMAC to expand operations to other parts of Libya and to conduct all humanitarian mine action activities, including manual clearance and battle area clearance (BAC).⁴⁰

As at March 2019, HI's main office for Libya was in Tripoli, with operational offices in Misrata and Benghazi, and an administrative base being maintained by HI in Tunis.⁴¹ In 2018, HI deployed six manual clearance personnel in Libya, and an existing EOD team planned to also conduct non-technical survey in 2019.⁴² As at March 2019, HI was operational in Benghazi, Misrata, and Tripoli, but security issues had temporarily hindered its 2019 operations in Tawerga, in Misrata, forcing teams to deploy elsewhere.⁴³ As at March 2019, HI had no implementing partners in mine action in Libya.⁴⁴

A number of other Libyan civil society organisations are also reported to carry out mine action operations, but they are not accredited by LibMAC.

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

HI reported clearing 4,151m² of CMR in an area in Tawerga, in Misrata in 2018. There were no other known reports of CMR clearance during 2018, although data from LibMAC and other clearance operators was not made available. No CMR-contaminated area was reported to have been released by survey in 2018, but HI reported that a total of 110,430m² was confirmed as CMR-contaminated.⁴⁵

SURVEY IN 2018

HI reported that a total of 110,430m² was confirmed as CMR-contaminated in 2018, which it reported to LibMAC.⁴⁶

CLEARANCE IN 2018

HI reported clearing 4,151m² of CMR contamination, in an area in Tawerga, in Misrata in 2018, during which 11 submunitions were destroyed.⁴⁷

PROGRESS TOWARDS COMPLETION

LibMAC describes the following challenges to implementation of mine action operations: the high level of contamination; ongoing conflict, and the continued presence of Islamic State; the difficulty in convincing internally displaced persons to delay their return until the ERW threat is addressed; security and access to priority areas; the limited ERW and EOD capacity in Libya; the vast geographical area; and the shortfall in governmental and international support.⁴⁸ Security conditions continued to pose a challenge to mine action in Libya.

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- 4 Cluster Munition Monitor, "Libya: Cluster Munition Ban Policy", last updated 2 August 2018, at: <https://bit.ly/2Vrflm>.
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- 6 Interview with Col. Turjoman, Director, LibMAC, in Geneva, 7 February 2019.
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- 8 Email from Adel Elatwi, Chief of Operations, on behalf of Col. Turjoman, LibMAC, 4 July 2019.
- 9 "Lives and Limbs Shattered by Libya Mines", *Asharq Al-Awsat*, 5 April 2018.
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- 14 Email from Roman Turšič, Head of Implementation Office Libya/Afghanistan, ITF, 26 February 2017; and interview with Col. Turjoman, LibMAC, in Geneva, 10 January 2017.
- 15 Email from Roman Turšič, ITF, 26 February 2017.
- 16 Email from Catherine Smith, HI, 12 March 2019.
- 17 Ibid.
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- 19 Ibid.
- 20 Telephone interview with Darren Devlin, Programme Manager Libya, DDG, 20 June 2018; and email, 4 July 2018.
- 21 Email from Catherine Smith, HI, 12 March 2019.
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- 23 Email from Catherine Smith, HI, 12 March 2019.
- 24 Ibid.
- 25 Interview with Col. Turjoman, LibMAC, in Geneva, 10 January 2017.
- 26 Email from Diek Engelbrecht, UNMAS Libya, 20 July 2013.
- 27 Interview with Col. Turjoman, LibMAC, in Geneva, 7 February 2019.
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- 30 Interview with Col. Turjoman, LibMAC, in Geneva, 7 February 2019.
- 31 UNMAS, "Programmes: Libya", accessed 16 May 2019, at: <https://bit.ly/2WMTzTk>; and emails from Lyuba Guerassimova, Programme Officer, UNMAS, 28 February 2017 and Dandan Xu, Associate Programme Management Officer, UNMAS, 12 July 2017; and Report of the Secretary-General on the United Nations Support Mission in Libya, UN Doc. S/2018/140, 12 February 2018, p. 12.
- 32 Email from Jakob Donatz, UNMAS, 21 June 2018.
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- 34 "Mine still claim legs and lives in Libya's Benghazi, months after war ceased", *Reuters*, 21 January 2018.
- 35 DCA website, accessed 16 May 2019, at: <https://bit.ly/2vYatmb>.
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- 37 Ibid.
- 38 GCS website, "GCS successfully collects 200 tons of explosive remnants of war in Libya", accessed 16 May 2019, at: <https://gcs.ch/libya>.
- 39 Email from Liam Chivers, Programme Manager, HALO Trust, 10 June 2019.
- 40 Ibid.
- 41 Emails from Catherine Smith, HI, 12 March and 11 June 2019.
- 42 Email from Catherine Smith, HI, 12 March 2019.
- 43 Emails from Catherine Smith, HI, 12 March and 11 June 2019.
- 44 Email from Catherine Smith, HI, 12 March 2019.
- 45 Ibid.
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- 47 Ibid.
- 48 PowerPoint presentation by Col. Turjoman, LibMAC, at the UN National Programme Director's Meeting, Geneva, 8 February 2017.

RECOMMENDATIONS FOR ACTION

- Serbia should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Serbia should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Serbia should identify additional funding, including from national and international sources, for the survey and clearance of cluster munition-contaminated areas.
- Serbia should consider using its armed forces to conduct clearance of CMR as they are already clearing other unexploded ordnance (UXO).
- SMAC should conduct non-technical and technical survey, rather than full clearance, in instances where survey represents the most efficient means to release part or all of areas suspected or confirmed to contain CMR.

CLUSTER MUNITION REMNANT CONTAMINATION

At the end of 2018, Serbia had five areas confirmed to contain CMR covering almost 0.64km², while a further nine areas over almost 1.9km² were suspected to contain CMR (see Table 1).¹ This remained unchanged from the CMR contamination baseline reported as at the end of 2017,² as no CMR survey of clearance took place in Serbia during 2018.³

CMR result from North Atlantic Treaty Organization (NATO) air strikes in 1999. According to Serbia, cluster munitions struck 16 municipalities: Brus, Bujanovac, Čačak, Gadžin Han, Knić, Kraljevo, Kuršumljija, Niš City-Municipality of Crveni Krst Niš City-Municipality of Medijana, Preševo, Raška, Sjenica, Sopot, Stara Pazova, Tutin, and Vladimirci.⁴

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Serbia is also contaminated by other UXO, including aircraft bombs, both on land and in its internal waterways, and by anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Serbia for further information).⁵

Table 1: CMR contamination by municipality (at end 2018)⁶

Municipality	Village	CHAs	Area (m ²)	SHAs	Area (m ²)
Bujanovac	Borovac	2	210,881	1	281,169
Niš	Medoševac	0	0	1	119,344
Raška	Lisina	0	0	1	190,359
Sjenica	Čedovo	2	89,450	2	74,474
Sjenica	Vapa	1	338,416	2	94,496
Tutin	Istočni Mojstir	0	0	1	514,682
Užice	Bioska	0	0	1	585,268
Totals		5	638,747	9	1,859,792

CHAs = confirmed hazardous areas SHAs = suspected hazardous areas

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

According to a Government Decree on Protection against Unexploded Ordnance, the Sector for Emergency Management, under the Ministry of Interior, acts as the national mine action authority (NMAA).⁷ The NMAA is responsible for developing standard operating procedures (SOPs); accrediting demining operators; and supervising the work of the Serbian Mine Action Centre (SMAC).⁸

SMAC was established on 7 March 2002, with a 2004 law making it responsible for coordinating demining; collecting and managing mine action information (including casualty data); and surveying suspected hazardous areas (SHAs). It also has a mandate to plan demining projects, conduct quality control (QC) and monitor operations, ensure implementation of international standards, and conduct risk education.⁹ As from 1 January 2014, according to a Government Decree on Protection against Unexploded Ordnance, the Sector for Emergency Management, under the Ministry of Interior, is responsible for accrediting demining operators. Previously, the SMAC was responsible for doing so.¹⁰

A new director of SMAC was appointed by the Serbian government in the autumn of 2015,¹¹ and as at 2018, SMAC had a total of eight staff.¹² SMAC reported that, in 2016, restructuring resulted in a greater proportion of operational posts.¹³

SMAC is fully funded by Serbia, including staff costs and running costs, as well as survey activities, development of project tasks for demining/clearance of areas contaminated by mines, submunitions and other UXO, follow-up on implementation of project tasks, and quality assurance (QA) and QC of demining.¹⁴ Around €150,000 per year is allocated to the work of SMAC from the national state budget.¹⁵ In addition, the UXO disposal work of the Sector for Emergency Situations of the Ministry of Interior is also state funded.¹⁶

Since 2015, Serbia has also been allocating national funds for survey and clearance, with roughly €100,000 allocated per year.¹⁷ In 2018, the Serbian Government allocated double the amount of funds for demining operations to €200,000 allocated per year, and it continues to seek international funding.¹⁸ However, for the time being, and due to funding restraints, SMAC will continue to prioritise its national funding to mine survey and clearance, rather than CMR, to contribute towards meeting its obligations under Article 5 of the Anti-Personnel Mine Ban Convention (APMBC).

GENDER

SMAC does not have a gender policy in place and does not disaggregate relevant mine action data by sex and age. However, it does ensure women and children are consulted during survey and community liaison activities and there is equal access to employment for qualified women and men in survey and clearance operations. Around 10% of those employed in survey and clearance teams, and also of those in mine action managerial or supervisory positions in Serbia, are women.¹⁹

INFORMATION MANAGEMENT AND REPORTING

SMAC does not use the Information Management System for Mine Action (IMSMA) at present, but had been discussing for some time the possibility of the system's future installation with the Geneva International Centre for Humanitarian Demining (GICHD).²⁰ There had been no further developments in that regard as at March 2019.²¹

PLANNING AND TASKING

The Government of Serbia adopts SMAC's workplan, as well as the Annual Report on its work.²² While SMAC had prepared/planned several CMR and UXO clearance projects for 2018, these could not be implemented due to lack of funding.²³

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

According to SMAC, survey and clearance operations in Serbia are conducted in accordance with the International Mine Action Standards (IMAS).²⁴

National mine action standards (NMAS) were said to be in the final phase of development as at September 2015.²⁵ In April 2017, SMAC reported that, along with the relevant national authorities, it was in the process of establishing a commission to develop national standards and SOPs to define methods and techniques for demining in Serbia.²⁶ However, this process has been hindered due to lack of capacity,²⁷ and as at March 2019, the development of the NMAS was still "in progress".²⁸

Under new directorship, SMAC has reassessed its land release methodology to prioritise full clearance over technical survey of hazardous areas.²⁹ This does not correspond to international best practice, and is an inefficient use of scarce clearance assets. In February 2016, the new director of SMAC reported to Mine Action Review that while SMAC supports the use of high quality non-technical survey to identify areas suspected of containing CMR, it will fully clear these areas, rather than using technical survey to more accurately identify the boundaries of contamination.³⁰

SMAC's position on its preferred land release methodology remains the same, although there is now a willingness to conduct technical survey, in a form "adjusted to the context of Serbia", in response to the stated preference of international donors for technical survey above clearance, where appropriate.³¹ The reduction of mined area through technical survey in the municipality of Bujanovac in 2017³² and in 2018³³ demonstrates SMAC's renewed willingness to adopt more efficient land release practices.

OPERATORS

SMAC does not itself carry out clearance or employ deminers but does conduct survey of areas suspected to contain mines, CMR, or other explosive remnants of war (ERW). Clearance is conducted by commercial companies and non-governmental organisations (NGOs), which are selected through public tender procedures executed by ITF Enhancing Human Security (ITF), supported by international funding.³⁴

The Ministry of Interior issues accreditation to mine action operators that is valid for one year. In 2018, 14 companies/organisations were accredited for demining: seven from Serbia, four from Bosnia and Herzegovina, two from Croatia, and one from Russia.³⁵

An explosive ordnance disposal (EOD) department within the Sector for Emergency Management, in the Ministry of Interior, responds to call-outs for individual items of ERW discovered, and is also responsible for the demolition of items found by SMAC.³⁶

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

No CMR-contaminated area was released by survey or clearance in 2018.³⁷

SURVEY IN 2018

No CMR-contaminated area was released by survey in 2018,³⁸ or in 2017.³⁹

CLEARANCE IN 2018

No CMR-contaminated area was released by clearance in 2018.⁴⁰ This is a reduction compared to 2017 when almost 0.18km² of CMR-contaminated area was cleared.⁴¹

SMAC did not have available data on the number or type of individual items of ERW destroyed by the EOD department within the Sector for Emergency Management during spot tasks in 2018.⁴²

PROGRESS TOWARDS COMPLETION

In 2010–13, significant progress was made in clearing CMR-contaminated areas, but since then progress has stalled. Less than 1km² in total has been cleared in the last five years (see Table 2), and no CMR clearance was conducted in 2018, which is ascribed to a lack of funding.⁴³

Table 2: Five-year summary of CMR clearance (2014–18)⁴⁴

Year	Area cleared (km ²)
2018	0.00
2017	0.18
2016	0.25
2015	0.18
2014	0.29
Total	0.90

With regards to CMR clearance operations in Serbia in 2019, as at March 2019, four clearance projects developed by SMAC, and totalling 742,615m², had been submitted to ITF for the selection of a contractor through its tender procedures. Of these four projects, two were to be implemented in Sjenica (totalling 432,912m²), one in Niš (119,344m²), and one in Raška (190.359m²), with funding from the Republic of Korea, Serbia, and the United States.⁴⁵

In the draft of its latest APMB Article 5 deadline extension request, dated 31 March 2018, Serbia includes a workplan for completion of all ERW clearance by 2023, at a predicted total cost of €20 million. CMR are not disaggregated from other ERW.⁴⁶ Progress in CMR clearance is said to be contingent on funding. Serbia predicts that if adequate funds for implementation of survey and clearance projects were secured, CMR clearance could be finished in three years.⁴⁷

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- 3 Email from Slađana Košutić, SMAC, 6 March 2019.
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- 11 Interview with Jovica Simonović, Director, SMAC, in Geneva, 18 February 2016.
- 12 Second APMBC Article 5 deadline Extension Request (2018), p. 16.
- 13 Ibid.; p. 10.
- 14 SMAC, "About us", accessed 3 June 2016; and Second APMBC Article 5 deadline Extension Request (2018), p. 16.
- 15 SMAC, "About us", accessed 3 June 2016; Second APMBC Article 5 deadline (2018), p. 16.; and email from Slađana Košutić, SMAC, 26 March 2019.
- 16 SMAC, "Mine situation", accessed 8 May 2019, at: <https://bit.ly/1Nom1V7>.
- 17 Email from Slađana Košutić, SMAC, 6 April 2017; interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017; and Second APMBC Article 5 deadline Extension Request (2018).
- 18 Second APMBC Article 5 Extension Request (2018), p. 9; and email from Slađana Košutić, SMAC, 26 March 2019.
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- 20 Email from Branislav Jovanović, (then) Director, SMAC, 4 May 2015.
- 21 Email from Slađana Košutić, SMAC, 26 March 2019.
- 22 Second APMBC Article 5 deadline Extension Request (2018), p. 16; and email from Slađana Košutić, SMAC, 26 March 2019.
- 23 Second APMBC Article 5 deadline Extension Request (2018), p. 33; and email from Slađana Košutić, SMAC, 6 March 2019.
- 24 SMAC, "Mine Situation", accessed 8 May 2019, at: <https://bit.ly/1Nom1V7>.
- 25 Interview with Branislav Jovanović, SMAC, in Dubrovnik, 10 September 2015.
- 26 Email from Slađana Košutić, SMAC, 6 April 2017.
- 27 Interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017.
- 28 Email from Slađana Košutić, SMAC, 26 March 2019.
- 29 Interview with Jovica Simonović, SMAC, in Geneva, 18 February 2016.
- 30 Ibid.
- 31 Interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017; email from Slađana Košutić, SMAC, 12 April 2018; and Second APMBC Article 5 deadline Extension Request (2018), p. 30.
- 32 Email from Slađana Košutić, SMAC, 12 April 2018.
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- 34 Second APMBC Article 5 deadline Extension Request (2018), p. 18.
- 35 Ibid., p. 17.
- 36 Interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017; and Second APMBC Article 5 deadline Extension Request (2018), p. 18.
- 37 Email from Slađana Košutić, SMAC, 6 March 2019.
- 38 Ibid.
- 39 Email from Slađana Košutić, SMAC, 12 April 2018.
- 40 Email from Slađana Košutić, SMAC, 6 March 2019.
- 41 Email from Slađana Košutić, SMAC, 12 April 2018.
- 42 Email from Slađana Košutić, SMAC, 26 March 2019.
- 43 Email from Slađana Košutić, SMAC, 6 March 2019.
- 44 Data from Mine Action Review and Cluster Munition Monitor reports on Serbia covering 2014–18.
- 45 Email from Slađana Košutić, SMAC, 26 March 2019.
- 46 Second APMBC Article 5 Extension Request (2018), p. 33.
- 47 Email from Slađana Košutić, SMAC, 12 April 2018.

RECOMMENDATIONS FOR ACTION

- South Sudan should accede to the Convention on Cluster Munitions (CCM) in line with the decision taken by the Council of Ministers announced in September 2017.
- South Sudan should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Mine action data should be recorded and reported according to International Mine Action Standards (IMAS) land release terminology, and the national database and reporting formats should clearly reflect CMR disaggregated from other explosive remnants of war (ERW) or generic “hazardous areas”.
- South Sudan should develop a resource mobilisation strategy and initiate dialogue with development partners on long-term support for mine action, including a specific focus on CMR.
- With a much clearer picture of the remaining threat, South Sudan should set concrete, realistic, and ambitious targets for completing clearance of CMR. It should report transparently on progress in addressing CMR contamination and consider adjusting its mine action strategy and annual workplans accordingly.
- South Sudan should consider revising requirements for survey of areas of CMR contamination in its national mine action standards, with the aim of ensuring that more accurate estimates of CMR-contaminated areas are recorded in the future.
- South Sudan should increase its financial support for mine action operations. Greater assistance from the government and international partners should be provided to the National Mine Action Authority (NMAA) to strengthen its capacity to develop and implement effective policies to address explosive ordnance.
- The mandate of the United Nations Mission in South Sudan (UNMISS) should be changed to mandate support for the capacity development of government institutions and the national mine action programme.

CLUSTER MUNITION REMNANT CONTAMINATION

At the end of 2018, South Sudan had a total of 123 areas suspected and confirmed to contain CMR, with the total size of contamination estimated at just over 5.3km².¹ This is a decrease on the total of 143 areas suspected and confirmed to contain CMR at the end of 2017, but an increase of cluster munition-contaminated area from just over 4.5km² as a result of revisions to contamination data in the national mine action database.²

South Sudan’s national mine action programme has made great strides in improving the accuracy of its estimates of contamination from landmines, CMR, and other ERW in 2018. A comprehensive overhaul of its mine action database was carried out during the year, along with a focus on re-survey of contaminated areas. Combined with better access for mine action operations as a result of an improvement in security conditions in certain areas, this resulted in a much clearer picture of remaining contamination, and one that is much more achievable to address. The total estimate of mine, CMR, and other ERW contamination remaining in the country decreased by more than half, from nearly 89km² reported at the start of 2018, to 39.4km² at the end of the year.³

A review of the existing records in the database and re-survey resulted in three primary and significant changes with regard to CMR contamination: a number of existing task records which had been wrongly recorded were re-classified as CMR-contaminated areas; several overly conservative estimates of existing confirmed hazardous areas (CHAs) recorded in the database were enlarged to better reflect actual contamination; and previously unrecorded areas containing CMR were added to the database.⁴

The year 2018 was also a bumper one for CMR clearance, with a five-fold increase to more than 5km² along with the destruction of nearly 3,600 submunitions, leading the UN Mine Action Service (UNMAS) to estimate that the remaining CMR contamination in South Sudan could be fully addressed in just two to three years at the current pace of clearance, as long as sufficient funding was ensured and the security situation continued to improve.⁵

A total of 17 tasks containing CMR contamination which were wrongly classified as areas of UXO contamination were re-classified in the database as CMR-contaminated area, which resulted in the addition of 1,745,322m² of CMR contamination to the total estimate. During the database review, 38 confirmed CMR-contaminated areas were expanded by a total of 4.87km², as a result of increasing evidence that previous survey reports had tended to underestimate the size of CMR clearance tasks. A further 25 previously unrecorded areas confirmed or suspected to contain CMR contamination were also added to the database in 2018 (see Tables 2(i), 2(ii), 2(iii)).⁶

The ongoing fighting which broke out in December 2013 has been the main challenge to CMR clearance.⁷ While no areas of new contamination from CMR as a result of recent conflict were identified in 2018, areas of CMR

contamination from decades of pre-independence conflict continued to be identified in 2018.⁸ The signature of the Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS) in September 2018 contributed to increased access for mine action operations. However, a number of areas of the country, particularly the Greater Upper Nile and Equatoria regions, have yet to be comprehensively surveyed due to ongoing insecurity and additional contamination will likely be recorded in these areas.⁹

Seven of South Sudan's former ten states have areas suspected to contain CMR (see Table 1), with Central and Eastern Equatoria remaining the most heavily contaminated.¹⁰ From 1995 to 2000, prior to South Sudan's independence, Sudanese government forces are believed to have air dropped cluster munitions sporadically in southern Sudan.

Table 1: CMR contamination by state in South Sudan (at end 2018)¹¹

State	CHAs	Area (m ²)	SHAs	Area (m ²)
Central Equatoria	35	1,318,411	4	532,126
Eastern Equatoria	50	2,577,461	9	590,109
Jonglei	5	160,851	2	*
Unity	1	10,000	0	0
Upper Nile	2	6,920	0	0
West Bahr El Ghazal	2	35,890	0	0
Western Equatoria	12	96,021	1	*
Totals	107	4,205,554	16	1,122,235

SHA = Suspected hazardous area * No area was associated with the reported SHA

Table 2(i): Existing areas reclassified from battle area to CMR-contaminated area¹²

State	CHA	Area (m ²)	SHA	Area (m ²)
Central Equatoria	5	343,140	0	0
Eastern Equatoria	5	1,129,788	3	187,442
Jonglei	1	60,958	1	*
Western Equatoria	2	23,994	0	0
Totals	13	1,557,880	4	187,442

* No area was associated with this report.

Table 2(ii): Area added through extensions to existing CHAs with CMR¹³

State	Extended CHAs	Area (m ²)
Central Equatoria	8	1,164,252
Eastern Equatoria	12	1,077,140
Jonglei	4	379,868
Lakes	1	41,100
Unity	0	591,355
Upper Nile	1	6,929
Western Bahr El Ghazal	2	277,290
Western Equatoria	10	1,329,672
Totals	38	4,867,606

Table 2(iii): Newly recorded hazardous areas contaminated by CMR¹⁴

State	CHAs	Area (m ²)	SHAs	Area (m ²)
Central Equatoria	9	567,257	2	111,688
Eastern Equatoria	5	344,542		
Jonglei	3	53,037		
Unity	1	10,000		
Upper Nile	1	22,600		
Western Bahr El Ghazal	3	54,000		
Western Equatoria	1	10,000		
Totals	*23	1,061,436	*2	111,688

* According to UNMAS, 10 of the 23 newly discovered hazards were within 500 metres of an existing hazard and could be considered as extensions of known contamination.

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

South Sudan has a significant problem with mines and especially ERW, resulting from large-scale use of explosive weapons during armed conflicts in 1955–72 and 1983–2005 (see Mine Action Review’s *Clearing the Mines* report on South Sudan for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The South Sudan Demining Authority (SSDA) – since renamed the NMAA – was established by presidential decree in 2006 to act as the national agency for planning, coordination, and monitoring of mine action in South Sudan.¹⁵ There is no national mine action legislation in South Sudan.¹⁶

In 2011, UN Security Council Resolution 1996 tasked UNMAS with supporting South Sudan in demining and strengthening the capacity of the NMAA. UNMAS (with the NMAA) has been overseeing mine action across the country through its main office in Juba, and sub-offices in Bentiu, Bor, Malakal, and Wau. UNMAS is responsible for accrediting mine action organisations, drafting national mine action standards, establishing a quality management system, managing the national database, and tasking operators.¹⁷

While it is planned that eventually the NMAA will assume full responsibility for all mine action activities, according to UNMAS, the NMAA continued to face serious financial and technical limitations preventing it from managing mine action operations effectively in 2018. It requires substantial resources and capacity building assistance if it is to operate effectively.¹⁸

UN Security Council Resolution 1996 authorised UNMISS to support mine action through assessed peacekeeping funds.¹⁹ In May 2014, UN Security Council Resolution 2155, adopted in response to the conflict that broke out in December 2013, effectively ended the mission’s mandate to support capacity development of government institutions. In 2018, UNMAS reported that reversing this change in the mission mandate to support the capacity building of government institutions would greatly enhance UNMAS’ ability to support the NMAA.²⁰

In 2018, the Government of South Sudan funded the costs of NMAA staff salaries and its sub-offices across the country. It did not, however, provide any funding for the conduct of survey or clearance.²¹ UNMAS has reported that the Government of South Sudan is only able to provide minimal funding and support to all national institutions, including the NMAA. It has raised concerns over resource mobilisation in the face of overwhelming donor fatigue and frustration due to the ongoing conflict, which continues to exacerbate the humanitarian crisis. Mine action, which is a critical enabler for humanitarian assistance, has not been prioritised by donors, who have been increasingly unwilling to support Government institutions until a peace agreement is implemented.²²

Positively, UNMAS reported that as part of South Sudan’s preparations to request an extension to its Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline, a centrally led effort to mobilise additional resources for mine action was underway in 2019.²³

GENDER

South Sudan's second national mine action strategy for 2018–22 includes a section on gender, focusing on how different gender and age groups are affected by mines and ERW and have specific and varying needs and priorities. Guidelines on mainstreaming gender considerations in mine action planning and operations in South Sudan are also incorporated in the strategy, including on the collection of data disaggregated by sex and age.²⁴ UNMAS reported that the programme was also implementing the UN Gender Guidelines for Mine Action, monitored by a gender focal point.²⁵

South Sudan's National Technical Standards and Guidelines (NTSG) contain provisions requiring all community liaison teams to tailor activities on the basis of the gendered needs of beneficiaries, and to address the specific risks faced by women and girls.²⁶ All teams are reportedly gender balanced in composition and trained to be inclusive, for example by ensuring outreach through non-technical survey and risk education is done separately for different age and gender groups, and taking local cultural practices into consideration.²⁷

At the same time, UNMAS reported that task prioritisation in 2018 was predominantly dependent on security considerations and that resources were concentrated on tasks within limited geographical areas

rather than on the basis of gender needs.²⁸ It claimed there was equal access in employment opportunities for qualified men and women in survey and clearance teams across the organisations operating in South Sudan, but reported that in 2018 16% of staff in operational roles such as deminers and community liaison officers were women, while women accounted for 11% of all staff in managerial or supervisory positions across the five operators conducting mine action operations in South Sudan in 2018.²⁹

Mines Advisory Group (MAG) reported that in 2018, a basic demining training course was offered to 20 interested women with no previous demining experience, in an effort to increase the number of potentially qualified women applicants for operational demining positions. It reported that since the training, 16 of the women had been hired for MAG operational teams. As at April 2019, MAG stated that all of its seven clearance teams included women deminers, including a number of women previously employed as cooks or community liaison officers who had participated in the demining training course and were subsequently offered operational positions.³⁰ MAG reported that in 2018, a total of 33% of deminers employed were female, along with 20% of all operational staff, and 54% of community liaison staff members.³¹

INFORMATION MANAGEMENT AND REPORTING

As noted above, a comprehensive review of all data in South Sudan's Information Management System for Mine Action (IMSMA) database was carried out in 2018, along with re-survey of recorded suspected and confirmed hazardous areas thought to be exaggerated or erroneously recorded. These activities resulted

in significant gains in the understanding of CMR contamination. UNMAS informed Mine Action Review that, wherever possible, a distinction is made in the database between mined areas, cluster munition contamination, and other ERW-contaminated areas, including spot tasks.³²

PLANNING AND TASKING

South Sudan's most recent National Mine Action Strategy 2018–2022, developed with support from the Geneva International Centre for Humanitarian Demining (GICHD) and funded by Japan, was officially launched in September 2018.³³ According to UNMAS, the strategy, which does not contain significant provisions relating to CMR contamination, has three strategic goals with related targets:³⁴

Strategic Goal 1: Advocacy and communication of South Sudan's mine/ERW problem continues through national and international awareness raising and adoption and implementation of international conventions to facilitate a mine-/ERW-free South Sudan.

Strategic Goal 2: The size of the mine/ERW contamination area is clarified and confirmed and the problem is addressed through appropriate survey and clearance methods; ensuring safe land is handed back to affected communities for use.

Strategic Goal 3: Safe behaviour is promoted among women, girls, boys and men to reduce mine/ERW accidents and promote safe livelihood activities.

UNMAS reported that annual workplans for CMR survey and clearance are incorporated into UNMAS operational workplans, and the current plan for 2019–20 was under development as at May 2019.³⁵ Joint monthly meetings were convened by the NMAA with mine action operators throughout the year.³⁶

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

According to UNMAS, the NTSGs for mine action in South Sudan are subject to constant review by UNMAS and the NMAA. These standards and guidelines contain provisions specific to CMR survey and clearance.³⁷ In 2018, the NTSGs were amended in regard to the storage and transport of explosives and the conduct of explosive ordnance disposal (EOD) operations. There were no significant changes made with respect to CMR survey or clearance.³⁸

However, both UNMAS and MAG have reported that a significant number of initial survey reports of CMR-contaminated areas have underestimated the extent of the contamination. MAG reported that areas were often recorded based on the minimum amount of clearance that would be required to comply with the NTSGs, which require a 50 metre fade-out. In MAG's experience, however, the actual CMR-contaminated area has often proved to be significantly larger, making it difficult to accurately plan for the time and resources needed to address each task. MAG begins CMR clearance with the expectation that the task area will reach at least 60,000m² and at times has encountered CMR tasks that had to be expanded by more than 100,000m² compared to the original estimate. It further reported that the fade-out requirements of the NTSGs sometimes resulted in the handover of cleared land while simultaneously creating a new "hazardous area" comprising the fade-out distance.³⁹ UNMAS reported that often in a recorded strike area, multiple cluster munition canisters are found, with the consequence that the overall contaminated area extends well beyond an expected standard footprint.⁴⁰

UNMAS also reported that in 2018 a total of 16 areas suspected to contain CMR contamination with a total size of 221,897m² were cleared, which were not found to contain any CMR.⁴¹

UNMAS also noted that the NTSGs require all mine action teams to conduct regular internal quality assurance (QA), along with quality control (QC) sampling of 10% of each area cleared. UNMAS conducted additional external QA through visits to each CMR clearance task in 2018, as well as upon the completion of a clearance task.⁴²

OPERATORS

In 2018, UNMAS reported that 16 teams from 4 organisations conducted CMR survey and clearance tasks: two international demining non-governmental organisations (MAG and DanChurchAid (DCA)), and two commercial companies (G4S Ordnance Management (G4S) and The Development Initiative (TDI)). It estimated the number of operational personnel involved in CMR survey and clearance at 250 during the year.⁴³

MAG reported beginning operations in 2018 with seven clearance teams, which reduced to six at the end of the year. It employed 66 demining staff for cluster munition clearance with four multi-task teams conducting battle area clearance (BAC) on CMR-contaminated tasks at the end of 2018, while one EOD team also focused on CMR BAC during the year.⁴⁴ It deployed four machines to assist with ground preparation for BAC clearance. MAG reported using a mulcher attachment during 2018, which significantly reduced the time needed for vegetation cutting.⁴⁵

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

A total of almost 7km² of CMR-contaminated area was reported as released in 2018 through survey and clearance, or as part of cancellation in the database review carried out during the year.⁴⁶

SURVEY IN 2018

According to UNMAS, the total area of CMR-contamination released by non-technical and technical survey operations in the field in 2018 amounted to just under 157,700m². A total of two areas of 10,400m² of suspected CMR contamination were cancelled by non-technical survey in Jonglei state by G4S. A further 147,300m² of CMR contamination was reported to have been reduced by technical survey during the year.⁴⁷

In addition, a remarkable total of 1,690,850m² of suspected CMR-contaminated area across 26 areas in Central and Eastern Equatoria and Jonglei states was cancelled by UNMAS in a desk review of the remaining CMR-contaminated areas recorded in the IMSMA

database.⁴⁸ This compares with 2017, when one CMR-contaminated SHA of just under 61,000m² was reported to have been cancelled by survey.⁴⁹

Table 3: Reduction by technical survey in 2018⁵⁰

State	Operator	Area reduced (m ²)
Central Equatoria	G4S	17,286
Central Equatoria	MAG	400
Eastern Equatoria	TDI	1,912
Jonglei	TDI	3,183
Lakes	TDI	15,700
Unity	G4S	28,028
Western Bahr El Ghazal	G4S	55,425
Western Equatoria	G4S	25,355
Total		147,289

CLEARANCE IN 2018

In 2018, UNMAS reported a five-fold increase in the amount of CMR-contaminated area cleared, compared with the previous year. A total of over 5.1km² was cleared in 2018, with the destruction of more than 3,590 submunitions, compared to just over 1km² of CMR-contaminated area was cleared in 2017, with the destruction of 629 submunitions.⁵¹ UNMAS reported that the increase in clearance of CMR contamination in

2018 was due to significant improvements in the security situation across the majority of the country, which allowed many teams to deploy on CMR-contaminated tasks.⁵²

In addition, a total of 190 submunitions were reported as destroyed during clearance of mined areas, and 927 submunitions were destroyed through EOD spot tasks during the year.⁵³

Table 4: Clearance of CMR-contaminated areas in 2018⁵⁴

State	Operator	Tasks completed	Tasks not completed	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
Central Equatoria	G4S	13	7	1,242,548	1,172	56
	MAG	3	4	991,747	811	16
	G4S	1	1	46,994	130	1
Eastern Equatoria	TDI	6	6	233,558	53	17
	DCA	0	3	94,644	72	1
Jonglei	G4S	0	1	80,368	3	1
	TDI	0	1	184,216	281	1
Lakes	TDI	0	1	25,400	7	0
Unity	G4S	2	0	662,327	446	8
Upper Nile	TDI	0	1	22,600	0	0
Western Bahr El Ghazal	G4S	2	2	194,712	123	6
Western Equatoria	G4S	6	11	1,364,292	495	3
Totals		33	38	5,143,406	3,593	110

PROGRESS TOWARDS COMPLETION

South Sudan is not a state party to the CCM and therefore does not have a specific clearance deadline under Article 4. Nonetheless, South Sudan has obligations under international human rights law to clear CMR as soon as possible.

South Sudan has announced its intention to accede to the Convention on Cluster Munitions, which is also a specific objective in South Sudan's National Mine Action Strategic Plan 2018–2022.⁵⁵ In May 2019, UNMAS reported that documents relating to South Sudan's accession to the Convention were under review by the national parliament.⁵⁶

Previously, primarily due to the ongoing conflict, it was impossible to predict when South Sudan might complete clearance of CMR, nor even assess the true extent of contamination.⁵⁷ However, with improvements in the security situation, progress in land release of CMR-contaminated areas, and a comprehensive database review, in 2019, the situation in South Sudan began to look a lot more positive. According to an UNMAS assessment in April 2019, at current rates of clearance, completion of clearance of all remaining cluster munition strikes could be achieved in as little as two or three years.⁵⁸

The NMAA has reportedly stated that given the appropriate support and the necessary security conditions, the clearance of both landmine and cluster munition contamination could be completed by 2026.⁵⁹ However, this will be dependent on the establishment of peace and continued increase in humanitarian access throughout the country.⁶⁰

In 2019, a priority for clearance was the Juba to Nimule road, along which many displaced persons are expected to travel. UNMAS expected a total of close to 2km² of CMR contamination would be cleared over the course of the year.⁶¹

- 1 Email from Ayaka Amano, Associate Programme Officer, UNMAS, 2 May 2019.
- 2 Emails from Tim Lardner, Chief, Mine Action, UNMAS, 27 February and 1 March 2018.
- 3 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 4 Ibid.
- 5 Ibid.
- 6 Ibid; and email from Richard Boulter, Senior Programme Manager, UNMAS, 20 May 2019.
- 7 Ibid; and email from Katie Shaw, Programme Officer, MAG, 26 April 2019.
- 8 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018; and Robert Thompson, UNMAS, 19 April 2017; and UNMAS, "2017 Portfolio of Mine Action Projects: South Sudan", January 2017, at: bit.ly/2VJcHl.
- 9 UNMAS, "2019 Portfolio of Mine Action Projects: South Sudan".
- 10 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 11 Ibid.
- 12 Ibid.
- 13 Ibid.
- 14 Email from Richard Boulter, UNMAS, 30 May 2019.
- 15 "South Sudan De-Mining Authority", undated, at: <http://bit.ly/2Y5Eb4o>.
- 16 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 17 South Sudan, "South Sudan National Mine Action Strategic Plan 2012–2016", Juba, 2012, p. iv.
- 18 Emails from Richard Boulter, UNMAS, 30 May 2019; and Tim Lardner, UNMAS, 27 February and 1 March 2018.
- 19 UNMISS, "United Nations Mine Action Coordination Centre [UNMACC]", undated, at: <http://bit.ly/2YctHjl>.
- 20 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.
- 21 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 22 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.
- 23 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 24 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.
- 25 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 26 Ibid.
- 27 Ibid.
- 28 Ibid.
- 29 Ibid.
- 30 Email from Katie Shaw, MAG, 26 April 2019.
- 31 Email from Katie Shaw, MAG, 29 May 2019.
- 32 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 33 Ibid.
- 34 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018; and Richard Boulter, UNMAS, 6 June 2018.
- 35 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 36 Emails from Ayaka Amano, UNMAS, 2 May 2019; and Katie Shaw, MAG, 26 April 2019.
- 37 Email from Robert Thompson, UNMAS, 21 April 2016; and responses to questionnaires by Robert Thompson, UNMAS, 30 March 2015; and Augustino Seja, NPA, 11 May 2015.
- 38 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 39 Email from Katie Shaw, MAG, 26 April 2019.
- 40 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018. According to UNMAS, the number of cluster munition strikes recorded is thought to be accurate, but the size of the strike area is likely greater than currently recorded estimates.
- 41 Emails from Ayaka Amano, UNMAS, 2 May 2019; and Richard Boulter, UNMAS, 30 May 2019.
- 42 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 43 Ibid.
- 44 Email from Katie Shaw, MAG, 26 April 2019.
- 45 Ibid.
- 46 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 47 Ibid. It reported that another area suspected to contain CMR of unreported size was also cancelled by G4S in Western Equatoria state.
- 48 Email from Ayaka Amano, UNMAS, 2 May 2019. This included 8 areas with a size of 110,283m² in Central Equatoria, 15 areas with a size of 1,485,022m² in Eastern Equatoria, and 3 areas with a size of 95,545m² in Jonglei states.
- 49 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.
- 50 Emails from Ayaka Amano, UNMAS, 2 May 2019; and Katie Shaw, MAG, 26 April and 29 May 2019. MAG reported, however, that the 400m² reported by UNMAS as area reduced by technical survey in Central Equatoria was area cancelled by non-technical survey.
- 51 Emails from Ayaka Amano, UNMAS, 2 May 2019; Mohammad Kabir Rahimi, UNMAS, 18 June 2018; and Katie Shaw, MAG, 18 June 2018.
- 52 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 53 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 54 Emails from Ayaka Amano, UNMAS, 2 May 2019; and Katie Shaw, MAG, 26 April and 29 May 2019. MAG additionally reported that it conducted clearance of CMR contamination in Eastern Equatoria state during 2018, but task completion did not take place until 2019 and will be reflected in the report on clearance in 2019.
- 55 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.
- 56 Email from Ayaka Amano, UNMAS, 2 May 2019. On 5 September 2017, at the Seventh Meeting of States Parties of the CCM, South Sudan announced its attention to accede to the Convention, stating that its Council of Ministers had taken a decision unanimously on 25 August 2017 to "fully accede" and comply with the terms of the Convention. Statement of South Sudan, CCM 7th Meeting of States Parties, Geneva, 5 September 2017.
- 57 Ibid.; and response to questionnaire by Robert Thompson, UNMAS, 30 March 2015.
- 58 Email from Ayaka Amano, UNMAS, 2 May 2019.
- 59 Ibid.
- 60 Ibid.
- 61 Ibid.

RECOMMENDATIONS FOR ACTION

- Sudan should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Sudan should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Sudan should make every effort to address the last remaining area suspected to contain CMR as soon as possible.
- Sudan should report transparently and in detail on release of suspected or confirmed hazardous areas.
- Sudan should ensure that reporting disaggregates submunitions from other unexploded ordnance (UXO) and that mine action data is recorded and reported according to International Mine Action Standards (IMAS) land release terminology.

CLUSTER MUNITION REMNANT CONTAMINATION

As at May 2019, Sudan’s National Mine Action Centre (NMAC) informed Mine Action Review that only one area suspected to contain CMR contamination remained in Sudan.¹ In May 2019, NMAC reported that the area, with an unknown size in South Kordofan state, was located in an area not under government control.²

NMAC previously reported that at the end of 2017, a total of two areas suspected to contain CMR contamination remained to be addressed in Sudan, the area in South Kordofan and another in West Kordofan state.³ In June 2018, NMAC informed Mine Action Review that it had deployed a team to address the remaining hazardous area in West Kordofan state, located in Aghabish village, Lagawa locality, which it later reported was cancelled during the year as no evidence of cluster munition contamination was found.⁴

In June 2011, the UN Mine Action Office (UNMAO), which was overseeing mine action operations at the time, reported nine areas suspected to be contaminated with unexploded submunitions. UNMAO asserted that 81 areas had been released (see Table 1).⁵ There have also been reports of new use of cluster munitions as recently as 2015, as well as in 2012.⁶

Table 1: CMR-contaminated areas (at June 2011)⁷

State	Open	Closed	Total
Kassala	7	2	9
South Kordofan	2	68	70
Blue Nile	0	9	9
Northern Darfur	0	1	1
Southern Darfur	0	1	1
Totals	9	81	90

In 2017, NMAC, which assumed full national ownership for implementing mine action activities upon UNMAO’s closure in June 2011, reported that of the nine open areas reported by UNMAO in 2011, seven were cleared in 2011–13.⁸ In March 2018, NMAC informed Mine Action Review that the size of the seven areas cleared during this period totalled 15,318m² and that 13 PM-1 submunitions were found and destroyed during clearance.⁹ NMAC has not reported any survey or clearance of CMR since 2013. It stated that no new CMR contamination was recorded in 2016–18.¹⁰

In the 1990s, Sudanese government forces are believed to have sporadically air dropped cluster munitions in its civil war with the Sudan People's Liberation Movement/Army (SPLM/A). Government forces were reported as having used several types of cluster munitions, including Spanish-manufactured HESPIN 21; US-manufactured M42 and Mk118 (Rockeye), and a Brazilian copy; Chinese Type-81 dual-purpose improved conventional munitions (DPICM); Chilean-made PM-1; and Soviet-manufactured PTAB-1.5 and AO-1-Sch submunitions. In 2012 and 2015, use of cluster munitions was recorded in five separate attacks on villages in South Kordofan state. Each attack involved air-dropped RBK-500 cluster munitions containing AO-2.5RT submunitions.¹¹

In April 2017, the African Union–United Nations Mission in Darfur (UNAMID) reported the presence of two AO-1-Sch submunitions in North Darfur (at Al Mengara village in Al Liet locality). The villagers reported that the bombs were dropped in 2008, had been identified by UNAMID at that time, and that the military had stated that they would dispose of the items.¹² The Sudanese Armed Forces Engineers destroyed the items in February 2018 and no further CMR were reported or identified.¹³

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Sudan also has a significant problem with anti-personnel mines, anti-vehicle mines, and UXO, primarily as a result of the more than 20 years of civil war that led to the Comprehensive Peace Agreement in 2005 and South Sudan's independence in July 2011 (see Mine Action Review's *Clearing the Mines* report on Sudan for further information).

While limited CMR contamination has, in the past, been identified in Darfur, contamination from other types of ERW is significant and remains widespread.¹⁴ ERW in Darfur includes unexploded air-delivered bombs, rockets, artillery and mortar shells, and grenades.¹⁵

Since South Sudan's independence, new conflicts in Abyei and in Blue Nile and South Kordofan states have resulted in increased UXO contamination in Sudan.¹⁶ In 2018, the extent of mine and ERW contamination in areas of Abyei and the border area between Sudan and South Sudan remained unknown due to persistent conflict and ongoing restrictions on access.¹⁷

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The Sudanese National Mine Action Authority (NMAA) and NMAC manage Sudan's mine action programme. In 2005, UN Security Council Resolution 1590 and the Comprehensive Peace Agreement established the legal framework for UNMAO to manage quality assurance (QA) of all mine action activities in Sudan in the framework of the UN Mission in Sudan (UNMIS).¹⁸ Following the closure of UNMIS and UNMAO in July 2011 upon the independence of South Sudan, NMAC assumed full ownership of national mine action with responsibility for coordinating all mine clearance, including accreditation and certification of clearance agencies. After starting an emergency programme in 2002, in 2015 the UN Mine Action Service (UNMAS) resumed its lead in supporting UN mine action efforts in Sudan and its role in providing assistance and technical support to NMAC following an invitation from the Sudanese Government.¹⁹

In Darfur, under the umbrella of UNAMID, UNMAS works under the name of the Ordnance Disposal Office (ODO) in direct support of UNAMID priorities.²⁰

UN Security Council Resolution 2429 (2018) sets out the gradual withdrawal of UNAMID by 2020. As such, UNMAS reported that some of ODO's responsibilities in Darfur were being handed over to UNMAS Sudan, and that it was to take over ODO's role in ERW clearance, risk education, and victim assistance as of 2019 in North, South, East, and West Darfur states, while ODO would focus its responsibilities in the area of Jabal Marrah.²¹

In 2018, the Government of Sudan contributed US\$2 million to the running costs of NMAC and for demining activities.²² It has consistently funded the national mine action programme at this level for the past three years, doubling its funding for mine action from \$1 million in 2015, and up from almost \$0.5 million in 2014.²³ NMAC reported that it expected to receive the same funding in 2019.²⁴

GENDER

In 2019, NMAC reported that gender is mainstreamed in the national mine action strategic plan for 2019–23 and in the national mine action standards. It stated that under those standards, all survey and community liaison teams are to be gender balanced, and that women and children are consulted during survey and community liaison activities, which is reflected in the format of relevant survey report forms to be filled in by the teams. It said that gender is also taken into account in the prioritisation, planning, and tasking of survey and clearance activities, as per the national mine action standards.²⁵

NMAC stated that it always encourages women to apply for employment in the national programme, whether at the office level or in the field. Positively, it reported that almost 40% of NMAC staff employed at the managerial or supervisory levels are women. However, it noted that there were few women employed in operational roles in the survey and clearance teams due to "local customs and traditions".²⁶

INFORMATION MANAGEMENT AND REPORTING

In May 2019, NMAC informed Mine Action Review that it was using both the Information Management System for Mine Action (IMSMA) legacy version in parallel with the newer version, IMSMA-NG.²⁷ In 2018, NMAC began a process of upgrading the IMSMA software to the newer New Generation version, with assistance from the Geneva International Centre for Humanitarian Demining (GICHD). Significant efforts to correct errors in the database were also undertaken.²⁸ The database does

not contain information on the disputed Abyei area.²⁹ However, UNMAS informed Mine Action Review in June 2019 that the United Nations Interim Security Force for Abyei (UNISFA) was working with NMAC on database sharing and had co-located an IMSMA officer within the NMAC office in Khartoum to assist with sharing of historical data, while it was also providing NMAC a monthly report on activities in Abyei.³⁰

PLANNING AND TASKING

In March 2018, Sudan submitted a request for an extension of its Anti-Personnel Mine Ban Convention (APMBC) Article 5 clearance deadline for a period of four years to 1 April 2023. The 2018 extension request did not contain any mention of remaining CMR or plans for survey and clearance of CMR-contaminated areas.

In May 2019, NMAC reported that the new national mine action strategic plan for 2019–23 had been finalised and was waiting for endorsement. The plan aims at fulfilling Sudan's APMBC obligations, and was developed in coordination with the GICHD to replace its previous national mine action strategy for 2016–19.³¹ NMAC stated that detailed annual workplans had been developed for each year under the new strategic plan.³²

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

In May 2019, NMAC reported that a review of Sudan's National Mine Action Standards (NMAS), reportedly ongoing since 2015, had been completed and the revised standards were awaiting endorsement.³³ NMAC previously reported that the draft standards did not contain a specific chapter on cluster munitions.³⁴

NMAC confirmed that in 2018, QA and quality control activities were carried out according to the NMAS.³⁵

OPERATORS

In 2018, no international non-governmental organisation (NGO) was conducting demining operations in Sudan. National demining operators are JASMAR for Human Security, National Units for Mine Action and Development (NUMAD), and the Friends for Peace and Development Organization (FPDO). In 2018, NMAC reported that a total of 22 mine action teams were operational (7 manual clearance teams, 11 multi-task teams, 3 mine detection dog teams, and 1 route verification and clearance team). It reported that the deployment of additional teams was made possible in newly accessible areas in Blue Nile and South Kordofan states.³⁶

In Darfur, in 2018, clearance operations continued to be conducted by commercial operator Dynasafe (DML) and NUMAD.³⁷

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

As stated above, NMAC reported that in 2018 the one recorded area of suspected CMR contamination in West Kordofan was cancelled by NUMAD after no evidence was found in the area.³⁸ No CMR were encountered in mine action operations during the year.³⁹

Previously, no CMR-specific survey or clearance took place in 2017.⁴⁰ NMAC does not distinguish between different types of ERW in its reporting on clearance and has not reported any clearance of CMR contamination since 2013. As noted above, however, it clarified in 2018 that in 2011–13, seven areas with a size of just over 15,300m² were cleared with the destruction of 13 PM-1 submunitions.⁴¹

PROGRESS TOWARDS COMPLETION

Sudan is not a state party to the CCM and therefore does not have a specific clearance deadline under Article 4. Nonetheless, it has obligations under international human rights law to clear CMR as soon as possible. In May 2017, NMAC informed Mine Action Review that Sudan was "with the spirit of the Convention on Cluster Munitions" and that the national authorities were aware of the convention and Sudan's current status as not yet having joined.⁴² In May 2019, NMAC stated that there had been no developments with regard to Sudan's accession to the CCM in 2018.⁴³

When asked when Sudan might complete survey and clearance of the remaining cluster munition contamination, NMAC stated that it could not specify a timeframe as the last known registered cluster munition-contaminated area was not under Sudanese Government control.⁴⁴

The security situation, lack of information, and registration of new hazardous areas continued to be significant hurdles for mine action operations, particularly in South Kordofan and Blue Nile states, in 2018.⁴⁵ However, the UN hopes that ongoing efforts towards peace negotiations would encourage a resolution to catalyse larger scale clearance operations in 2019.⁴⁶

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- 1 Email from Hatim Khamis Rahama, Technical Advisor, NMAC, 1 May 2019.
 - 2 Email from Hatim Khamis Rahama, NMAC, 1 May 2019 and interview in Geneva, 24 May 2019.
 - 3 Email from Hatim Khamis Rahama, NMAC, 3 March 2018; and interview in Geneva, 24 May 2019. NMAC previously reported to Mine Action Review that each area had an estimated size of 1km². In May 2019, it clarified that this had been a reporting error.
 - 4 Emails from Hatim Khamis Rahama, NMAC, 1 May 2019 and 14 June 2018.
 - 5 The locations are based on a review of sites in the UNMAO database by Mine Action Review.
 - 6 See Cluster Munition Monitor, "Country Profile: Sudan: Cluster Munition Ban Policy", updated 23 August 2014; Human Rights Watch, "Under Siege: Indiscriminate Bombing and Abuses in Sudan's Southern Kordofan and Blue Nile States", 6 December 2012; "Unexploded Ordnance Kill 13 People in South Kordofan", All Africa, 10 August 2013; and UN, "UNMAS Annual Report 2012", New York, August 2013, p. 10.
 - 7 Emails from Mohamed Kabir, Chief Information Officer, UNMAO, 27 June 2011; and Hatim Khamis Rahama, NMAC, 14 June 2018.
 - 8 Emails from Hatim Khamis Rahama, NMAC, 14 June 2017; and Ali Abd Allatif Ibrahim, NMAC, 18 May 2017. In June 2016, however, NMAC had reported that no CMR-contaminated areas were "recorded as remaining hazards to be cleared" and that no separate survey or clearance operations for CMR occurred in 2015 and claimed that no cluster munitions had been found in all mine action activities "to date". Email from Ahmed Elser Ahmed Ali, Chief of Operations, NMAC, 8 June 2016.
 - 9 Email from Hatim Khamis Rahama, NMAC, 3 March 2018.
 - 10 Emails from Hatim Khamis Rahama, NMAC, 1 May and 3 March 2018; and from Ali Abd Allatif Ibrahim, NMAC, 18 May 2017.
 - 11 See Cluster Munition Monitor, "Country Profile: Sudan: Cluster Munition Ban Policy", updated 23 August 2014.
 - 12 Email from Dandan Xu, Associate Programme Management Officer, UNMAS, 12 July 2017.
 - 13 Email from Colin Williams, Deputy Programme Manager, Ordnance Disposal Office (ODO), UNAMID, 1 June 2018.
 - 14 UNMAS, "2019 Portfolio of Mine Action Projects, Sudan".
 - 15 UNMAS, "2018 Portfolio of Mine Action Projects, Sudan".
 - 16 Human Rights Watch, "Under Siege: Indiscriminate Bombing and Abuses in Sudan's Southern Kordofan and Blue Nile States", 6 December 2012; "Unexploded Ordnance Kill 13 People in South Kordofan", All Africa, 10 August 2013; and UN, "UNMAS Annual Report 2012", New York, August 2013, p. 10.
 - 17 UNMAS, "2019 Portfolio of Mine Action Projects, Sudan".
 - 18 Revised Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline Extension Request, 30 July 2013, p. 6.
 - 19 UNMAS, "About UNMAS in Sudan (Excluding Darfur), March 2018, at: <http://bit.ly/2H12IWR>; and email from Javed Habibulhaq, Programme Manager, UNMAS, 13 June 2016.
 - 20 UNMAS, "2017 Portfolio of Mine Action Projects, Sudan".
 - 21 UNMAS, "2019 Portfolio of Mine Action Projects, Sudan".
 - 22 Email from Hatim Khamis Rahama, NMAC, 1 May 2019.
 - 23 Emails from Hatim Khamis Rahama, NMAC, 13 May 2018; and Ali Abd Allatif Ibrahim, NMAC, 4 June 2017; UNMAS, "2017 Portfolio of Mine Action Projects, Sudan"; APMBC Article 7 Reports (for 2015), Form F; and (for 2014), Form A.
 - 24 Email from Hatim Khamis Rahama, NMAC, 1 May 2019.
 - 25 Ibid.
 - 26 Ibid.
 - 27 Ibid.
 - 28 Emails from Ahmed Elser Ahmed Ali, NMAC, 9 May and 8 June 2016; and Third APMBC Article 5 deadline Extension Request, March 2018, pp. 37–38.
 - 29 Email from Javed Habibulhaq, UNDP, 11 May 2015.
 - 30 Email from Dandan Xu, Associate Programme Management Officer, UNMAS, 28 June 2019.
 - 31 Emails from Hatim Khamis Rahama, NMAC, 1 May 2019 and 13 May 2018.
 - 32 Email from Hatim Khamis Rahama, NMAC, 1 May 2019.
 - 33 Emails from Hatim Khamis Rahama, NMAC, 1 May 2019 and 13 May 2018.
 - 34 Emails from Ahmed Elser Ahmed Ali, NMAC, 9 May and 8 June 2016.
 - 35 Email from Hatim Khamis Rahama, NMAC, 1 May 2019.
 - 36 Ibid.
 - 37 APMBC Article 7 Report (for 2018), p. 19.
 - 38 Email from Hatim Khamis Rahama, NMAC, 1 May 2019.
 - 39 Ibid.
 - 40 Email from Hatim Khamis Rahama, NMAC, 3 March 2018.
 - 41 Ibid.
 - 42 Email from Ali Abd Allatif Ibrahim, NMAC, 18 May 2017.
 - 43 Email from Hatim Khamis Rahama, NMAC, 1 May 2019.
 - 44 Ibid.
 - 45 Ibid.; and Article 7 Report (for 2018), p. 17.
 - 46 UNMAS, "2019 Portfolio of Mine Action Projects, Sudan".

RECOMMENDATIONS FOR ACTION

- Syria should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Syria should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Syria should establish a national mine action authority.
- Syria should develop a mine action programme enabling Syrian and international organizations to undertake systematic survey and clearance of explosive remnants of war (ERW).

CLUSTER MUNITION REMNANT CONTAMINATION

Syria is believed to have widespread CMR contamination along with dense contamination by mines (including mines of an improvised nature, see Mine Action Review's *Clearing the Mines* report on Syria for further information), and other ERW resulting from the armed conflicts continuing since 2011. The extent of contamination by any particular category of device is not known. A United Nations (UN) needs overview in 2019 estimated that 10.2 million people lived in 1,980 communities that had reported explosive contamination over the past two years.¹

Syrian government and Russian forces have used cluster munitions extensively and Islamic State has reportedly used them in a number of instances.² Opposition group Jabhat al-Nusra has also produced videos showing Russian-made submunitions being adapted for re-use as projectiles.³

In the first half of 2019, Russian and Syrian government airforces intensively bombed the demilitarised zone, including Idlib governorate, in north-west Syria. The UN Commission of Inquiry on Syria reported in July 2019 that air strikes on the area regularly involved use of indiscriminate weapons, including cluster munitions.⁴ Syrian state-run media reported "recent" use of cluster munitions by opposition groups in early 2019. Syria's state news agency reported that the United States (US)-led coalition used cluster munitions in air strikes carried out in Deir Ezzour province in 2018. The coalition denied the report.⁵

The UN Commission of Inquiry on Syria reported "an alarming number of incidents involving cluster munitions" in February 2017, affirming that their use in densely populated areas such as opposition-held eastern Aleppo "constitutes the war crime of indiscriminate attacks in a civilian populated area".⁶ Among multiple reports of attacks using cluster munitions, which could not be independently verified, the Syrian Network for Human Rights said that in the 12 months to the end of February 2017 Russian forces conducted 121 cluster munitions strikes. It said these attacks brought the total number of cluster munitions strikes by Russia since it intervened in the conflict in 2015 to 175, mostly in Aleppo (89 attacks), Idlib (68) and Hama (9).⁷

Syrian Civil Defence (SCD) said it had cleared large numbers of submunitions in Idlib and to a lesser extent in Dar'a, Hama, and Quneitra over the past two years (see Land Release section below).⁸ Human Rights Watch reported civil defence and first responders had located CMR, mostly Russian-made ShOAB-0.5 submunitions, in the towns of al-Tamanah, Jisr Al-Shughur and Maraat Harma (Idlib governorate); Qalaat al-Madiq (Hama governorate); and Tel'adeh.⁹ HALO Trust reported that Syrian NGO AFAK, working in the southern governorates of Daraa and Quneitra, had encountered seven types of cluster munition, mostly Russian-made PTAB 2.5M, AO2.5RT, A-01 Sch, and SAKR B submunitions, but also Chinese-made Type 81 and one US-made BLU-97 (thought to date back to 1973).¹⁰ Unverified social media reports said cluster munitions used in Idlib in May 2019 included submunitions delivered by BM-30 SMERCH multiple rocket launchers.¹¹

PROGRAMME MANAGEMENT

Syria does not have a national mine action authority or a national programme for survey and clearance. Mine action has been conducted by a wide range of organisations, including military engineers of parties to the conflict, civil defence organisations, humanitarian demining organisations, and commercial companies.

Russia deployed several hundred military deminers from the Armed Forces Demining Centre. Russian troops provided training courses for Syrian army engineers and conducted clearance with manual teams supported by mine detection dogs and Uran-6 mine detection robots. In 2018, Russia started to withdraw troops, including deminers, from Syria and appealed to other countries to provide support. Armenia became the first country to respond to the appeal, sending an 83-man team to Syria in February 2019, planning to focus its work on the northern governorate of Aleppo.¹²

International humanitarian and commercial operators, including Mines Advisory Group (MAG) and Tetra Tech, operated in north-eastern Syria clearing areas recaptured from Islamic State by Kurdish and US-led coalition forces.¹³ National operators included SCD, which, at the start of 2018, was working in five governorates (Dar'a, Hama, Homs, Idlib, and Quneitra) with the support of Mayday. SCD's three teams in Daraa and two teams in Quneitra operated until early July 2018

when developments brought their operations to a halt and the teams disbanded. SCD also had one clearance team working in Hama governorate and another in Idlib in 2018. By mid 2019, SCD had five clearance teams working in Hama (one team), Idlib (two) and Aleppo (two). It also planned to deploy two non-technical survey teams, one each in Hama and Idlib.¹⁴ Roj Mine Control Organization (RMC0) was conducting clearance in north and north-east Syria.¹⁵ Syrian NGO AFAK, working in partnership with HALO Trust, conducted clearance in southern provinces of Daraa and Quneitra in the early part of the year until a Syrian army drive to take control of the area.¹⁶

UNMAS signed a Memorandum of Understanding (MoU) with the Syrian government in July 2018 under which it deployed two staff to Damascus. In January 2019, it started a first risk education training course for 26 Syrian personnel, including 16 women.¹⁷ Russia announced in March 2019 that it would provide funding of US\$1 million to support UNMAS's activities in Syria.¹⁸ In April 2019, UNMAS announced a "Humanitarian Mine Action Support to Syria (31 March 2019 – 31 March 2020)" project supported by a \$1.4 million grant from Japan which is expected to deliver risk education to 43,000 people and conduct contamination impact surveys in 85 communities, also marking and fencing off explosive hazards.¹⁹

LAND RELEASE

Comprehensive data on land released in ERW clearance operations in Syria is not available.

Russian and Syria army engineers conducted ERW clearance in areas controlled by the government in 2018, including in Homs governorate in 2018 and in Damascus, Daraa, and Quneitra governorates in the first four months of 2019, but few details were available of the location, scope, and results of their operations.²⁰

International humanitarian and commercial operators active in north-east Syria in 2018 reported clearance mainly of improvised devices left by Islamic State. Tetra Tech, working in Raqqa and Deir Ezzour in 2018 focused on critical infrastructure, operating with a toolbox that included mechanical assets, explosive detection dogs and drones, tackled some CMR but found they made up a small proportion of items cleared.²¹

SCD/Mayday previously said submunitions constituted the "vast majority" of items cleared in the course of conducting roving spot tasks in response to community requests. Between November 2015 and March 2018, SCD teams cleared nearly 16,000 submunitions, 11,759 of them in Idlib governorate, as well as 521 other items of unexploded ordnance.²² In 2018 alone, SCD destroyed 2,162 submunitions, mostly in Aleppo, Idlib, and Hama, and marked a further 118.²³

- 1 United Nations, "2019 Humanitarian Needs Overview", 1 March 2019, p. 52.
- 2 Human Rights Watch, "Syria: Evidence of Islamic State Cluster Munition Use", 1 September 2014.
- 3 K. Fulmer, "Jabhat al-Nusra re-purposing SPBE and AO-2.5RT submunitions in Syria", Armament Research, 18 October 2015.
- 4 Statement to the UN Human Rights Council by Paulo Sergio Pinheiro, Chair of the Independent International Commission of Inquiry on the Syrian Arab Republic, Geneva, 2 July 2019; "Civilians killed in Idlib as Syrian government escalates its bombardment in northern Syria", Middle East Eye, 7 April 2019.
- 5 "US-led coalition uses banned cluster bombs in Deir Ezzour", SANA, 14 November 2018; "US-led coalition denies use of cluster bombs in Syria amid reported casualties", Press TV, 15 November 2019.
- 6 Report of the Commission of Inquiry on Syria, UN doc. A/HRC/34/64, 2 February 2017, para. 57. In an annex to the report on the applicable law the Commission again asserts that: "When used in densely-populated areas such weapons [cluster munitions] are inherently indiscriminate." Ibid., Annex 1, para. 44.
- 7 Syrian Network for Human Rights, "Russian forces are worse than the Syrian regime in terms of use of cluster munitions", 24 March 2017.
- 8 Mayday Rescue, "Syria Civil Defence, Explosive Hazard Mitigation Project Overview, Nov 2015–Mar 2018", 1 March 2018.
- 9 Human Rights Watch, "Russia/Syria: Deadly airstrikes on trapped civilians", 31 October 2017.
- 10 HALO Trust, "Survey and Explosive Hazard Removal in Dar'a and Quneitra governorates, southern Syria", undated but 2018, p. 6. For further information on types and locations of submunitions found in Syria see also "Collected evidence of cluster bombs used in Syria", Brown Moses Blog, 28 August 2012, at: <http://bit.ly/2Vifwlc>.
- 11 See <http://bit.ly/2Yqal5p>.
- 12 "Russia calls for international support for demining efforts in Syria", Xinhua, 7 July 2018; and "Armenia sends deminers to Syria as part of Russia-backed mission", Radio Free Europe, 10 February 2019.
- 13 Interview with Gareth Hawkins, Chief of Party, Syria CWD, Tetra Tech EC, Erbil, Iraq, 10 May 2019; S. Kajjo, "Landmine removal crucial in post-IS Syria", Voice of America, 3 April 2019; N. Wazir, "Removing explosive hazards to promote stability in northeastern Syria", Program Manager for Syria, Office of Weapons Removal and Abatement, US Department of State, 13 November 2018.
- 14 Telephone interview with Luke Irving, Specialist Training and EOD Manager, Mayday Rescue, 28 March 2018; Mayday Rescue, "Syria Civil Defence, Explosive Hazard Mitigation Project Overview, Nov 2015–Mar 2018", 1 March 2018; and emails from Michael Edwards, Explosive Hazards Operations Manager, Mayday, 16 and 30 May 2019.
- 15 S. Kajjo, "Landmine removal crucial in post-IS Syria", Voice of America, 3 April 2019.
- 16 Email from Adam Boyd and Rob Syfret, HALO Trust, 18 May 2018; and HALO Trust, "Survey and Explosive Hazard Removal in Dar'a and Quneitra Governorates, Southern Syria", undated but 2018; interview with Tim Porter, Director of Programmes, HALO Trust, in Geneva, 5 February 2019.
- 17 "Syria, UN Mine Action Service, Sign MoU", Syrian Arab News Agency, 8 July 2018, accessed at <http://bit.ly/2Hjenwl>; and interview with Gilles Delecourt, Senior Programme Manager, UNMAS, in Geneva, 7 February 2019.
- 18 "Russia allocates \$1 million to UN for demining of Syrian territories", Tass, 15 March 2019.
- 19 UNMAS, "Japan contributes to humanitarian mine action in Syria", 15 April 2019.
- 20 See: Bulletin of the Centre for Reconciliation of Opposing Sides and Refugee Migration Monitoring in the Syrian Arab Republic, Ministry of Defence of the Russian Federation, accessible at <http://bit.ly/2EadbJD>.
- 21 Interview with Gareth Hawkins, Tetra Tech EC, Erbil, Iraq, 10 May 2019.
- 22 Telephone interview with Luke Irving, Mayday Rescue, 28 March 2018; Mayday Rescue, "Syria Civil Defence, Explosive Hazard Mitigation Project Overview, Nov 2015–Mar 2018", 1 March 2018. Emails from Michael Edwards, Operations Manager, Mayday Rescue, 29 June and 2 July 2018.
- 23 Email from Michael Edwards, Mayday, 16 May 2019.

RECOMMENDATIONS FOR ACTION

- Tajikistan should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Tajikistan should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- The Tajikistan National Mine Action Centre (TNMAC) should conduct survey to clarify the extent of remaining CMR and ensure timely clearance and release of the contaminated areas.

CLUSTER MUNITION REMNANT CONTAMINATION

TNMAC has reported that, as at end 2018, a total of 937,040m² was suspected to contain CMRs: seven of Tajikistan's eight recorded battle areas totalling an area of almost 877,040m² and one shooting range of 60,000m² in Shamsiddin Shohin district.¹ The battle areas in question are mainly recorded as hazardous areas due to past accidents involving unexploded ordnance (UXO) or reports from local communities, but for which the resulting survey did not specify the precise type of contamination. Re-survey of most of these areas is required to determine whether or not further evidence of explosive remnants of war (ERW) exists, in particular CMR.²

In addition, and not included in the above total, there is a further 430,000m² of previously unknown CMR contaminated area in the Sagirdasht municipality of Darvos district in the Central Region, discovered through non-technical survey by NPA in 2018, and planned for clearance in 2019.³ As CMR contamination

continues to be found each year in the Sagirdasht municipality of Darvos district, NPA and TNMAC have concluded that technical survey/cluster munition remnant survey (CMRS) should be undertaken of the Khaburabod mountain pass in 2019 to identify and, if possible, also address the full extent of any remaining contamination.⁴

Cluster bombs were dropped during Tajikistan's civil war in 1992–97,⁵ though it is not known who used the munitions.⁶

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Tajikistan also has areas containing other UXO and anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Tajikistan for further information on the mine problem).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The Commission for the Implementation of International Humanitarian Law (CIIHL), chaired by the first deputy of the Prime Minister, and containing key representatives from relevant line ministries, acts as Tajikistan's national mine action authority, responsible for mainstreaming mine action in the government's socio-economic development policies.⁷

In June 2003, the Government of Tajikistan and the United Nations Development Programme (UNDP) established the Tajikistan Mine Action Centre (TMAC) with a view to it becoming a nationally owned programme in the short term,⁸ though this did not happen until more than ten years later. TMAC was made responsible for coordinating and monitoring all mine action activities.⁹ Since then, TMAC has acted as the secretariat for the CIIHL to which it reports.¹⁰

On 3 January 2014, TNMAC was established by government decree to replace TMAC.¹¹ While transition to national ownership is considered to have been successful, UNDP's Support to Tajikistan Mine Action Programme (STMAP) project has continued to support the building of sustainable national structures and TNMAC's technical capacity.¹² In 2018, UNDP assisted TNMAC in elaboration of Tajikistan's plan for Article 5 completion under the Anti-Personnel Mine Ban Convention (APMBC). UNDP plans to transfer assets, knowledge, and expertise directly to TNMAC.¹³

In 2015, Tajikistan drafted a Law on Humanitarian Mine Action, which covers all aspects of mine action. However, relevant non-governmental organisations (NGOs) are not believed to have been consulted during its drafting.¹⁴ The law (number 1338), which was adopted by Tajikistan's Parliament on 23 July 2016,¹⁵ was presented to mine action stakeholders in September 2016, during a workshop hosted by TNMAC.¹⁶

The Ministry of Defence plays a significant role in Tajikistan's mine action sector. With its adoption in July 2013 of the Strategic Plan on Humanitarian Demining (for 2013–16), the Ministry has sought to focus on three main objectives: to further support demining; to enhance national capacities; and to create the conditions for an effective national mine action programme.¹⁷ The Organization for Security and Co-operation in Europe (OSCE) Programme Office in Dushanbe supported the Ministry of Defence to develop an updated plan, entitled Ministry of Defence of the Republic of Tajikistan Co-operation Plan for Humanitarian Demining 2018–2023.¹⁸

GENDER

In September 2017, experts from the Geneva Mine Action Programme (GMAP) prepared and submitted to TNMAC a draft of a national gender strategy in mine action for 2018–22. The strategy was approved by TNMAC in October 2018.¹⁹ Gender in Tajikistan is also addressed by a number of laws and documents, including the national development strategy through to 2030, approved by the parliament on 1 December 2016.²⁰

INFORMATION MANAGEMENT AND REPORTING

In 2016, Tajikistan updated its mine action information management system to Information Management System for Mine Action (IMSMA) version 6.0.²¹ In 2018, TNMAC planned to implement IMSMA Core, with support from the Geneva International Centre for Humanitarian Demining.²²

PLANNING AND TASKING

The previous national mine action strategic plan for 2010–15 expired at the end of 2015.²³ A new National Strategy on Humanitarian Mine Action 2017–2020 was approved by government decree No. 91 on 25 February 2017.²⁴

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Tajikistan's revised National Mine Action Standards (TNMAS) were approved by decree No. 162 on 1 April 2017. The revised standards have been translated into Russian and English.²⁵

NPA has proposed the application of CMRS as an effective methodology for technical survey of CMR contamination in Darvos district. As at June 2019, NPA had submitted a set of standing operating procedures (SOPs) to TNMAC for final approval so that methodology could be applied in July 2019 during the summer clearance season in Darvos.²⁶

OPERATORS

In 2018, overall operational capacity for demining and battle area clearance (BAC) comprised four multi-tasking manual NPA teams; five military multi-purpose manual teams (four from the Ministry of Defence Humanitarian Demining Company (HDC) and one from the Committee of Emergency and Civil Defence); and

two Union of Sappers of Tajikistan (UST) non-technical survey teams.²⁷ NPA undertook both survey and clearance in 2018 while UST conducted non-technical survey, identifying two mined areas.²⁸ No funding was secured for Swiss Foundation for Mine Action (FSD) survey or clearance operations in Tajikistan in 2018.²⁹

NPA planned to conduct BAC training for all its staff in 2019, in preparation for any CMR operational needs that might arise. NPA did not have dedicated non-technical survey personnel in 2018 and any non-technical survey activities were conducted by an NPA technical advisor and a task supervisor, in areas in which NPA operated. In 2019, NPA established one non-technical/targeted technical survey team, consisting of four surveyors, one paramedic, and one task supervisor, as support to TNMAC's efforts to survey the remaining areas for which minefield records existed but that had not yet been surveyed and to help support other survey/resurvey needs, as required. NPA's survey team, which began deployment in April 2019, will be used to survey CMR-contaminated areas as well.³⁰

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

In 2018, 407,571m² of CMR-contaminated area was released through clearance, during which 63 submunitions and 100 other items of UXO were destroyed.³¹

SURVEY IN 2018

A total of 568,500m² was identified as contaminated in the Sagirdasht municipality of Darvos district of the Central Region through NPA non-technical survey in 2018: 138,500m² in June 2018,³² and a further 430,000m² in August 2018. Subsequent clearance of the 138,500m² polygon in 2018 revealed the area of CMR contamination to be larger than recorded (407,571m² when clearance was suspended at the end of the clearance season in 2018). The second 430,000m² polygon is planned for clearance in 2019.³³

No technical survey was conducted in 2018, but NPA believes that CMRS should be considered in 2019 in the Sagirdasht municipality of Darvos district, in order to determine the full extent of CMR contamination in this area.³⁴

CLEARANCE IN 2018

In 2018, NPA cleared 407,571m² of CMR-contaminated area in Darvos district of GBAO, in the central region, during which 63 CMR and 100 other items of UXO were destroyed.³⁵ This is an increase on the 248,581m² released through clearance in 2017.

PROGRESS TOWARDS COMPLETION

Tajikistan needs to complete clearance of the two recently discovered areas of more than 0.4km² confirmed to contain CMR in Sagirdasht municipality of the Darvos district and should conduct CMRS to determine whether further CMR contamination exists in this municipality.

In addition, the seven other battle areas suspected to contain CMR should be re-surveyed and cleared, recording any submunitions found. Survey should also be conducted of the 60,000m² firing range in Shamsiddin Shohin district, to determine whether or not it contains unexploded submunitions.³⁶

1 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

2 Email from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018; and interview with Daler Eshonjonov, TNMAC, and Erkin Huseinov, United Nations Development Programme (UNDP), Dushanbe, 29 May 2018.

3 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

4 Email from Melissa Andersson, NPA, 27 March 2019.

5 Second Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline Extension Request (draft), 31 March 2019, p. 6.

6 Statement of Tajikistan, APMBC 14th Meeting of States Parties, Geneva, 1 December 2015.

7 APMBC Article 5 deadline Extension Request, 31 March 2009, p. 4; and Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 20.

8 Rebecca Roberts, "Evaluation of UNDP Support to the Tajikistan Mine Action Programme", p. 12, at: <http://bit.ly/2VrxvY8>.

9 APMBC Article 5 deadline Extension Request, 31 March 2009, p. 1; and TMAC, "About TMAC", 2012, accessed 10 March 2014 at: <http://bit.ly/2LvPub1>.

10 Roberts, "Evaluation of UNDP Support to the Tajikistan Mine Action Programme", p. 12.

11 Email from Muhabbat Ibrohimzoda, TNMAC, 3 April 2015.

12 TNMAC, "Draft Article 5 Completion Plan 2016–20", 4 October 2016.

13 Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 27.

14 Email from Aubrey Sutherland-Pillai, (then) Country Director, NPA, 18 October 2016.

15 Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 22.

16 Email from Aubrey Sutherland-Pillai, NPA, 18 October 2016.

17 Ministry of Defence, "Strategic Plan on Humanitarian Demining 2013–2016", Dushanbe, 17 July 2013; and Response to Landmine Monitor questionnaire by Luka Buhin, Mine Action Office, OSCE Office in Tajikistan, 8 April 2014.

18 Email from Luka Buhin, OSCE Office in Tajikistan, 9 October 2017.

19 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

20 Ibid.; and Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 28.

21 Email from Muhabbat Ibrohimzoda, TNMAC, 22 May 2017.

22 Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 29.

23 Interview with Muhabbat Ibrohimzoda, TNMAC, and Ahad Mahmoudov, Programme Manager, UNDP, in Geneva, 23 June 2015.

24 "National Strategy of the Republic of Tajikistan on humanitarian mine action for 2017–2020", 25 February 2017; and Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 21.

25 Email from Muhabbat Ibrohimzoda, TNMAC, 22 May 2017; and Second APMBC Article 5 deadline Extension Request (draft), 31 March 2019, p. 21.

26 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

27 Second Article 5 deadline Extension Request (draft), 31 March 2019.

28 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

29 Ibid.

30 Email from Melissa Andersson, NPA, 27 March 2019.

31 Ibid.; and email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

32 Email from Melissa Andersson, Country Director, NPA, 4 July 2018.

33 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

34 Email from Melissa Andersson, NPA, 27 March 2019.

35 Ibid.; and email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

36 Email from Muhabbat Ibrohimzoda, TNMAC, 14 June 2019.

RECOMMENDATIONS FOR ACTION

- Ukraine should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Ukraine should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Ukraine should undertake a baseline survey of CMR contamination in areas to which it has effective access.
- Ukraine should formally establish a national mine action authority and a functioning national mine action centre to manage clearance of explosive ordnance.
- Ukraine should elaborate a strategic plan for mine action, including for CMR survey and clearance.
- Ukraine should systematically collect data on contamination from mines, CMR, and other explosive remnants of war (ERW), as well as progress in survey and clearance, and establish a centralised database for planning purposes.
- Ukraine should consult with mine action stakeholders and elaborate standardised national criteria for the prioritisation of CMR clearance.
- Ukraine should establish a quality management system for survey and clearance operations.

CLUSTER MUNITION REMNANT CONTAMINATION

The extent of contamination from CMR in Ukraine is not known. Ukraine has claimed that many unexploded submunitions contaminate the Donetsk and Luhansk regions,¹ with the most intensive use of cluster munitions said to have occurred in and around the city of Debalcevo in Donetsk oblast.² In 2017, Ukraine estimated, implausibly, that total contamination by mines and ERW (including CMR) could extend over 7,000km².³ The Ukrainian Ministry of Defence (MoD) accepts that this is a “rough” estimate.⁴ It is further suggested that 15–20% of the explosive contamination is from mines while the rest is from ERW.⁵ However, Ukraine cannot reliably estimate the overall extent of CMR contamination until surveys have been completed.⁶ The heaviest mine and ERW contamination is believed to be inside the 15km buffer zone between the warring parties, but access to this area for survey and clearance operations is severely limited.⁷

Since The HALO Trust began operations in Ukraine, it has confirmed 1.4km² of land as contaminated with CMR. In 2018, The HALO Trust identified three new areas of CMR contamination with a total surface area of 0.4km².⁸ The OSCE Project Coordinator (PCU) suggests that the national mine action centre (NMAC), due to

be established in 2019, should initially focus on non-technical survey outside the 15km buffer zone in order to better define the scale of the problem. Areas within the buffer zone will continue to be under the jurisdiction of the MoD and not within the direct remit of NMAC.⁹

Multiple reports from 2014 and 2015 indicate that both government forces and pro-Russian rebels have used cluster munitions in the Donetsk and Luhansk regions of eastern Ukraine. This included Smerch (Tornado) and Uragan (Hurricane) cluster munition rockets, which deliver 9N210 and 9N235 anti-personnel fragmentation submunitions; 300mm 9M55K cluster munition rockets with 9N235 submunitions; and 220mm 9M27K-series cluster munition rockets.¹⁰ During a ten-day investigation in eastern Ukraine, Human Rights Watch found evidence that cluster munition rockets had been fired in at least seven localities between 23 January and 12 February 2015, with some hit multiple times. Three of the areas were in government-controlled territory while the other four were in rebel-held territory. Thirteen civilians were reportedly killed during these attacks, including at least two children.¹¹

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 current conflict (see Mine Action Review's *Clearing the Mines* report on Ukraine for further information). It is also affected by unexploded ordnance (UXO) and abandoned explosive ordnance (AXO)

remaining from the First World War and Second World War¹² and Soviet military training and stockpiles. In February 2016, Ukraine claimed that 32 former military firing ranges and the many other areas contaminated with explosive items from past wars covered 1,500km².¹³

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

All areas of mine action in the Donetsk and Luhansk region, including humanitarian demining operations, are currently planned, coordinated, and controlled by the MoD.¹⁴ Several other ministries are also involved in the sector, including the Ministry of Internal Affairs, under which sits the State Emergency Services of Ukraine (SESU); the Security Services; the Ministry of Temporarily Occupied Territories and Internally Displaced Persons; the State Special Transport Services (STSS) of the Ministry of Defence; the National Police; and the State Border Service.¹⁵

The MoD has organisational control of operations while SESU is generally responsible for conducting clearance. It established a "Special Humanitarian Demining Centre" in 2015 in Kiev. The centre's remit includes coordination of SESU pyrotechnical teams (akin to rapid-response explosive ordnance disposal (EOD) teams) involved in technical and non-technical survey, demining, internal quality control (QC) of SESU units, information management, and handover of land cleared by SESU to local authorities, as well as risk education.¹⁶

Ukraine's national mine action legislation was adopted by parliament on 6 December 2018 and signed into law by the President on 22 January 2019. It establishes a framework for humanitarian demining, divides responsibilities among state institutions, and envisages the creation of a mine action authority and mine action centre. Members of the national mine action authority (NMAA) will be appointed by the Cabinet of Ministers. NMAC will be responsible for survey and clearance outside of the contact line and buffer zone and once staffed will prepare a mine action strategic plan. The MoD will maintain responsibility for survey and clearance of the contact line and buffer zone. According to the OSCE PCU, the NMAA and NMAC would be in place by the end of 2019 following the presidential and parliamentary elections in September.¹⁷

The HALO Trust and Danish Demining Group (DDG) reported that they have actively participated in roundtables and public hearings on mine action legislation, organised by the MoD, the OSCE PCU, and the VR's Defence and Security Committee. During these meetings, The HALO Trust and DDG supported the adoption of national legislation and shared best practices and lessons learned from other countries.¹⁸

Once the mine action law is fully implemented, this should provide the mechanisms for government bodies to assist operators with visas and importation of equipment: issues that are currently handled by the operators themselves.¹⁹ In 2018, The HALO Trust faced challenges importing armoured machinery that was classed as military equipment and, as such, could not be imported by a civilian organisation without the support of an executive branch of government.²⁰

National funding is provided for clearance of ERW and mines.²¹ Ukraine also receives assistance from foreign partners (OSCE and North Atlantic Treaty Organization, NATO) for demining equipment.²²

The Geneva International Centre for Humanitarian Demining (GICHD) has been working with the OSCE PCU in Ukraine to help foster mine action institutions, including legislation.²³ The OSCE PCU, with GICHD assistance, has received funding until October 2020 to support Ukraine with the establishment of the NMAA and NMAC and adoption of national standards (now that the mine action legislation has been passed).²⁴ DDG is focusing on working with SESU to equip, train, and support their survey and clearance capacities as the mine action sector evolves and national standards come into force.²⁵ In 2018, The HALO Trust organised or facilitated training courses for both state bodies and international operators in land release, quality management, EOD, and geographic information systems (GIS).²⁶

GENDER

DDG has a gender policy and implementation plan. It ensures that all affected groups, including women and children, are consulted during survey and community liaison activities. However, DDG acknowledges its survey and community and liaison teams are not gender balanced, with only 15% of operational roles being filled by women, although 38% of its managerial/supervisory positions are occupied by women.²⁷

The HALO Trust uses mixed gender non-technical survey and community liaison teams. HALO Trust began recruiting women for clearance roles in 2017, employing the first female deminers in Ukraine. As at May 2019, 15% of operational survey and clearance staff were female while more than half of all managerial/supervisory staff were female.²⁸

INFORMATION MANAGEMENT AND REPORTING

There are two functioning Information Management System for Mine Action (IMSMA) databases, one managed by SESU and the other by the MoD, which collects and analyses contamination and land release data from national operators and NGOs.²⁹ The databases are claimed to be complementary, as they are separated based on region, thematic area, and operational purpose.³⁰ It will be the task of NMAC to create a central national IMSMA database.³¹ In preparation for this, the

OSCE PCU organised IMSMA training sessions in 2018 for staff from the MoD, SESU, SSTS, The HALO Trust, DDG and Swiss Foundation for Mine Action (FSD).³² An online map has been published by the MoD, with technical support from The HALO Trust, with areas of anti-personnel mine and UXO contamination (although submunitions are not disaggregated from other UXO), surveyed by DDG, FSD, The HALO Trust, and a commercial company, Demining Solutions.³³

PLANNING AND TASKING

Following an order from the Prime Minister of Ukraine on 30 November 2015, the Department of Environmental Protection and Mine Action developed a draft order for the Cabinet of Ministers to approve the State Programme for Mine Action in Ukraine for 2017–21.

Annually, the MoD produces an operational plan for all operators, based on information provided by national agencies and international operators working in Ukraine.³⁴ There are currently no standardised criteria at a national level for prioritising tasks.³⁵

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

National mine action standards (NMAS) were finalised by the MoD in September 2018 after multi-year input and review from key stakeholders.³⁶ The NMAS were published in April 2019 but, in accordance with the new mine action law, are awaiting formal adoption by the government before they can become operational. As at May 2019, there were no CMR specific standards.³⁷ In April 2019, the Cabinet of Ministers approved Resolution No. 372 on "Regulations on marking mine and ERW hazards" which follows the provisions set out in international mine action standards (IMAS).³⁸

In May 2019, the GICHD, at the request of the OSCE PCU, provided assistance to the review of the national standards and also planned in-country training on standards and non-technical survey. These activities will be implemented in 2019 to 2020, depending on the progress with establishing the NMAA and NMAC, in accordance with the new law.³⁹

OPERATORS

The MoD and several other ministries continue to deploy units that undertake clearance and destruction of mines and ERW. This includes the Ministry of Internal Affairs, which conducts clearance through SESU and also has an engineering department that conducts EOD, the Security Service, the State Special Transport Service, 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.⁴⁰ As at June 2018, the Ukrainian authorities were deploying 55 demining teams (totalling 259 personnel), of which 37 teams were deployed by the Ministry of Defence.⁴¹

Three international demining organisations – DDG, FSD, and The HALO Trust – are operating in Ukraine.⁴² In addition, the Ukrainian organisations, Demining Team of Ukraine and Demining Solutions are active in demining in eastern Ukraine.⁴³

As at June 2018, The HALO Trust had 244 staff of whom 218 were engaged in survey, mine clearance, or battle area clearance (BAC). By September 2018, this had increased to a total of 360 staff.⁴⁴ All HALO Trust teams are trained and equipped for both mine clearance and BAC, and for all expected threats in the conflict zone, as non-technical survey has yet to determine the proportion of different types of hazard.⁴⁵ HALO Trust expects the expansion of its operations to continue, as at June 2019, it had 418 staff, including 25 manual and 2 mechanical clearance teams, 5 survey teams and 2 mechanical support teams.⁴⁶

FSD conducted survey and clearance in Ukraine. It had planned to increase its clearance capacity in 2018 with the creation of dedicated "large loop" crews to assist with BAC tasks although, as at June 2019, it was not known if this had occurred. FSD also conducted training for additional non-technical survey personnel in 2018.⁴⁷

It has been claimed that Emercom, Russia's state agency for emergencies, has planned to begin clearance in areas under the control of separatists in the Donetsk and Luhansk regions.⁴⁸

Currently operators conduct their own quality management but it is expected that the formal development of external quality management will take place in 2019 following the adoption of the mine action law.⁴⁹ As at June 2019, The HALO Trust was undergoing an external quality inspection by the MOD's Kamianets-Podilsky Demining Centre. Once this process is complete, all land cleared by The HALO Trust in Ukraine since the start of its demining operations in 2016 can be officially released.⁵⁰

OPERATIONAL TOOLS

In 2018, The HALO Trust deployed its first mechanical clearance asset, the first operator in Ukraine to do so.⁵¹ As at June 2019, HALO Trust was deploying three mechanical clearance assets, two armoured front-end loaders, and one armoured excavator.⁵²

DDG plans to use drones to create high-resolution maps for their tasks but, as at June 2019, the mechanism for acquiring permission to fly is not yet in place.⁵³ DDG does not use any mechanical assets.⁵⁴ It was expected that FSD will relocate a mechanical clearance machine to Ukraine from another FSD programme later in 2018, although, as at May 2019, it was not known if this was done.⁵⁵

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

DDG did not conduct any survey or clearance of CMR contaminated areas in 2018.⁵⁶ As at May 2019, FSD had not provided any information on whether it undertook survey or clearance of CMR contamination in 2018. The HALO Trust cleared one area of 49,010m² and found two submunitions (see Table 1) and identified three new areas of CMR contamination with a total surface area of 399,476m².

The HALO Trust has only cleared three areas with CMR contamination since 2016.⁵⁷ No CMR were destroyed during spot tasks by HALO or DDG in 2018.⁵⁸

No target date has been set for the completion of CMR clearance in Ukraine. Although it is understood, in addition to clearance conducted by operators, some clearance of CMR contamination has been undertaken by the MoD the extent is unclear as that information has not been made available by the national authorities.⁵⁹

Access to CMR contamination is a problem in certain areas either because of security concerns or because of their proximity to active military sites.⁶⁰ In addition, Ukraine has not had full control over parts of its territory with suspected CMR contamination since conflict erupted in 2014.⁶¹ 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, in any areas of Ukraine over which it exercises effective control.

Table 1: Clearance of CMR-contaminated area in 2018⁶²

District/Village	Operator	Areas cleared	Area cleared (m ²)	Submunitions destroyed
Volnovaskyi Graftske	HALO Trust	1	49,010	2
Totals		1	49,010	2

- 1 National Security and Defence Council and State Emergency Services of Ukraine (SESU), "Humanitarian demining in Ukraine: current issues and challenges", Anti-personnel Mine Ban Convention (APMBC) Fourteenth Meeting of States Parties (14MSP), Side event, Geneva, 2 December 2015.
- 2 Interview with Lt.-Col. Yevhenii Zubarevskiy, Mine Action Department, Ministry of Defence (MoD), in Geneva, 20 May 2016.
- 3 "Measures to ensure compliance", presentation by Col. Viktor Kuzmin, Deputy Chief, Engineer Troops, Armed Forces of Ukraine, provided to the APMBC Implementation Support Unit at the APMBC Intersessional Meetings, Geneva, 9 June 2017, at: <http://bit.ly/2EoMS2u>.
- 4 Interview with Maksym Komisarov, Chief of Mine Action Department, MoD, in Geneva, 8 June 2018.
- 5 Ibid.
- 6 "Mine Action in Ukraine", Side-event presentation by Lt.-Col. Yevhenii Zubarevskiy, MoD, at the 19th UN Meeting of Programme Directors, Geneva, 17 February 2016; and Statement of Ukraine, APMBC Intersessional Meetings, Geneva, 19 May 2016.
- 7 Emails from Yuri Shahramanyan, Programme Manager, HALO Trust Ukraine, 24 May 2017; and Henry Leach, Head of Programme, DDG Ukraine, 29 May 2017.
- 8 Email from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.
- 9 Interview with Miljenko Vahtavic, OSCE PCU, 7 February 2019.
- 10 Human Rights Watch (HRW), "Ukraine: Widespread use of cluster munitions", 20 October 2014, at: <http://bit.ly/2WgCZ0n>; "Ukraine used cluster bombs, evidence", *New York Times*, 20 October 2014; HRW, "Ukraine: Attacks require better investigation", 19 December 2014; "A test of the new Ukraine's commitment to reform", 15 January 2015; "Ukraine: More Civilians killed in Cluster Munition Attacks", 19 March 2015; and Protection Cluster Ukraine, "Eastern Ukraine: Brief on the need for humanitarian mine action activities", undated, but accessed on Protection Cluster website, 5 May 2016, at: <http://bit.ly/2YKhmE2>; Armament Research Services, "9M55K cargo rockets and 9N235 submunitions in Ukraine", Blog entry, 3 July 2014, at: <http://bit.ly/2YE33AB>.
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- 12 See, e.g., "During a Year in Kerch and Sevastopol neutralized 33 thousands of munitions", *Forum*, 4 December 2009.
- 13 "Humanitarian mine and UXO clearing of the territory of Ukraine conducted by the State Emergency Service of Ukraine", Side-event presentation by Col. Oleh Bondar, Head, Division for pyrotechnic work and humanitarian demining, SESU, at the 19th UN Meeting of Programme Directors, Geneva, 17 February 2016.
- 14 Email from Lt.-Col. Yevhenii Zubarevskiy, MoD, 27 June 2017.
- 15 Ibid.; and emails from Anton Shevchenko, OSCE, 14 June 2016; and Gianluca Maspoli, Country Focal Point for Ukraine, GICHD, 20 June 2017 and 5 July 2018.
- 16 Ibid.; National Security and Defence Council and the SESU, "Humanitarian demining in Ukraine: current issues and challenges", Side event, 14MSP, Geneva, 2 December 2015; and National Defence and the Canadian Armed Forces, "Operations UNIFIER"; and "Humanitarian mine and UXO clearing of the territory of Ukraine conducted by the State Emergency Service of Ukraine", Side-event presentation by Col. Oleh Bondar, SESU, Geneva, 17 February 2016; and email from Lt.-Col. Yevhenii Zubarevskiy, MoD, 17 June 2016.
- 17 OSCE, "Ukrainian parliament adopts legal framework for mine action, with OSCE advice provided", 10 December 2018, at: <http://bit.ly/2QdTaQo>; interview with Miljenko Vahtarić, OSCE PCU, 7 February 2019; and email, 13 June 2019.
- 18 Emails from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019; and Henry Leach, DDG Ukraine, 25 September 2018.
- 19 Email from Henry Leach, DDG Ukraine, 2 May 2019.
- 20 Email from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.
- 21 Interview with Col. Oleksandr Shchebetiuik, Ukrainian Armed Forces, in Geneva, 26 June 2015.
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- 23 GICHD, "Conference on Ukraine's current security, humanitarian demining and ERW challenges", News release, Geneva, 24 April 2015.
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- 25 Email from Henry Leach, DDG Ukraine, 25 September and 1 October 2018.
- 26 Email from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.
- 27 Email from Henry Leach, DDG Ukraine, 2 May 2019.
- 28 Emails from Yuri Shahramanyan, HALO Trust Ukraine, 24 May 2017 and 16 May 2019.
- 29 Emails from Lt.-Col. Yevhenii Zubarevskiy, MoD, 21 October 2016 and 27 June 2017; Gianluca Maspoli, GICHD, 20 June 2017; and Inna Cruz, Information Management Advisor, GICHD, 5 July 2018.
- 30 Email from Gianluca Maspoli, GICHD, 20 June 2017.
- 31 Email from Miljenko Vahtarić, OSCE PCU, 30 April 2018.
- 32 Email from Miljenko Vahtarić, OSCE PCU, 25 September 2018.
- 33 Emails from Yuri Shahramanyan, HALO Trust Ukraine, 16 May and 31 May 2019.
- 34 Email from Gianluca Maspoli, GICHD, 25 September 2018.
- 35 Emails from Henry Leach, DDG Ukraine, 2 May 2019; and Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.
- 36 Emails 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.
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- 47 Email from Anthony Connell, FSD Ukraine, 15 June 2018.
- 48 Protection Cluster Ukraine, "Eastern Ukraine: Brief on the need for humanitarian mine action activities".
- 49 Email from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.
- 50 Email from Yuri Shahramanyan, HALO Trust Ukraine, 19 June 2019.
- 51 Emails from Yuri Shahramanyan, HALO Trust Ukraine, 17 May 2019.
- 52 Email from Yuri Shahramanyan, HALO Trust Ukraine, 19 June 2019.
- 53 Email from Henry Leach, DDG Ukraine, 11 June 2019.
- 54 Email from Henry Leach, DDG Ukraine, 2 May 2019.
- 55 Email from Anthony Connell, FSD Ukraine, 26 June 2018.
- 56 Email from Henry Leach, DDG Ukraine, 2 May 2019.
- 57 Ibid.
- 58 Email from Henry Leach, DDG Ukraine, 2 May 2019.
- 59 Ibid.
- 60 Email from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.
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- 62 Email from Yuri Shahramanyan, HALO Trust Ukraine, 16 May 2019.

RECOMMENDATIONS FOR ACTION

- Vietnam should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Vietnam should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Vietnam should conduct high-quality survey in order to establish a baseline of CMR contamination.
- Vietnam should elaborate a national strategic plan and annual workplan for CMR with clear targets for survey and clearance.
- Vietnam should accelerate development of a national database and make data available to operators on a timely basis.
- Vietnam should publish comprehensive annual reports on the results of survey and clearance by all operators.

CLUSTER MUNITION REMNANT CONTAMINATION

Vietnam is massively contaminated by CMR but no accurate estimate exists, even to the nearest hundred square kilometres. An explosive remnants of war (ERW) impact survey, started in 2004 and completed in 2014, was only published in 2018. It claimed that 61,308km² or 19% of Vietnam's land surface area was affected by ERW but did not specify the area affected by CMR. It found, though, that CMR affected 32 of Vietnam's 63 provinces and cities.¹

In Quang Tri, reputedly Vietnam's most contaminated province, Norwegian People's Aid (NPA) is carrying out a province-wide survey, which it expects to complete in the first half of 2020.² Estimates of CMR-contaminated area are increasing sharply as survey progresses. In 2018, 165 confirmed hazardous areas (CHAs), amounting to 113km², were confirmed by technical survey, bringing the total to 255km². It is estimated that the remaining areas to be surveyed could result in additional CHAs of up to 100km².³

In Quang Binh, Mines Advisory Group (MAG) has used a desk-top non-technical survey methodology – Evidence Point Polygon (EPP) mapping – to map initial CHAs. MAG uses its historical operational data of explosive ordnance disposal (EOD) spot tasks to plot polygons of adjoining CMR evidence points. In 2018, MAG has mapped out almost 3.3km² across 118 CHAs. Based on extrapolations of available data, as at June 2019, MAG estimated that its historical data would lead to more than 42km² being defined as contaminated. However,

because MAG's data does not cover the whole province, overall contamination levels for Quang Binh will be higher than those being defined through EPP mapping. In 2019, MAG was planning to deploy a technical survey capacity to augment the EPP mapping data.⁴

Danish Demining Group (DDG) uses non-technical survey teams to estimate boundaries of a possible cluster munition strike area or battle area. In 2018, in Quang Nam province DDG found 151,967m² of additional CMR contamination. In Thua Thien Hue province it was just over 1.1km².⁵

The United States (US) dropped 413,130 tons of submunitions over Vietnam between 1965 and 1973, reportedly striking 55 provinces and cities. Vietnam's Military Engineering Command has recorded finding 15 types of US-made submunitions. Most submunition types were air-dropped, but artillery-delivered submunitions were also used in central Quang Binh and provinces to the south.⁶ Most of the CMR that international operators encounter in Quang Tri are BLU types 26, 29, and 61, and occasionally Mk 20 Rockeyes.⁷ In Quang Nam, almost all the CMR cleared by Danish Demining Group (DDG) were M83 submunitions.⁸ The Military Engineering Command has encountered substantial amounts of cluster munitions abandoned by the US military, notably at or around old US air bases, including eight underground bunkers found in 2009, one reportedly covering 4,000m² and containing some 25 tons of munitions.⁹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Vietnam has huge unexploded ordnance (UXO) contamination and an unquantified mine problem (see Mine Action Review's *Clearing the Mines* report on Vietnam for further information). The ERW impact survey identified the most heavily contaminated regions as the central coastal provinces, the Central Highlands,

the Mekong River delta, and the Red River delta.¹⁰ The experience of international operators in central Vietnam points to wide variations in contamination types from district to district. International operators report encountering mainly projectiles, mortars, grenades, and some aircraft bombs.¹¹

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Vietnam's mine action programme is restructuring, but management and operations continue to depend largely on the armed forces. According to the Decree on the Management and Implementation of Mine Action Activities, issued in February 2019 (hereafter, the 2019 Decree), the Ministry of National Defence (MoD) will continue to elaborate and preside over the national mine action programme, as the lead authority, in coordination with other relevant ministries and sectors.¹² It also designates the MoD as the focal point for international cooperation in mine action. However, the roles and responsibilities of the MoD and other relevant ministries and bodies are described in relatively generic terms within the 2019 Decree and it is expected that Guiding Circulars, which were being drafted as at May 2019, will bring clarification.¹³

The Vietnam National Mine Action Centre (VNMAC) was established in 2014 by Prime Ministerial decision (No. 738 of 2013) to strengthen the direction of mine action and provide a focal point for mine action operations. The 2019 Decree instructed, "VNMAC, under the direction of the Prime Minister and managed by Ministry of Defense, to monitor, coordinate and implement mine action tasks."¹⁴ Although the VMAC is not yet fully functional, 2019 will be a crucial year as the national programme develops its legal framework, structure, policies and standards.¹⁵

Operators have been invited by VNMAC to provide inputs to the development and implementation of the 2019 Decree and recently to the draft of guiding Circulars. According to MAG, VNMAC are gradually engaging more with operators through site visits and invitations to briefings and meetings but improvements can still be made to coordination and information sharing.¹⁶ The challenge for VNMAC is to identify and implement the legal framework that would allow mine action stakeholders to support the decision-making process.¹⁷

The approval process for granting visas to international mine action staff, memorandums of understanding (MoUs), and the importation of demining equipment can take months, all of which has a detrimental impact on operators' project plans and budgets. However, it is hoped with the adoption of the 2019 Decree and forthcoming Guiding Circulars the enabling environment for mine action at a central level will improve.¹⁸

MAG, NPA, the United Nations Development Programme (UNDP), and Golden West all provide capacity development support in Vietnam. In 2018 and 2019, MAG provided training and familiarisation visits for operations staff from the Quang Tri mine action centre (QTMAC).¹⁹ In 2019, MAG will also work with Quang Binh province to develop a strategic plan and will advise on other structural improvements to mine action institutions, such as with the database unit and coordination mechanisms.

NPA is implementing two capacity-development projects with VNMAC. An NPA Senior Technical Advisor is working with the VNMAC senior management team on all issues related to their strategic, organisational, and individual development as well as with donor liaison and resource mobilisation. NPA is also providing an Information Management Technical Advisor to VNMAC which has supported the establishment, development, training, and mentoring of their Information Management Unit, which runs the national database.²⁰

VNMAC, the Korea International Cooperation Agency (KOICA), and UNDP are collaborating on a US\$30 million project (KV-MAP) for ERW survey and clearance, and to support information management resources, risk education, and victim assistance in two central provinces (Binh Dinh and Quang Binh) for three years (2018–20). A Joint Project Management Unit (JPMU), with representatives from each of the three organisations, will be responsible for project management, supported by a UNDP chief technical adviser who joined in March 2018. A Joint Project Coordination Committee (JPCC), comprising representatives from the MOD, VNMAC, UNDP, and KOICA, will provide overall strategic guidance and oversight.²¹

Golden West is providing IMAS-compliant EOD training to Provincial Military Commands in Ha Tinh, Quang Binh, and Quang Tri provinces to provide a sustained clearance response, as well as advising VNMAC on technologies and training and supporting US military-to-military EOD training. Golden West is also partnering with the Geneva International Centre for Humanitarian Demining (GICHD) in a Management of Residual Explosive Remnants of War project to study the ERW ageing; develop standards for the collection, cutting, and dissection of ERW; and to draw up and pilot a long-term risk management model.²²

GENDER

MAG has a gender policy, which is also incorporated into other policies and procedures. MAG encourages gender within its recruitment, training, and promotion procedures ensuring all staff are entitled to equal opportunities.²³

NPA follows Vietnamese law in regards to providing equal opportunity and non-discrimination in employment. NPA continues to work towards gender equality in the recruitment process and in the work place. Women are actively encouraged to apply for roles and to pursue development opportunities once employed.²⁴

DDG has a gender policy and implementation plan and promotes equal access to employment opportunities. Of the three operators, DDG has the highest proportion of women employed.²⁵

MAG's community liaison teams are gender balanced and trained to involve all groups, including women and children.²⁶ NPA's non-technical survey teams are gender balanced to engage with affected peoples regardless of gender or age. NPA has found this inclusive process effective for later technical survey within the Cluster Munition Remnant Survey (CMRS) process.²⁷ DDG uses community meetings, focus group discussions, and household interviews to ensure that consultation with local people during survey activities is inclusive. Survey teams are for the most part made up of both men and women.²⁸

MAG's, NPA's and DDG's operations data are disaggregated by sex and age.²⁹

In CMR survey and clearance, 24% of MAG's, 25% of NPA's, and 30% of DDG's staff are female. In managerial/supervisory positions 34% of MAG's, 33% of NPA's, and 40% of DDG's are staffed by women.³⁰

INFORMATION MANAGEMENT AND REPORTING

Data quality and accessibility continues to be a major challenge in Vietnam. VNMAC is responsible for national information management and uses the Information Management System for Mine Action (IMSMA). However, with the exception of KV-MAP project data, information is not shared with mine action operators.³¹ The ERW impact survey report released in 2018 noted that "regulations on reporting demining activities have not been strictly followed" and authorities had received clearance data for only two provinces, Ha Tinh and Quang Tri, where international donors have supported operations.³²

VNMAC information management unit intends to consolidate mine action data from the Technology Centre for Bomb and Mine Disposal (BOMICEN), the KV-MAP project and Quang Tri province into the national information management system. With support from NPA, VNMAC is equipped with the necessary technical capabilities and knowledge, but legislation governing the collection and sharing of mine action data was lacking.³³ However, it is thought that the forthcoming guiding Circular, which as at June 2019 was in the process of being drafted, will provide some clarity on the collection and sharing of mine action data, including data permitted to be shared by the military.³⁴

Vietnam has a National Mine Action Standard, a Technical Mine Action Regulation, and various mine action-related procedures, each of which have their own data collection forms. These data collection forms are not consistent, nor are they used in a standard manner. However, this issue is expected to be addressed by the legal framework being developed.³⁵

Mine action data collected by the provincial information management system in Quang Tri, also using IMSMA, is accessible to all mine action stakeholders. The database holds survey and clearance results, providing a basis for planning and tasking, as well as victim data. It has also received some data on clearance activity undertaken by the Provincial Military Command for the years 2000 to 2013.³⁶ The data, which are believed to be accurate, up to date, and reliable, have been the catalyst for greater coordination across all stakeholders within the province.³⁷ Live up-to-date operations data can be accessed via QTMAC's website, while the rest of the Vietnamese provinces with active mine action programmes do not have databases, and operators maintain their own.³⁸

Development of information management is an aim of the KV-MAP project, the goal of which is to improve available information for the UXO/mine action sector to support informed policy making and task prioritisation.³⁹ In 2018, Coordination Offices and Database Centers for Mine Action were established in Quang Binh and Binh Dinh provinces with training provided to provincial staff. As at June 2019, these centres manage the data from the KV-MAP project, which is then fed into the VNMAC database but the aim is for the centres to be sustainable and in the future manage the mine action data for the province.⁴⁰

PLANNING AND TASKING

Vietnam does not have a strategy specifically targeting CMR. Decision 504, approved by the Prime Minister in April 2010, set out a National Mine Action Plan for 2010 to 2025. The plan aimed to “mobilize domestic and international resources in making efforts to minimize and finally create impact-free environment for social economic development.” It called for ERW contamination clearance of 8,000km² between 2016 and 2025.⁴¹

A VNMAC action plan for 2018 included three main targets⁴²:

- Finalise legislation, decrees, and guidelines for the mine action sector in order to provide a unified framework for the sector country-wide
- Clarify contamination estimates through the release of the landmine impact survey and develop risk education
- Clearance of some 300km² of ERW affected land.

It is evident that at least partially these targets have been achieved: legislation has been introduced; clarifying guidelines are being developed; and the results of the ERW impact survey was released. As at May 2019, however, no information had been formally provided by VNMAC on the realisation of its 2018 goals or on its goals for 2019.

As at May 2019, there was no national prioritisation system for CMR clearance. In Quang Tri province, there is a prioritisation plan in place and an effective system for task allocation.⁴³ The prioritisation processes and accompanying forms were piloted in 2018 and were rolled out in May 2019, with QTMAC now managing the province-wide clearance task prioritisation process.⁴⁴ The criteria are established based on consultation and agreement between QTMAC and operators. In Quang Binh province, MAG has been applying its own procedures and process to prioritise clearance tasks based on scores of consent, hazard assessment, and community benefits.⁴⁵ DDG uses a consultative approach at the province, district, and village level to prioritise its clearance tasks.⁴⁶

In Quang Tri, MAG receives tasks dossiers from QTMAC in a timely manner. In Quang Binh, MAG produces its own task dossiers to the same standard as those in Quang Tri. These will be submitted once Quang Binh has a functioning mine action coordination body.⁴⁷

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Vietnam has both National Technical Regulations (QCVNs), which are legally binding and similar in content to standing operating procedures (SOPs), and National Mine Action Standards (TCVN), closely aligned with the International Mine Action Standards (IMAS), but considered optional by VNMAC and the MoD. Both QCVNs and TCVNs were due to be updated in 2019 and following this, a system will be established for periodical reviews. According to NPA, the QCVNs are drafted with the MoD in mind and without consideration of other operators' SOPs, equipment use, land release methods, or structure and composition of teams. There are issues with the terminology used in TCVNs, chapters contradict themselves, and they read as a combination of SOPs and standards.⁴⁸

Operators are fully aware of the TCVN and the QCVNs and ensure their individual SOPs are in line with both IMAS and the QCVNs.⁴⁹

OPERATORS

Most clearance in Vietnam is conducted by the Army Engineering Corps and military-owned commercial companies. Outside the central provinces, its current strength and deployment are unknown. Since 2016, the Golden West Humanitarian Foundation, supported by US funding, has been training and mentoring the Provincial Military Commands (PMC) EOD teams in Quang Tri, Quang Binh and Ha Tinh. The Quang Tri PMC EOD team is now fully integrated into the tasking structure of the QTMAC as a valuable asset to the province. The Quang Binh PMC are coordinating closely with the KOICA project and offering support to them.

Officials have previously reported that it had 250 mine clearance and battle area clearance (BAC) teams nationally. The three PMC teams in these provinces all conducted BAC throughout 2018. Vietnam reportedly has more than 70 military-owned companies undertaking clearance related to infrastructure and commercial and development projects.⁵⁰

International operators active in 2018 included DDG, working in Quang Nam and Thua Tien Hue provinces; MAG, working in Quang Binh and Quang Tri provinces; NPA, working in Quang Tri and Thua Thien Hue provinces; and PeaceTrees Vietnam, who have been working in Quang Tri province since 1995.

MAG significantly increased its clearance capacity from 351 staff in 2017 to 610 in 2018. In 2019, MAG expected to deploy 670 personnel across both operational provinces. Community liaison capacity remained the same as 2017 in both Quang Tri and Quang Binh. In 2019, the community liaison capacity in Quang Binh was being slightly reduced as MAG will not generate EOD tasks from non-technical survey. Instead, they will respond only to emergency EOD spot tasks reported to its free hotline telephone number.⁵¹

NPA's non-technical survey capacity remained the same from 2017 to 2018. In 2019, NTS surveyors will be converted into technical survey searchers once non-technical survey is completed. Non-technical survey was expected to be completed in Quang Tri province by mid 2019 after which most of its staff will be converted into technical survey searchers. NPA expanded its technical survey capacity from 88 personnel in 2017 to 104 in 2018. In 2018, NPA deployed 44 clearance personnel, an increase from 2017. No change was expected in 2019.⁵²

DDG deployed ten people for non-technical survey in 2018, the same figure as 2017. In 2019, this will reduce to eight personnel due to funding constraints. DDG deployed 46 clearance personnel in 2018, an increase from 2017 due to the commencement of a project in A Luoi, Thua Thien Hue province, funded by the Embassy of Japan. Capacity reduced to 21 personnel in 2019 due to the end of funding for the project.⁵³

KV-MAP, which was initiated in February 2018, calls for ERW survey and clearance in the two provinces in 2018–20 to be carried out by 73 provincial military teams, (21 survey and 52 clearance teams), targeting survey of 200km² and clearance of about 80km².⁵⁴ The survey teams began working in September 2018 across the two provinces, and by the end of 2018 there were 15 teams working in Binh Dinh and 6 in Quang Binh. Clearance began in 2019 and, as at June, 12 clearance teams were deployed. An additional two survey teams have also been deployed to Quang Binh.⁵⁵

In 2018, a Quality Management System (QMS) consisting of eleven procedures was developed by VNMAC and the GICHD. These QMS procedures are being piloted in KV-MAP but, in general, no effective external quality management is being implemented by the national authority. In 2019, there was a plan to establish and train a VNMAC Quality Management team. This team will be trained by NPA, with DFID funding, with a view to receiving accreditation in early 2020 from VNMAC, with NPA and GICHD support.⁵⁶ The 2019 Decree tasks the MoD with guiding the implementation of quality management. This is not in practice yet and it is expected that the forthcoming Circular will provide guidance.⁵⁷

OPERATIONAL TOOLS

MAG, NPA, and DDG all deploy manual clearance teams. MAG also deploys mechanical assets to support vegetation removal. In 2019, MAG was seeking the necessary approvals from provincial and national authorities to deploy drones.⁵⁸

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

In 2018, 113km² was confirmed as containing CMR by technical survey, 74km² was surveyed, and 5,548 submunitions were found and destroyed in the process. In addition, MAG confirmed almost 3.3km² and DDG over 1.2km² as containing CMR using non-technical survey.

A total of over 26km² of CMR-contaminated area was cleared with 5,805 submunitions found and destroyed. There were also 1,167 submunitions found and destroyed during spot tasks.

SURVEY IN 2018

In Quang Tri, ranked as Vietnam’s most heavily contaminated province, NPA continued to work in a partnership with MAG, under which NPA conducted CMRS and MAG cleared the resulting CHAs.

As part of the process of refining CMRS, NPA adopted a more systematic technical survey approach that included 50 metre fade-out and “skip boxes” methodology which have significantly accelerated the process of defining CHA boundaries. A fade-out of 50 metres whenever evidence of CMR was found was introduced in April 2016 which was augmented by the

introduction, in January 2018, of skipping two boxes in each direction of a box with a confirmed evidence point.⁵⁹ NPA aims to complete survey of Quang Tri in 2020 and will then deploy survey teams for clearance.⁶⁰

NPA almost doubled the amount of area confirmed as containing CMR from 53.7km² in 2017 to 113.4km² in 2018. This increase was due to improved survey methodology: by introducing box skipping and by focusing on defining the CHA boundary NPA has found that the same effort leads to greatly increased output.⁶¹

CLEARANCE IN 2018

Operators cleared over 26km² in 2018, an increase of more than 54% on the 16.8km² cleared in 2017. The majority of this increase in output came from MAG, which cleared 61% more land than it did in 2017. In 2018, a total of 6,972 submunitions were destroyed of which 5,805 were found and destroyed during clearance and 1,167 during EOD spot tasks.

Table 1: Technical survey of CMR-contaminated area in 2018

Operator	Area surveyed (m ²)	CHAs identified	Area confirmed (m ²)	CMR destroyed	Other UXO destroyed
NPA	74,290,000	165	113,440,893	5,548	1,874
Totals	74,290,000	165	113,440,893	5,548	1,874

Table 2: Clearance of CMR-contaminated area in 2018

Operator	Province	Areas cleared	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
MAG	Quang Binh	22	4,547,998	2,184	331
MAG	Quang Tri	40	20,264,150	2,957	3,163
NPA	Quang Tri	N/R	397,095	86	126
PMC/GW	Quang Tri	8	458,959	2	202
NPA	Thua Thien Hue	N/R	281,970	256	99
DDG	Quang Nam	43	129,502	3	148
DDG	Thua Thien Hue	4	171,000	317	139
Totals		117	26,250,674	5,805	4,208

N/R = Not reported

In Quang Tri, MAG conducts clearance in partnership with NPA, which defines CHAs through technical survey. In Quang Binh, MAG clears CHAs defined through EPP Mapping. In 2018, a submunition or other remnant was found in every 2,082m² in Quang Binh and in every 6,852m² in Quang Tri. There was one CHA of 6,163m² in Quang Binh in which the teams found no CMR during clearance. However, this site was an anomaly as it was the first CHA defined through EPP mapping that subsequently had no contamination.⁶²

NPA's clearance output remained relatively consistent in 2018. A suspension in clearance operations in Thua Thien Hue was compensated for by the introduction of two new clearance teams in the last quarter of the year. No areas were cleared where contamination was not found.⁶³

DDG deploys battle area clearance teams to areas with suspected contamination as estimated by non-technical survey teams. Clearance of the area begins from evidence points collected by the non-technical survey teams and clearance to fade-out is applied to determine the boundaries of clearance.⁶⁴

In 2018, Quang Tri PMC were in the process of being organised into a functional EOD team so tasks were minimal, but outputs are expected to increase in 2019. The Quang Binh PMC did no clearance and responded to minimal spot tasks in 2018. This was being addressed in 2019.⁶⁵

Table 3: EOD spot tasks in 2018⁶⁶

Operator	No. of spot tasks	CMR destroyed	Other UXO destroyed
MAG	3,636	722	6,727
NPA	1,145	270	3,165
DDG	808	175	867
Totals	5,589	1,167	10,759

Vietnam has not set a target date for the completion of CMR clearance. In its national mine action plan for 2010 to 2025 it called for the clearance of 8,000km² of CMR from 2016 to 2025⁶⁷ but did not specify how much of this should be CMR. The lack of a baseline of CMR contamination and a lack of information at a national level about ongoing survey and clearance across the country makes it difficult to understand both Vietnam's annual progress in reducing CMR contamination and how this contributes to the completion of CMR clearance.

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RECOMMENDATIONS FOR ACTION

- Yemen should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Yemen should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Yemen Mine Action Centre (YEMAC) should seek to expand international technical support for the sector and facilitate survey and clearance by international operators.
- YEMAC should take immediate action to update operational standards and address weak application that is jeopardising deminer safety.
- YEMAC should become more transparent on its work, including by publishing regular, comprehensive reports on developments in its management, planning, and implementation of mine action.

CLUSTER MUNITION REMNANT CONTAMINATION

YEMAC has reported the presence of CMR in six governorates but the extent is not known. Contamination is believed to be heavy in Saada and al-Jawf governorates as well as in Amran, Hodeida, Mawit, and Sana'a governorates, including in Sana'a City.¹

Yemen had CMR contamination before 2015 but the escalation of armed conflict since 26 March 2015 has significantly increased both its extent and the threat to the civilian population, mainly as a result of airstrikes by the Saudi Arabia-led coalition.² Human Rights Watch said it had recorded Saudi air strikes using cluster munitions dating back to 2009.³ In March 2017, the organisation reported that 18 coalition attacks using cluster munitions since 2015 had killed at least 18 civilians and injured 74 more.⁴

Human rights groups have documented the use of United States (US) BLU-63 (Sana'a City), BLU-97 combined effect submunitions (Saada governorate), CBU-58 and CBU-105 sensor-fused munitions (Amran and Sana'a governorates), Brazilian Astros II munitions (Saada governorate and city) and British BL755 submunitions (Hajjah governorate). They have also reported use of ZP-39 artillery-delivered submunitions of indeterminate origin.⁵

No air strikes using cluster munitions by the Saudi-led coalition have been recorded since May 2017.⁶ The coalition, however, has continued air strikes into 2019, contributing to Yemen's already significant contamination by explosive remnants of war (ERW), including anti-personnel and anti-vehicle mines, including mines of an improvised nature, and a wide range of rockets, mortars, and artillery shells.⁷

PROGRAMME MANAGEMENT

Yemen established a National Mine Action Committee (NMAC) by prime ministerial decree in June 1998 to formulate policy, allocate resources, and develop a national mine action strategy.⁸ NMAC, chaired by the Minister of State (a member of the cabinet), brought together representatives of seven concerned ministries and a number of non-governmental organisations. In Yemen's 2019 request for an extension to its Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline YEMAC reported the Committee had disbanded.⁹

YEMAC was established in Sana'a in January 1999 as NMAC's implementing body with responsibility for coordinating mine action, including through responsibility for planning, quality control, and information management.¹⁰ YEMAC worked through two Regional Executive Mine Action Branches (REMABs), in Sana'a and Aden; a national training centre in Aden, also set up in 1999; and another REMAB in al-Mukalla (Hadamout governorate), which was created in March 2004. REMABs were responsible for field implementation of the national mine action plan.¹¹

Since the upsurge in conflict in 2015, YEMAC effectively split into two operations, undermining coordinated management and planning. In 2018, an office in Sana'a directed activities in the north in areas under the control of the Houthis. YEMAC's director was based in the south, overseeing activities in southern and central areas under the control of the internationally-recognised government, where it has its main offices in Aden and Marib, and branches in Abyan, Hadramaut, and Lahej.¹²

YEMAC said in 2019 it planned to open new branches in Taiz and Marib. It also announced plans to open a new coordinating office in Aden in 2019.¹³ The office was to be under YEMAC's director with responsibilities that included accrediting and tasking operators.¹⁴

The United Nations supported mine action in Yemen from 1999 to 2003 through a programme implemented by the UN Office for Project Services (UNOPS). From 2003, the programme came under full national management. The UN Development Programme (UNDP) deployed an international adviser to YEMAC at the end of 2014 to support planning and programme management. In 2018, its international staff included a chief technical adviser and planning and reporting specialist in Sana'a and a technical advisor based in Aden. National staff included two posts in Sana'a and one in Aden. In 2019, UNDP planned to recruit up to eight additional international staff and three or more national staff to strengthen the programme capacity.¹⁵

PLANNING

Yemen has no strategic plan for tackling CMR, mines, or ERW.¹⁶ Mine action in 2018 focused on emergency clearance of the most affected areas. YEMAC and UNDP expected to maintain emergency clearance in 2019 but also to build programme capacity and increase non-technical survey in order to develop an understanding of the extent of contamination. A coordination officer due to be appointed in 2019 was to be tasked with supporting planning.¹⁷

STANDARDS AND LAND RELEASE EFFICIENCY

Compliance with international standards of survey and clearance appear to be a major challenge and concern. Yemen acknowledges that clearance operations are not conducted to a "uniform standard or application of SOPs", which has largely been the situation since 2007. YEMAC observed "clearance teams are under tremendous pressure to release land quickly thus leading to the uneven application of the standards."¹⁸

INFORMATION MANAGEMENT

YEMAC maintains an Information Management System for Mine Action (IMSMA) database. UNDP observed that the system, although outdated, was becoming more reliable. It planned to hire an international information management expert in 2019 to work with YEMAC and develop capacity.¹⁹ Yemen said its IMSMA system is "outdated" and "not usable".²⁰

OPERATORS

Until 2018, YEMAC was the only organisation authorised to conduct survey and clearance. YEMAC had almost 1,000 staff deployed in field operations at the end of 2018 divided between the northern and southern areas of operations.²¹ Yemen reported in early 2019 that "teams and management are in need of a complete development of methodologies, skill development and training. YEMAC is using outdated clearance methodologies, based on their training in the 1990s, which is further hampered by a degree of 'skill fade' by the teams."²² It also noted that staff are paid only intermittently and have no insurance or pension.²³

Dynasafe Middle East Project Management became operational in May 2018. It is implementing the King Salman Humanitarian Aid and Relief Centre (KSrelief) Saudi Project for Landmine Clearance (Project MASAM), headquartered in Marib. Operational management is provided by SafeLane Global Ltd., which worked in 2018 with a total staff of 304, mostly seconded from YEMAC but including up to 19 international staff.²⁴ Danish Demining Group (DDG), which already had a presence in Yemen conducting risk education, deployed a non-technical survey team to Taiz in November 2018.²⁵

DEMINEE SAFETY

Casualties during CMR clearance were not reported in 2018. That said, poor compliance with safety standards appears to be a major challenge and concern and significant numbers of deminees, particularly those working on Project MASAM, may have been killed and injured during the year. YEMAC reported 14 staff killed in the course of clearance operations in 2018.²⁶ A YEMAC deminer was also reportedly shot dead by a sniper in Taiz.²⁷

Five international staff working for Safelane were killed in January 2019. KSrelief said they died in an accidental explosion as they were transporting mines from the project headquarters to a remote location for demolition.²⁸ SafeLane said that ordnance in their vehicle contributed to the scale of the explosion but initial detonation was caused by an improvised explosive device (IED) placed under the passenger seat of their vehicle.²⁹ YEMAC said two government investigations into the incident found no evidence that SafeLane had been targeted by any armed group.³⁰ Six SafeLane personnel were killed in April in an explosion in a depot stockpiling mines and other ERW for destruction in the port city of Mokha. A seventh operator died of his injuries a day later. The nationality of those killed was not reported.³¹

LAND RELEASE

Mine action in 2018 focused on emergency clearance of small, high-threat areas and did not include systematic survey and clearance of areas affected by cluster munitions. Of 125,193 items of ERW recorded as destroyed in 2018, 79 were reported to have been submunitions.³²

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- 1 Interviews with Ahmed Alawi, YEMAC, 17 February 2016; and Stephen Bryant, Chief Technical Adviser, UNDP, in Geneva, 6 February 2017.
 - 2 United Nations Development Programme (UNDP), Grant Progress Report for 1 October–31 December 2015, 25 January 2016.
 - 3 Human Rights Watch, "Yemen: Cluster munitions harm civilians", 31 May 2015.
 - 4 Human Rights Watch, "Brazilian cluster munitions wound children", 17 March 2017.
 - 5 Human Rights Watch, "Yemen: Cluster munitions harm civilians", 31 May 2015 and "Brazilian cluster munitions wound children", 17 March 2017; Amnesty International, "Yemen: children among civilians killed and maimed in cluster bomb 'minefields'", 23 May 2016; the Legal Centre for Rights and Development, Sana'a, "The bombing of civilians and residential neighbourhoods with international forbidden weapons (cluster munitions)", undated but 2018.
 - 6 Office of the UN High Commissioner for Human Rights, "The situation of human rights in Yemen, including violations and abuses since September 2014", UN doc. A/HRC/36/33, 5 September 2017, p. 9.
 - 7 See, e.g., briefing to the United Nations Security Council by Mark Lowcock, United Nations Emergency Relief Coordinator, 15 April 2019.
 - 8 Anti-Personnel Mine Ban Convention (APMBC) Article 7 Report, Form I, 31 March 2009.
 - 9 APMBC Article 5 deadline Extension Request, 28 March 2019, p. 12.
 - 10 APMBC Article 5 deadline Extension Request, 31 March 2008, p. 2.
 - 11 UNDP, "Emergency Mine Action Project, Annual Report 2017", January 2018, p. 8.
 - 12 Interview with Ameen Saleh Alaqili, Director, NMAP/YEMAC, in Geneva, 5 February 2019.
 - 13 APMBC Article 5 Extension Request, 28 March 2019, p. 5.
 - 14 Interview with Ameen Al-Aqili, Director, YEMAC, in Geneva, 23 May 2019.
 - 15 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 9.
 - 16 APMBC Article 5 Extension Request, 28 March 2019, p. 12.
 - 17 Interviews with Ameen Saleh Alaqili, NMAP/YEMAC; Stephen Bryant, Stephen Robinson and Aleksandar Mihailov, UNDP, in Geneva, 5 February 2019; email from Stephen Robinson, UNDP, 15 May 2019; UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 9.
 - 18 APMBC Article 5 Extension Request, 28 March 2019, p. 10.
 - 19 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, pp. 10–11.
 - 20 Yemen Article 5 Extension Request, 28 March 2019, p. 10.
 - 21 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 10; and interviews with Stephen Bryant, Stephen Robinson and Aleksandar Mihailov, UNDP, in Geneva, 5 February 2019.
 - 22 APMBC Article 5 Extension Request, 28 March 2019, p. 9.
 - 23 Ibid., p. 10.
 - 24 Email from Chris Clark, Director Special Projects, Safelane Global Ltd., 17 April 2019.
 - 25 Email from Marie-Josée Hamel, Head of Programme, DDG Yemen, 3 April 2019.
 - 26 Interview with Ameen Al-Aqili, YEMAC, in Geneva, 23 May 2019.
 - 27 Interview with Stephen Robinson and Aleksandar Mihailov, UNDP, in Geneva, 5 February 2019.
 - 28 KSrelief, "KSrelief mourns loss of life following explosion related to Masam demining project in Yemen", Statement, 21 January 2019.
 - 29 Emails from Chris Clark, Director Special Projects, Safelane Global Ltd., 17 and 23 April 2019.
 - 30 Interview with Ameen Al-Aqili, YEMAC, in Geneva, 23 May 2019.
 - 31 "Six deminers killed in Yemen blast", Agence France Presse, 26 April 2019.
 - 32 UNDP, "Emergency Mine Action Project, Annual Report 2018", 20 January 2019, p. 6 and Annex A, p. 26.

OTHER AREAS

The background of the page is composed of several overlapping, angular shapes in two shades of red: a vibrant, medium red and a darker, more muted red. These shapes create a dynamic, layered effect, with some shapes appearing to be in front of others, creating a sense of depth and movement. The overall composition is abstract and modern.

RECOMMENDATIONS FOR ACTION

- While formal accession to the Convention on Cluster Munitions (CCM) is not currently possible for Kosovo, as it is not yet recognised as a state by the depository to the Convention, Kosovo should submit a letter to the United Nations Secretary-General stating that it intends to fully comply, on a voluntary basis, with the CCM.
- This should include the submission of a voluntary Article 7 transparency report on an annual basis, as Kosovo has proposed in its Mine Action Strategy 2019–2024.
- Kosovo should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- The Kosovo Mine Action Centre (KMAC) should continue its efforts to ensure timely and efficient clearance of CMR, in line with the objectives in its Mine Action Strategy 2019–2024 and complete clearance by the end of 2024. In developing the Strategy, KMAC has established a clear, realistic, and costed plan to complete CMR clearance, which should be supported and funded by the international donor community.
- KMAC should promote the implementation of its mine action strategy and mine action programme across the Kosovo government.
- KMAC and international mine action operators should increase their collaboration to seek additional funding and greater financial stability for mine action.

CLUSTER MUNITION REMNANT CONTAMINATION

At the end of 2018, contamination from CMR in Kosovo was estimated to cover a total of 15.37km² across 48 areas, according to KMAC.¹ This is almost the same as the 15.4km² across 49 areas reported for the end of 2017.²

Kosovo has gained an accurate assessment of CMR contamination remaining on its territory, as a result of two decades of mine action activities, including surveys in 2013 and 2015. The majority of the contamination is well known across Kosovo's seven districts, with the exception of Mitrovica, where operator Norwegian People's Aid (NPA) expected that additional CMR-contaminated areas would be identified and added to the mine action database in 2019, as it garnered additional information as its operations expanded in southern Mitrovica.³

Contamination is primarily a result of conflict between the Federal Republic of Yugoslavia (FRY) and the Kosovo Liberation Army (KLA) in the late 1990s; and between the FRY and the North Atlantic Treaty Organization (NATO) in 1999.⁴ During Operation Allied Force, NATO aircraft bombed 333 locations between 24 March and 10 June 1999, dropping 1,392 bombs that released more than 295,700 submunitions.⁵ Forces of the FRY also used cluster munitions during the 1998–99 conflict in Kosovo.⁶ The failure rate of the submunitions was typically between 10% and 15%, resulting in tens of thousands

of unexploded submunitions lying on and under the ground. A large clearance programme followed in 1999 under a United Nations (UN) mandate, but this ended prematurely in 2001, leaving many CMR-contaminated areas still needing to be cleared.⁷

In 2013, The HALO Trust and KMAC conducted a joint non-technical survey of cluster munition strikes and minefields across Kosovo, with the exception of four municipalities in the north. The survey identified 130 confirmed hazardous areas (CHAs): 51 cluster munition strikes, covering 7.63km², and 79 mined areas over 2.76km².⁸

In 2015, NPA, in coordination with KMAC and local municipality authorities, conducted non-technical survey of the four northern municipalities, which were not covered in the 2013 HALO Trust/KMAC survey.⁹ The NPA survey confirmed 8.9km² of CMR contamination in three of the four municipalities surveyed (Leposavic, Zubin Potok, and Zvecan). No CMR contamination was found in the fourth (Mitrovica North).¹⁰ On the basis of available evidence, NPA believed that 83 cluster bombs were dropped in this region, dispersing a total of 17,041 submunitions.¹¹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Kosovo is contaminated with anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Kosovo for further information). It also remains affected by explosive remnants of war (ERW) other than CMR.

Most ERW consists of unexploded aircraft bombs (located mainly in the west of the province) and items

of abandoned explosive ordnance (AXO). However, explosive ordnance disposal (EOD) teams continue to encounter items of unexploded ordnance (UXO) dating back to World War II.¹² Kosovo Protection Force (KFOR) and Kosovo Security Force (KSF) EOD teams regularly dispose of ERW in response to information provided by the public and demining organisations.¹³

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

In January 2011, the EOD Coordination Management Section became KMAC, responsible for managing clearance of mines and ERW, including CMR. KMAC prepares an annual workplan in cooperation with international demining NGOs and coordinates their operations along with the national demining teams of the KSF. It also coordinates survey, quality assurance, risk education, public information, and victim assistance activities.¹⁴ KMAC's role and responsibilities as head of the national mine action programme under the auspices of the Ministry of Defence were established and institutionalised by Kosovo's 2012 Law on Humanitarian Demining.¹⁵

In 2018, KMAC had a total of five permanent staff: a Director, a Senior Quality Assurance (QA) Officer, a QA Inspector, a Mine Risk Education (MRE) Officer, and a Public Information Officer.¹⁶

Kosovo's mine action programme is fully nationally owned, with a strong, longstanding commitment from the national government. Evidence of this can be seen in the ongoing support for KMAC and its small, but dedicated team of permanent national staff, which have been employed with KMAC since its creation. This has benefitted the programme with the retention of skilled and experienced staff and the retention of institutional memory and national capacity building. The national mine action programme is said to be efficient, effective, and collaborative.¹⁷

The Kosovo government provided approximately €135,000 in financial support to KMAC in 2018, consistent with the amount of funding for KMAC's operations provided in 2017. The KSF received €980,000 for mine and CMR clearance in 2018, also consistent with the funding it received from the Kosovo government the previous year.¹⁸ KMAC reported that it expected similar levels of funding in 2019.¹⁹

Kosovo's current Mine Action Strategy 2019–2024 sets out the objective of intensifying resource mobilisation efforts in order to gain greater financial stability.²⁰ While a specific resource mobilisation strategy did not exist in 2018, operators reported that coordinated approaches together with KMAC were made to donors such as the United States and European Union.²¹

Unfortunately, the misperception that CMR and mine clearance in Kosovo was completed in 2001 persists, whereas the reality is that significant contamination remains to be cleared. Kosovo remains a poor country and needs economic assistance to help it complete cluster munition clearance in a timely manner, otherwise completion risks being prolonged unnecessarily, when with sufficient resources it is possible to complete clearance of the CMR contamination in less than five years.

In 2019, KMAC identified funding and logistical support as the two primary areas where it could most benefit from assistance from international donors and mine action operators.²²

GENDER

Kosovo's Mine Action Strategy 2019–2024 reflects the commitment of the mine action programme to ensure that gender are taken into consideration in the planning, implementation, and monitoring of all mine action projects, with a view to promoting equality and quality.²³ The Strategy stipulates that all mine action activities and assistance must reflect the needs of different ages and gender in a targeted and non-discriminatory manner, and that mine action and community liaison data is also to be collected systematically disaggregated according to sex and age.²⁴

Both KMAC and KSF had gender policies in place in 2018. KMAC reported that the KSF's gender policy aims to facilitate the consultation of all groups affected by CMR, mine, and ERW contamination, expressly women and children. In 2018, a total of 8% of KSF staff employed in operational mine action roles were women, along with 5% of staff in managerial or supervisory positions.

Within KMAC, 20% of its staff were women, including in both operational and managerial roles.²⁵

Kosovo's mine action strategy recognises the barriers which exist against equal employment in Kosovo society, including significant differences in employment levels between men and women, despite the number of men and women of working age being broadly similar. The Strategy notes that, as at 2019, more than four-fifths of women of working age were not employed in Kosovo's labour market, and less than one in eight women of working age have been employed annually over the past five years. The primary reasons given by women for unemployment are child and family care obligations, which traditionally fall on women in Kosovo society. The Strategy notes the efforts made by mine action operators to overcome these challenges and barriers to employment, such as through child care and parental leave, and gender-sensitive recruitment practices that

encourage women to apply for positions traditionally seen as jobs for men. It further notes the importance of employment of not only multi-gender, but multi-ethnic, survey and clearance teams and the particular benefits of recruitment in areas affected by high unemployment and poor socio-economic conditions.²⁶

In 2018, The HALO Trust developed a gender policy in consultation with the Kosovo Women's Network, an advocacy network of over 140 members, including women's organisations of all ethnic backgrounds from throughout Kosovo, which was adopted in February. The policy aims both at increasing the recruitment of women, as well as retention of existing female employees through the provision of extra maternity leave and child care allowances. Recognising the significant deterrents to women's employment of affordable child care and traditional gender roles as family caregivers, The HALO Trust's gender policy provides female employees and single parents of either sex with stipends covering 75% of child care costs and increased the paternity leave allowance from four days as stipulated by national law, to two weeks of paternity leave.²⁷ By the end of 2018, the number of women working for The HALO Trust in Kosovo increased to close to 15%, up from 3% at the start of the year.²⁸

In 2018, The HALO Trust's dedicated Community Liaison Officer was female and the programme reported deploying a gender-balanced survey team which tried to reach male and female respondents equally, including girls and boys with permission of their parents. As men are most often the primary respondents of the household, added effort was placed on access to and inclusion of women and girls in all project phases. The HALO Trust expected that with increasing community liaison and a stronger female presence within demining teams, further progress would be made to overcome

the challenge of reaching women and encouraging women to take a greater interest in mine action in their communities. Data collected post-clearance is also disaggregated to ensure the understanding and analysis of impact of mine action activities also takes gender into consideration, it reported.²⁹

While The HALO Trust reported that it did not have any women in operational management positions in 2018, it stated that it was a priority for the programme address upward mobility for women within the organisation and was partnering with the Gender and Mine Action Programme (GMAP) in 2019 to this end. Additionally, in 2019, the programme planned to train more women in the use of Handheld Stand-off Mine Detection System (HSTAMIDS) mine detectors and to introduce new junior management positions into which women will have the opportunity to be promoted.³⁰

NPA reported that a target of 25% female staff was in place, and in 2018, 23% of its staff were women, including one out of four team leaders, two out of six medics, and one out of four staff in the management team. Women were especially encouraged to apply for staff positions, and given priority over male applicants with equivalent skills and experience. NPA confirmed its survey and community liaison teams were gender balanced and ensured that the participation of all relevant social groups is always taken into account when conducting activities in local communities.³¹ NPA's efforts to recruit and train multi-ethnic survey and clearance teams was also been a critical factor in allowing for the deployment of teams in areas of particular ethnic and political sensitivities, extending the reach of mine action operations in north Kosovo, while also building bridges and friendships between the individual staff members and through their community liaison activities.³²

INFORMATION MANAGEMENT AND REPORTING

KMAC uses the Information Management System for Mine Action (IMSMA) database, New Generation version. Data is clearly disaggregated between mine, cluster munition, and ERW contamination.³³ Operators were positive in their assessments of the quality and accessibility of data contained in the database and of KMAC's information management systems in general. Notably, operators report to KMAC on a weekly basis.³⁴

Both NPA and The HALO Trust also emphasised the constructive and proactive working relationship with KMAC. Beyond weekly KMAC visits to operational sites, regular senior management coordination meetings between KMAC and mine action operators were held on a monthly basis in 2018, or more frequently when required, and quarterly meetings were also convened for operational planning.³⁵

According to its most recent mine action strategy, KMAC intends, as a means to show its commitment to the CCM, to submit voluntary Article 7 transparency reports on an annual basis.³⁶

PLANNING AND TASKING

The GICHD supported the development of Kosovo's new Mine Action Strategy 2019–2024, bringing together a wide range of national and international stakeholders in a strategy stakeholder workshop in Pristina in October 2018. The strategy, formally approved in January 2019 and launched by the Ministry of Kosovo Security Services on 4 April 2019, has three goals:

- Mine/ERW threats managed and reduced
- Communication and awareness raising
- Management of residual contamination.

The strategy declares that all known mine and CMR-contaminated areas will be addressed by the end of 2024, leaving only residual contamination to be managed accordingly. It contains annual projections for CMR clearance, including:

- All high priority CMR tasks (four as at October 2018) will be cleared by 2020;
- All medium-priority CMR tasks (thirty as at October 2018) will be cleared by 2022; and
- All low-priority CMR tasks (sixteen as at October 2018) will be completed by 2024.³⁷

The Strategy clearly states that it is based on a number of assumptions, including that the necessary funding will be secured and that no new mined or CMR-contaminated areas are identified. It notes, however, that “so far each year 3–4 different affected areas have been reported” and that should this trend continue, capacity and progress will need to be reassessed with regards to the 2024 deadline.³⁸ In June 2019, NPA informed Mine Action Review it was too soon to assess the implications of its technical survey activities for the identification or release of CMR-contaminated areas requiring release in Mitrovica.³⁹

As per the Strategy, KMAC will develop annual operational workplans to implement the strategy's goals.⁴⁰ KMAC will also request an external mid-term review of the strategy in 2022 to evaluate progress and make any adaptations according to contextual changes if required.⁴¹

According to the strategy, a separate national strategy on the management of residual contamination will be developed by KMAC by 2023, in collaboration with other national actors, to clarify roles and responsibilities in order to manage a long-term residual contamination problem.⁴²

In 2019, KMAC confirmed that it had developed annual operational workplans to target CMR-contaminated areas, according to impact-based criteria, including risk reduction, development priorities, and poverty reduction, along with the findings of a nationwide baseline socio-economic impact assessment carried out in 2018 by KMAC, with the support of The HALO Trust.⁴³ The mine action strategy for 2019–24 also is in alignment with the objectives of Kosovo's National Development Strategy 2016–2021.⁴⁴

The HALO Trust reported prioritising in its areas of operations was based on impact, land use, seasonal access, and risk and contamination levels.⁴⁵ While NPA confirmed that its operations in northern Kosovo continued to focus on high-impacted areas, it noted that it was also important for NPA to ensure both Serbian and Albanian-populated areas are prioritised equally, with sensitivity towards political, cultural, and ethnic affiliations.⁴⁶

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

National Mine Action Standards for land release are in place in Kosovo, which according to KMAC are in accordance with the International Mine Action Standards (IMAS).⁴⁷

Kosovo's national mine action standards set the standard clearance depth for battle area clearance (BAC) at 50cm.⁴⁸ There has been a discussion over whether this standard clearance depth could be reduced to 30cm in certain forested and stony areas which would enable detectors to be set to a medium rather than high sensitivity setting and potentially result in fewer false indicators being investigated.⁴⁹ However, KMAC informed Mine Action Review in 2019 that the BAC clearance depth of 50cm is necessary as many of the areas targeted with cluster munitions were especially wet and muddy, as the bombing campaign took place during a period of heavy rain, making it possible for submunitions to penetrate to higher than normally expected depths.⁵⁰ It did, though, state that on certain tasks where the ground was entirely stony, a reduction in search depth could be considered.⁵¹

Data from NPA and HALO Trust largely support this assertion. The HALO Trust's analysis of devices found by depth in 2008–18 show that 22% of all items found by HALO Trust teams were at a depth of 30cm or deeper.⁵² NPA's clearance statistics show that 12% of all submunitions found in its operations were found at depths greater than 30cm. At the same time, NPA raised the issue of the potential threat that explosive items located deeper than 30cm might pose, and whether the expected future ground use could be considered when setting the search depth.⁵³

In accordance with the national mine action standards, KMAC deployed two QA officers in 2018 who visited sites at least once a week to ensure compliance with the national standards and standing operating procedures (SOPs).⁵⁴ NPA reported increasing its internal QA/quality control (QC) capacity during the year and confirmed that KMAC made frequent visits to its tasks, which it said provided highly valued input for QA.⁵⁵ The HALO Trust confirmed that KMAC made weekly QA visits to its operations and reported that it was exploring

opportunities to restructure team management with the aim of enabling more effective QA/QC.⁵⁶

A 2014 evaluation of Kosovo's mine action programme, conducted on behalf of the International Trust Fund (ITF) Enhancing Human Security, concluded that an increase in capacity and improvements to land release methodology and equipment deployed would be necessary if Kosovo were to complete clearance operations by 2024. Since the 2014 evaluation a number of significant improvements have been introduced to the mine action programme, including the use of HSTAMID (Handheld Standoff Mine Detection System) detectors by the HALO Trust.⁵⁷ In 2018, both The HALO Trust and NPA were also using large-loop detectors on certain CMR tasks, which enabled further productivity increases.⁵⁸

In 2018, in another significant advancement in land release efficiency, KMAC formally approved the implementation of Cluster Munition Remnants Survey (CMRS) methodology by NPA to carry out technical survey activities on CMR-contaminated areas in Kosovo. According to this methodology, which NPA has modified to take into account the specific conditions in Kosovo, and in line with the IMAS, operators are permitted to enter a cluster munition strike area and to walk on ground with subsurface contamination, increasing the efficiency of the survey process and offering the ability to accurately define confirmed hazardous areas.⁵⁹ HALO Trust, which displayed some hesitancy to implement a CMRS approach in 2017, reported in 2019 that it was interested in defining evidence-based clearance standards and that it felt there could be scope to explore and improve survey and clearance standards for addressing CMR, especially in regard to recent developments with the implementation of CMRS methodology in South-East Asia.⁶⁰ It believed, however, that as general survey has already been conducted in HALO Trust's areas of operations, implementing CMRS would duplicate work already carried out to define confirmed hazardous areas.⁶¹

OPERATORS

In 2018, Kosovo's national mine action programme's capacity consisted of two international operators, The HALO Trust and NPA, and national operator, the KSF. The HALO Trust and NPA continued to conduct BAC in 2018, along with the KSF, which also provided a round-the-clock EOD emergency response.⁶² KFOR also supports the KSF and Kosovo Police with EOD response tasks and organising mine and ERW demolitions in Mitrovica and the north of Kosovo, including NPA's areas of operations.⁶³ The demining season is from the end of March to the end of November, due to weather conditions.⁶⁴

In 2018, The HALO Trust maintained a 10-team capacity to conduct both mine and CMR clearance. It reported that operational personnel are cross-trained and can move between activities, but generally the programme is split, with seven teams dedicated to mine clearance and three dedicated to cluster munition clearance. At the end of 2018, the programme employed 97 operations personnel, of whom 14% were women.⁶⁵

In 2018, NPA deployed, for the first time, two BAC teams composed of only national staff. It deployed the teams, of eight operators each, from the start of the year, as opposed to 2017, when a team of experienced national deminers from NPA's Bosnia Herzegovina programme were deployed on clearance tasks and to mentor and train newly recruited national Kosovo demining staff teams. This mentoring and training made it possible to deploy two national BAC teams of ethnically mixed backgrounds, which also served to enhance national capacity and reduce costs of deploying expatriate personnel. Most notably, the deployment of local teams of mixed ethnicities made it possible for NPA to work in previously inaccessible areas in north Kosovo and deploy teams to both Serbian and Albanian ethnic areas through the multi-ethnic composition of the teams.⁶⁶

KSF operated four platoons in 2018: three for demining and one for EOD. The demining platoons are divided into five teams with a total of 75 staff, and the EOD platoon consists of six teams of five persons each. Of these, three teams are on standby for EOD call-outs in Prizren and three teams in Pomozotin.⁶⁷ In 2018, KSF units conducted demining operations in five locations: Babaj i Bokës, Ferizaj, Ferizaj/Urosevac Park, Harilaq, and Paldenica.⁶⁸

OPERATIONAL TOOLS

As noted above, significant advances in operational productivity have been achieved by the introduction of the use of tools such as HSTAMID and large-loop detectors. NPA also sought to introduce the use of mine detection dogs (MDD) for a three-month pilot project to conduct targeted technical survey, however, their use in CMR operations was not formally approved by KMAC in 2018. As such, the MDD were deployed for survey and clearance of mine contamination instead. The presence of anti-personnel mine contamination was not found in any of the areas suspected and NPA discontinued plans for the use of MDD in its areas of operations in north Kosovo.⁶⁹ In 2019, KMAC informed Mine Action Review that the use of MDD could be considered for KSF operations in remaining minefield tasks along the Kosovo-Albanian border.⁷⁰

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

A total of just under 1.7km² of CMR-contaminated area was released in 2018: over 1.2km² by clearance, and 0.4km² by technical survey.⁷¹

During 2018, KMAC reported that two CMR-contaminated hazardous areas were added to the database with a total size of just over 155,750m².⁷²

SURVEY IN 2018

According to KMAC, a total of 436,685m² of cluster munition-contaminated area was reduced by technical survey in 2018: 407,859m² reduced by NPA and 28,826m² by The HALO Trust.⁷³

The total amount of CMR-contaminated area reduced by technical survey in 2018 was a decrease from 2017, when NPA reduced a total of 506,696m² by technical survey and cancelled a total of 2,290m² by non-technical survey.⁷⁴

At the same time, as noted above, KMAC reported that two additional CMR-contaminated areas were confirmed by survey in 2018 with a size of 155,757m², and NPA expected that additional CMR-contaminated areas would be identified and added to the mine action database in 2019 as it garnered additional information as its operations expanded in southern Mitrovica.⁷⁵

CLEARANCE IN 2018

Collectively, the KSF, The HALO Trust, and NPA cleared just over 1.24km² of CMR contamination in 2018, with the destruction of 212 submunitions (see Table 1).⁷⁶ This represents a significant increase on the almost 0.88km² of CMR contamination cleared in 2017 and 64 submunitions destroyed.⁷⁷ A further nine submunitions were destroyed in spot tasks.

The HALO Trust cleared close to 0.71km² in 2018 of area containing CMR in 2018 and destroyed 72 submunitions, an increase from 0.44km² cleared in 2017.⁷⁸ HALO reported that this increase in CMR clearance was due to working on more open and accessible tasks in 2018 where large-loop detectors could be applied extensively.⁷⁹

NPA reported clearing close to 0.3km² of CMR contamination in 2018, with the destruction of almost 140 submunitions, an increase from the previous year when NPA cleared close to 0.25km² of area.⁸⁰

In 2018, KSF cleared 196,300m² through BAC in five hazardous areas.⁸¹ In the course of clearance, no submunitions were found, though 696 other items of UXO were destroyed.⁸²

According to KMAC, an additional nine submunitions were destroyed by the KSF Explosive EOD teams in spot tasks in 2018.⁸³ The HALO Trust did not conduct EOD spot tasks during the year.⁸⁴

As Kosovo has robust national procedures for the management of explosives, the KSF, with support from KFOR in northern Kosovo, carries out the demolition of CMR and items of UXO found by The HALO Trust and NPA.⁸⁵

Table 1: Clearance of CMR-contaminated area in 2018⁸⁶

Operator	Areas cleared	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed
KSF	5	196,300	0	696
HALO	4	708,886	72	3
NPA	N/R	335,191	140	0
Totals	9	1,240,377	212	699

PROGRESS TOWARDS COMPLETION

Kosovo cannot formally adhere to the CCM and therefore does not have a specific clearance deadline under Article 4. Nonetheless, it has obligations under international human rights law to clear CMR as soon as possible.

As stated in Kosovo's Mine Action Strategy 2019–2024, which sets completion of mine and cluster munition clearance by the end of 2024, completion will only be achievable if sustained funding is secured.⁸⁷ Specific concerns are elaborated in the Strategy including the necessity of upgrading old equipment, including vehicles, which will entail significant financial costs to ensure that operations can continue at an optimal pace, without unnecessary stand-downs or costly repairs.⁸⁸

With adequate funding, KMAC and The HALO Trust predict that clearance of CMR will be completed by the end of 2024.⁸⁹ This would be 25 years after the end of the conflict between the FRY forces and NATO and more than 20 years after the UN claimed that the clearance of the province was largely complete.

In 2019, HALO reported that it could complete clearance of remaining CMR contamination within its areas of responsibility with existing capacity by the end of 2024. It cautioned however that sustaining capacity over the Strategy period will prove to be a challenge, and any reductions in funding could impede progress towards meeting the 2024 target date.⁹⁰

NPA reported, however, that it would need an increase from four teams to a total of nine teams if it was to complete clearance of CMR contamination in its areas of operations by 2024. Funding likewise remained the primary obstacle, followed by poor weather and difficult terrain, according to NPA. It also noted that additional CMR-contaminated areas were still being recorded in its areas of operations as a result of ongoing survey.⁹¹

Table 2: Five-year summary of CMR clearance (2014–18)

Year	Area cleared (km ²)
2018	1.24
2017	0.88
2016	0.47
2015	0.34
2014*	0.84
Total	3.77

*Mine and CMR clearance

- 1 Email from Ahmet Sallova, Head, KMAC, 30 April 2019.
- 2 Email from Ahmet Sallova, KMAC, 4 May 2018.
- 3 Email from Terje Eldøen, Country Director, NPA, 25 April 2019.
- 4 See United Nations Mission in Kosovo (UNMIK), "UNMIK OKPCC EOD Management Section Annual Report 2005", Pristina, 18 January 2006, p. 2; and International Committee of the Red Cross (ICRC), *Explosive Remnants of War, Cluster Bombs and Landmines in Kosovo*, Geneva, rev. June 2001, p. 6.
- 5 ICRC, *Explosive Remnants of War, Cluster Bombs and Landmines in Kosovo*, rev. June 2001, pp. 4 and 6; and The HALO Trust, "Action on cluster munitions in Kosovo", 10 September 2015, at: <http://bit.ly/30P1X70>.
- 6 Human Rights Watch (HRW) and Landmine Action, *Banning Cluster Munitions Government Policy and Practice*, Mines Action Canada, Ottawa, 2009, p. 238; and ICRC, *Explosive Remnants of War, Cluster Bombs and Landmines in Kosovo*, rev. June 2001, p. 6.
- 7 A. Moore, The HALO Trust, "Action on cluster munitions in Kosovo", Side event, First CCM Review Conference, Dubrovnik, 10 September 2015.
- 8 Ibid.
- 9 NPA, *Cluster Munition Remnants in Northern Kosovo: non-technical survey of contamination and impact*, September 2015; and email from Goran Peršić, NPA Bosnia and Herzegovina, 13 May 2016.
- 10 Ibid.
- 11 NPA, *Cluster Munition Remnants in Northern Kosovo: non-technical survey of contamination and impact*, September 2015.
- 12 UNMIK, "OKPCC EOD Management Section Annual Report 2008", Pristina, 12 January 2009, p. 4.
- 13 Email from Ahmet Sallova, KMAC, 1 August 2012.
- 14 Ibid.
- 15 Emails from Ahmet Sallova, KMAC, 16 June and 3 July 2017; and Ministry of Defence, "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 3.
- 16 Interviews with Terje Eldøen, NPA, Pristina, 5 April 2019; and Olivia Meader, Programme Manager, HALO Trust, Gjakova, 2–3 April 2019; and "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 3.
- 17 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, pp. 5–6.
- 18 Emails from Ahmet Sallova, KMAC, 30 April 2019 and 4 May 2018.
- 19 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 20 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 14.
- 21 Email from Terje Eldøen, NPA, 25 April 2019.
- 22 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 23 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 8.
- 24 Ibid.
- 25 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 26 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, pp. 8–9.
- 27 Ibid., p. 8.
- 28 Email from Olivia Meader, HALO Trust, 1 May 2019; and "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 8.
- 29 Ibid.
- 30 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 31 Email from Terje Eldøen, NPA, 25 April 2019.
- 32 Ibid.
- 33 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 34 Emails from Olivia Meader, HALO Trust, 1 May 2019; and Terje Eldøen, NPA, 25 April 2019.
- 35 Emails from Olivia Meader, HALO Trust, 1 May 2019; Ahmet Sallova, KMAC, 30 April 2019; and Terje Eldøen, NPA, 25 April 2019.
- 36 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 13.
- 37 Ibid., p. 12.
- 38 Ibid., pp. 9–10.
- 39 Email from Terje Eldøen, NPA, 12 June 2019.
- 40 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, pp. 9–10.
- 41 Ibid., p. 16.
- 42 Ibid., p. 15.
- 43 Emails from Ahmet Sallova, KMAC, 30 April 2019; and Tom Welling, HALO Trust, 7 May 2018.
- 44 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 1.
- 45 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 46 Email from Terje Eldøen, NPA, 25 April 2019.
- 47 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 48 Email from Ahmet Sallova, KMAC, 4 May 2018.
- 49 Ibid.
- 50 Interview with Ahmet Sallova, KMAC, Pristina, 5 April 2019.
- 51 Ibid.

- 52 Email from Olivia Meader, HALO Trust, 21 June 2019.
- 53 Emails from Terje Eldøen, NPA, 25 April 2019; and Olivia Meader, HALO Trust, 1 May 2019.
- 54 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 55 Email from Terje Eldøen, NPA, 25 April 2019.
- 56 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 57 Emails from Ash Boddy, Regional Director, HALO Trust, 5 May 2017; and Terje Eldøen, NPA, 11 June 2018.
- 58 Emails from Olivia Meader, HALO Trust, 1 May 2019; and Terje Eldøen, NPA, 25 April 2019.
- 59 Interview with Terje Eldøen, NPA, Pristina, 5 April 2019; and email, 25 April 2019.
- 60 Emails from Ash Boddy, HALO Trust, 5 May 2017; and Olivia Meader, HALO Trust, 1 May 2019.
- 61 Email from Olivia Meader, HALO Trust, 21 June 2019.
- 62 Email from Ahmet Sallova, KMAC, 30 April 2019; and "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 3.
- 63 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 4; and interview with Ahmet Sallova, KMAC, Pristina, 5 April 2019.
- 64 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 3.
- 65 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 66 Email from Terje Eldøen, NPA, 25 April 2019; and "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 4.
- 67 Email from Ahmet Sallova, KMAC, 4 May 2018.
- 68 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 3.
- 69 Email from Terje Eldøen, NPA, 25 April 2019.
- 70 Interview with Ahmet Sallova, KMAC, Pristina, 5 April 2019.
- 71 Emails from Olivia Meader, HALO Trust, 1 May 2019; Terje Eldøen, NPA, 25 April 2019; and Ahmet Sallova, KMAC, 30 April 2019.
- 72 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 73 Emails from Ahmet Sallova, KMAC, 30 April and 17 June 2019; Terje Eldøen, NPA, 25 April 2019; and Olivia Meader, HALO Trust, 1 May 2019. According to HALO Trust, "it should be noted that HALO does not employ technical survey as used in the CMRS. The above statistics only refer to those areas released by reduction from technical survey". NPA reported a total of 407,859m² reduced by technical survey in 2018, of which only 22,848m² was reported as completed, in a task in Gazi Voda lake. NPA reported that the other 385,011m² reduced by technical survey were part of tasks not yet completed at the end of 2018.
- 74 Email from Terje Eldøen, NPA, 11 June 2018. The HALO Trust did not report reduction of area through technical survey in 2017.
- 75 Emails from Ahmet Sallova, KMAC, 30 April 2019; and Terje Eldøen, NPA, 25 April 2019.
- 76 Emails from Ahmet Sallova, KMAC, 30 April 2019; and Olivia Meader, HALO Trust, 1 May 2019.
- 77 Emails from Ahmet Sallova, KMAC, 20 February 2017 and 4 May 2018; Tom Welling, HALO Trust, 7 May 2018; and Terje Eldøen, NPA, 7 May 2018.
- 78 Emails from Olivia Meader, HALO Trust, 1 May 2019; and Tom Welling, HALO Trust, 7 May 2018.
- 79 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 80 Emails from Terje Eldøen, NPA, 25 April 2019 and 11 June 2018.
- 81 Email from Ahmet Sallova, KMAC, 30 April 2019.
- 82 Ibid.
- 83 Ibid.
- 84 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 85 Interview with Ahmet Sallova, KMAC, Pristina, 5 April 2019.
- 86 Emails from Ahmet Sallova, KMAC, 30 April and 17 June 2019; Terje Eldøen, NPA, 25 April 2019; and Olivia Meader, HALO Trust, 1 May 2019. The five areas where the KSF was conducting CMR clearance in 2018 were not completed and remained ongoing tasks in 2019. Of the four CMR-contaminated areas on which HALO Trust was conducting clearance in 2018, two were completed and two were ongoing in 2019.
- 87 "Mine Action Strategy 2019–2024 in Republic of Kosovo", 4 April 2019, p. 6.
- 88 Ibid.
- 89 Emails from Ahmet Sallova, KMAC, 4 May 2018; Tom Welling, HALO Trust, 7 May 2018; and Terje Eldøen, NPA, 7 May 2018.
- 90 Email from Olivia Meader, HALO Trust, 1 May 2019.
- 91 Email from Terje Eldøen, NPA, 25 April 2019.

NAGORNO-KARABAKH

MINE
ACTION
REVIEW

CLEARING CLUSTER
MUNITION REMNANTS
2019

RECOMMENDATIONS FOR ACTION

- The Nagorno-Karabakh authorities should make a formal commitment to respect and implement the Convention on Cluster Munitions (CCM).
- Nagorno-Karabakh should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Survey and clearance of CMR should resume and the Nagorno-Karabakh authorities should provide funding for the work.

CLUSTER MUNITION REMNANT CONTAMINATION

There is no national baseline of CMR contamination in Nagorno-Karabakh. While the exact extent is not determined with precision, it is known to be both significant and widespread.¹ At the end of 2018, CMR contamination (both surface and subsurface) was estimated to be 71.62km² across 212 confirmed hazardous areas (CHAs), in seven of a total of eight districts.

Table 1: CMR contamination by district (at end 2018)²

District	CHAs	Area (km ²)
Askeran	56	21.29
Hadrut	28	10.54
Lachin	17	8.50
Martakert	45	11.70
Martuni	57	15.09
Shushi	8	4.00
Stepanakert	1	0.50
Totals	212	71.62

Cluster bombs were dropped extensively across Nagorno-Karabakh by the Azerbaijani Air Force during the 1988 conflict between Azerbaijan and Armenia. Following the cease fire in 1994 tensions flared up again in April 2016 when fighting broke out briefly along the Line of Contact (LOC). While ground fighting was confined to areas close to the LOC, artillery fire penetrated more than 10km into Nagorno-Karabakh, and included use of cluster munitions. The HALO Trust calculated the four days of hostilities added 2.4km² of CMR contamination, all of which has now been cleared.³ The territory of Nagorno-Karabakh remains disputed and negotiations have so far failed to produce a permanent peace agreement, leaving the de facto independent state locked in a “frozen conflict”.⁴

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Nagorno-Karabakh is also contaminated by other explosive remnants of war (ERW) and landmines. Mine contamination reportedly covered 5.14km² as at end 2018, of which 3.78km² was from anti-personnel mines, and 1.36km² from anti-vehicle mines (see Mine Action Review’s *Clearing the Mines* report on Nagorno-Karabakh for further information).⁵

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

In 2000, The HALO Trust established the Nagorno-Karabakh Mine Action Centre (NKMAC), which is now moribund. In theory, its role is to consolidate all mine action-related information and to respond to requests from the government ministries, non-governmental organisations (NGOs), and local communities. In reality, there is no viable or tangible mine action centre in Nagorno-Karabakh.⁶

A mine action coordination committee was responsible for liaising between the local authorities and The HALO Trust.⁷ Regular coordination committee meetings were held between the local authorities, The HALO Trust, and the International Committee of the Red Cross (ICRC) until 2018 when the head of the committee was moved to a new post. The position remains vacant, with HALO Trust continuing to lobby for a suitable candidate to fill the role.⁸

The Nagorno-Karabakh authorities do not provide The HALO Trust with any funding for clearance of CMR-contaminated or mined areas.⁹

GENDER

The HALO Trust has an organisational gender policy which is incorporated into HALO's Nagorno-Karabakh programme. In addition to fully briefing new recruits, HALO also conducts regular refresher trainings on all its policies, including its gender policy, for all its national and international staff.¹⁰

All groups affected by CMR and anti-personnel mine contamination, including women and children are said to be consulted during survey and community liaison activities. However, the non-technical survey teams have been predominantly male with the first female team member recruited in 2019. Going forward HALO aims to recruit more female non-technical survey team members.¹¹

Relevant mine action data is disaggregated by sex and age.¹² Gender is not taken into account in the prioritisation, planning, and tasking of survey and clearance activities.¹³

HALO is one of the largest civilian employers in Nagorno-Karabakh, with 270 Karabakhi Armenian staff.¹⁴ And while there is equal access to employment for qualified women and men in survey and clearance, the number of women employed in operational roles is still quite low. In 2018, out of the total of 210 deminers only 15 were women of whom 2 were team leaders. In addition, three women were employed in managerial level/supervisory positions, and six of the support staff were women.¹⁵

INFORMATION MANAGEMENT AND REPORTING

There is no national information management system in place. However, HALO operates its own country mine action database and is working to better tailor the database to its operations. For example, new fields were added to the database in 2018 to allow for further disaggregation of data. HALO Nagorno-Karabakh also continues to be supported by its United Kingdom-based specialist data management staff.¹⁶

The Nagorno-Karabakh Army Liaison Officer shares information with HALO Trust on items found, incidents, CHAs, and clearance on a regular basis. HALO is not authorised to share this data with others.¹⁷

PLANNING AND TASKING

There is no national mine action strategy currently in place in Nagorno-Karabakh.¹⁸

HALO Trust's workplans for 2018 and 2019 do not include any CMR survey or clearance as per the request of the donors to prioritise mine clearance. CMR surface clearance is funded as a secondary activity, to be conducted when weather or other conditions do not permit safe mine clearance.¹⁹ In 2019, HALO was planning to continue to destroy CMR found during explosive ordnance disposal (EOD) spot tasks and, if possible, to survey additional CMR-contaminated areas.²⁰

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

No local mine action standards exist in Nagorno-Karabakh. However, as at April 2019, the Nagorno-Karabakh police were planning to lobby the government to develop standards and HALO will work closely with the authorities to support this process.²¹

The HALO Trust follows its own standing operating procedures (SOPs) for demining and battle area clearance, which comply with IMAS.²² As at April 2019, HALO's survey and anti-personnel mine clearance SOPs were under review, with a view to incorporating best practice from other HALO country programmes.²³

OPERATORS

Since 2000, The HALO Trust has been the main organisation conducting land release in Nagorno-Karabakh. The Nagorno-Karabakh Rescue Service conducts EOD spot tasks and one Nagorno-Karabakh army unit conducts limited demining. Since the April 2016 conflict, The HALO Trust has collaborated with the Nagorno-Karabakh Rescue Services when gathering information about CMR and mines, and part of its quality assurance (QA) process involves participation in the official handover ceremony with community representatives.²⁴

The HALO Trust does not field separate teams dedicated solely to either CMR clearance or mine clearance. Operational staff are trained and experienced in working

in both tasks.²⁵ However, as no survey or clearance of CMR took place in 2018 all its operational staff were engaged in mine clearance.²⁶

HALO is currently working to increase its non-technical survey capacity in support of its mine clearance operations, while decreasing its technical survey capacity. HALO recruited 30 new deminers in 2018. It had hoped to recruit more but a demining accident in March 2018 (see below) is thought to have deterred many potential applicants.²⁷

OPERATIONAL TOOLS

HALO conducts both manual and mechanical clearance in Nagorno-Karabakh. Machines are used to clear roads with a plastic anti-vehicle mine threat and in areas with high levels of metal contamination which makes manual clearance extremely inefficient.²⁸

DEMINER SAFETY

In March 2018, a HALO vehicle with a technical survey team onboard detonated an anti-vehicle mine on their way to an anti-personnel mine clearance task, which killed three staff and injured two others.

The accident was internally investigated by HALO who also commissioned an external expert investigation. A further investigation by the Nagorno-Karabakh police was ongoing as at 1 May 2019. As a result of the internal investigation prodding was halted as a safety precaution until the exact causes of the accident were understood. Mechanical clearance and clearance with detectors have since superseded its use. Copies of HALO Trust's internal and external reports will be available once the police investigation is finalised.²⁹

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

No survey or clearance of CMR-contaminated areas took place in 2018. This compares to the 1,056,000m² of clearance in 2017.³⁰

In 2018, a total of 29 submunitions were destroyed during 21 EOD spot tasks.³¹

No target date has currently been set for the clearance of all CMR contamination in Nagorno-Karabakh.³² Due to restrictions from its donors, HALO Trust currently prioritises clearance of mines over CMR. HALO continues to look for donors to support CMR clearance, but finds this is challenging due to the international isolation of Nagorno-Karabakh and the territorial restrictions that are often placed on funding.³³ While surface clearance of legacy CMR contamination within the within the former Soviet-era Nagorno-Karabakh Autonomous Oblast (NKAO) boundaries of Nagorno-Karabakh could potentially be completed within a few years, this would still leave sub-surface contamination within the NKAO boundaries of Nagorno-Karabakh, in

addition to CMR in areas outside the NKAO which are under the control of the Nagorno-Karabakh forces.³⁴

As a result of the lack of funding progress in clearance of CMR has dropped dramatically in the years since 2014, as shown in Table 2.

Table 2: Five-year summary of CMR clearance (2014-18)

Year	Area cleared (km ²)
2018	0
2017	1.06
2016	3.28
2015	2.91
2014	13.01
Total	20.26

1 Email from Andrew Moore, Caucasus and Balkans Desk Officer, HALO Trust, 29 May 2015.

2 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

3 Emails from Amasia Zargarian, Programme Support Officer, HALO Trust, 4 May 2018; and Asqanaz Hambardzumyan, HALO Trust, 26 April 2019.

4 The HALO Trust, "Our role in Nagorno Karabakh: History", at: <http://bit.ly/2GVkA09>; and BBC, "Nagorno-Karabakh profile", at: <https://bbc.in/2UTatxz>, both accessed 10 April 2019.

5 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

6 Emails from Andrew Moore, HALO Trust, 28 June 2013; and Asqanaz Hambardzumyan, HALO Trust, 26 April 2019.

7 Email from Andrew Moore, HALO Trust, 28 June 2013.

8 Emails from Andrew Moore, HALO Trust, 26 May 2016; and Asqanaz Hambardzumyan, HALO Trust, 26 April 2019.

9 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

10 Ibid.

11 Ibid.

12 Ibid.

13 Ibid.

14 The HALO Trust, "Our role in Nagorno-Karabakh", accessed 10 April 2019.

15 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

16 Ibid.

17 Ibid.

18 Ibid.

19 Email from Amasia Zargarian, HALO Trust, 4 May 2018.

20 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

21 Email from Asqanaz Hambardzumyan, HALO Trust, 26 April 2019.

22 Emails from Andrew Moore, HALO Trust, 26 May 2016; and Asqanaz Hambardzumyan, HALO Trust, 18 June 2019.

23 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

24 Email from Amasia Zargarian, HALO Trust, 4 May 2018.

25 Email from Andrew Moore, HALO Trust, 22 May 2015.

26 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

27 Ibid.

28 Ibid.

29 Emails from Asqanaz Hambardzumyan, HALO Trust, 10 and 26 April and 1 June 2019.

30 See *Clearing Cluster Munition Remnants* report for Nagorno-Karabakh for 2018.

31 Email from Asqanaz Hambardzumyan, HALO Trust, 10 April 2019.

32 Ibid.

33 The HALO Trust, "Our role in Nagorno-Karabakh", accessed 10 April 2019.

34 Emails from Andrew Moore, HALO Trust, 26 May 2016; and Ash Boddy, HALO Trust, 14 April 2017.

RECOMMENDATIONS FOR ACTION

- The Saharawi Arab Democratic Republic (SADR) should reaffirm its written commitment to respect and implement the Convention on Cluster Munitions (CCM) and to clear all cluster munition remnants (CMR) contamination east of the Berm as soon as possible.
- The SADR should comply with its obligations under international human rights law to clear CMR on territory under its jurisdiction or control as soon as possible.
- Facing significant challenges due to a decrease in operational capacity and funding for 2019, Western Sahara's mine action strategy target of completing clearance of all remaining CMR contamination by the end of 2019 should be reassessed, and a revised mine action strategy developed.
- A resource mobilisation plan should be developed with the aim of attracting international donor support.
- Greater support should be provided to the Saharawi Mine Action Coordination Office (SMACO) in order for it to be able to continue to coordinate mine action in Western Sahara, cover staff salaries and running costs, and ensure that capacity development efforts are not lost.
- Mine action in Western Sahara must not become a legacy issue, forgotten or overlooked by the international mine action community. Priority must still be given to addressing the remaining mine, cluster munition, and other explosive remnants of war (ERW) contamination until the territory is fully cleared and its inhabitants free from the threat of explosives.

CLUSTER MUNITION REMNANT CONTAMINATION

According to the United Nations Mine Action Service (UNMAS), Western Sahara had a total of 79 confirmed hazardous areas (CHA) containing CMR with a total size of approximately 2.8km² east of the Berm¹ at the end of 2018. Of the 79 CHAs, six cluster munition strike areas, with a total size of 0.5km², are located inside the buffer strip and are inaccessible for clearance.² This is an increase in confirmed CMR contamination from the 40 areas totalling 2.6km² reported by UNMAS as remaining at the end of 2017.³

In a notable achievement, Norwegian People's Aid (NPA) reported completing the clearance of all known and accessible cluster munition contamination in its areas of operations in Bir Lahlou in December 2018.⁴

Both the north and south of Western Sahara still contain confirmed CMR-contaminated areas, as set out in Table 1.⁵

Table 1: CMR contamination east of the Berm (at end 2018)⁶

Region	CHAs	Area (km ²)
North	52	1.42
South	11	0.26
Totals	63	1.68

The Royal Moroccan Armed Forces used both artillery-fired and air-dropped cluster munitions against Polisario Front Military forces during their conflict in Western Sahara from 1975 to 1991. According to SADR, the Royal Moroccan Armed Forces used BLU-63, M42, and Mk118 submunitions at multiple locations in Bir Lahlou, Dougaj, Mehaires, Mijek, and North Wadis.⁷

While CMR clearance had been projected to be completed by the end of 2012,⁸ discovery of previously unrecorded contaminated areas meant this target date was not met. According to UNMAS, new strike areas continued to be identified from 2013–18, as mine action activities continued and additional information was received from local populations.⁹

The size of the six cluster munition strike areas located inside the buffer strip, with an estimated total area of 520,609m², may increase if restrictions on access to the buffer strip are lifted, allowing survey and clearance to be conducted.¹⁰ However, clearance of the buffer strip of mines and ERW is not foreseen in MINURSO mission agreements, which according to the UN, considerably limits the ability of MINURSO military observers to patrol and verify developments.¹¹

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Western Sahara also remains significantly affected by mines and ERW other than CMR due to the conflict (see Mine Action Review's *Clearing the Mines* report on Western Sahara for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

MINURSO manages a Mine Action Coordination Centre (MACC), which was upgraded from a mine "cell" in February 2008. MINURSO MACC supports mine action activities, of which, survey and clearance activities were implemented by commercial contractor SafeLane Global (formerly Dynasafe MineTech Limited, DML) and humanitarian NGO NPA in 2018. On 30 April 2019, MINURSO's mandate was extended for an additional six months until 30 October 2019 under Security Council Resolution 2468 (2019). UNMAS Western Sahara serves as the UN focal point for mine action activities within the MINURSO area of operations. Its contracted teams work in areas east of the Berm only.

The Royal Moroccan Army operates its own demining operations in areas west of the Berm.

In 2013–14, the Polisario Front, with UN support, established the SMACO, which is responsible for coordinating mine action activities in Western Sahara east of the Berm, excluding the buffer strip.¹²

In 2018, UNMAS continued to implement an ongoing capacity development project with SMACO, with

funding from the German Federal Foreign Office, which concluded in October after 28 months.¹³ Emphasis was placed on building the programme's capacity to translate local mine action requirements into proposals and budgets with the aim of ensuring that SMACO can independently seek funds and report on progress in the future.¹⁴ UNMAS stated that efforts were also aimed at regularly raising the profile of SMACO within the local and wider international communities.¹⁵ NPA also reported continuing its capacity development efforts in partnership with SMACO to reinforce the local staff capacity through on-the-job trainings in the support office as well as on the operational side.¹⁶ It stated that SMACO's ability to coordinate operations improved significantly in 2018, but raised serious concerns about the cessation of funding from the German government for capacity development activities, noting that SMACO's running costs and ability to pay staff salaries were at risk.¹⁷ UNMAS informed Mine Action Review, however, that it had allocated unearmarked funding to cover SMACO's operating costs for calendar year 2019, and to include the development of a communications and resource mobilisation strategy during this period.¹⁸

GENDER

UNMAS has reported that gender policies are implemented in accordance with UNMAS, UNOPS, and MINURSO guidelines, as well as with direction from the Polisario.¹⁹ NPA reported that gender mainstreaming considerations were included in its Memorandum of Understanding with SMACO, in NPA's internal strategy documents, and taken into account during recruitment processes. Additionally, during survey, efforts are made to ensure the needs of men, women, girls, and boys are taken into consideration for more effective and efficient operations, despite challenges presented by conducting survey activities targeting Bedouin populations.²⁰

In 2018, NPA reported that during recruitment, the programme actively selected female candidates for interviews wherever possible. In local media stories about NPA's work in Western Sahara, NPA encouraged journalists to highlight the work of female deminers and their ability to work equally well in a very challenging environment, with the aim of breaking myths held by local communities that demining is a job for men. It stated that six women were employed in operational roles in 2018, or just over 18% of the total operational staff. Two women held managerial roles, including Head of Finance and Head of Human Resources, making up 40% of NPA's management staff in Western Sahara.²¹

INFORMATION MANAGEMENT AND REPORTING

According to UNMAS, the Information Management System for Mine Action (IMSMA) database for Western Sahara improved appreciably as a result of an ongoing data audit initiated at the end of 2015.²² It reported that routine database clean-up was conducted throughout 2018 and confirmed that information on CMR is recorded separately from ERW and explosive ordnance disposal (EOD) spot tasks.²³ The Geneva International Centre for Humanitarian Demining (GICHD) has also provided ongoing support to correct database errors, and an upgrade to the latest database software version, IMSMA Core, was scheduled to take place in August 2019.²⁴

PLANNING AND TASKING

In May 2019, UNMAS informed Mine Action Review that a new mine action strategy specific to Western Sahara would be developed in 2019, in line with the newly published global UN Mine Action Strategy 2019–2023.²⁵

The previous mine action strategy for Western Sahara had set a target of releasing all recorded cluster strike munition areas east of the Berm by the end of 2019.²⁶ It also foresaw the completion of non-technical survey in 2017 or 2018 and a 50% reduction in the total number of recorded suspected and confirmed hazardous areas remaining on the territory of Western Sahara by the end of 2022.²⁷ In May 2019, UNMAS informed Mine Action Review that these targets were not met due to “changing priorities” for mine action. It reported that the new end state for completing the clearance of all known hazards

to the east of the Berm would be the end of 2023 in the forthcoming revised strategy, given conducive funding, political and security conditions.²⁸

UNMAS and SMACO identify priorities for clearance of both cluster munition strike areas and minefield clearance to the east of the Berm in conjunction with MINURSO. Priorities are identified based on humanitarian needs for the safety and freedom of movement of local populations, while UNMAS ensures that observation patrol routes are safe for military observers and the transport of logistical supplies.²⁹ NPA confirmed that operators were always consulted in priority setting to ensure sufficient resources and equipment were available to conduct operations in a given area.³⁰

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Local mine action standards were in place and implemented in 2018.³¹ The standards were developed and finalised in 2016 by UNMAS, together with SMACO, and in coordination with mine action partners. They include provisions specific to the survey and clearance of CMR.³² NPA has reported that operators updated their standing operating procedures (SOPs) accordingly, and that the local mine action standards set realistic benchmarks for efficient operations.³³ A first annual review of the standards was completed in November 2018 with a review board consisting of representatives from UNMAS, SMACO, and all implementing partners. No significant changes were made, and UNMAS reported in June 2019 that translation of the standards into Arabic had been completed and shared with SMACO.³⁴

An external quality management system was in place in 2018 and implemented by UNMAS and SMACO to the east of the Berm.³⁵ NPA confirmed a considerable increase in quality assurance (QA) activities in 2018, which it said was due to the relocation of UNMAS to Tindouf, Algeria, with easier access to territory under Polisario control. NPA confirmed that SMACO and UNMAS QA officers conducted many QA visits in 2018, conducted accreditation for new NPA staff, monitored progress on tasks, and conducted quality control of completed areas.³⁶

OPERATORS

SafeLane Global (formerly DML) and NPA were the implementing operators conducting CMR survey and clearance in Western Sahara in 2018. UNMAS reported no change in operational capacity during the year. The overall mine action capacity in Western Sahara in 2018 consisted of nine multi-task teams (MTTs) and one community liaison/survey team, with a total of 116 operational staff in the field. This included six DML teams and one community liaison/survey team, of which four teams were tasked on CMR operations during the year. The total number of MTTs was reduced by one in July 2018.³⁷

In 2018, NPA continued to deploy two manual teams to address the remaining cluster munition contamination in ongoing demining activities in Bir Lahlou, with a third team deployed to clear minefield contamination, and five mine risk education teams operating in the Saharawi refugee camps in southern Algeria. The risk education project, funded by Germany and supervised by UNMAS/SMACO, ended in April 2018.³⁸

NPA made the “difficult decision” to close down its programme, effective on 1 January 2019, after releasing the remaining known contaminated areas in Bir Lehlou province in August 2018. After completing operations in Bir Lahlou, NPA was set to deploy teams to tasks in Agwanit in the south, with the aim of clearing the last remaining province with CMR contamination in Western Sahara. However, NPA reported that moving operations to the south presented significant logistical and financial challenges. It stated that the remaining contamination was located in very remote areas and had limited humanitarian or socio-economic impact, and as such, based on a cost-effectiveness analysis, it made the decision that its resources would be more effective in higher impact areas.³⁹

LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUT IN 2018

Total land release of CMR-contaminated area in 2018 was just over 4.9km²: close to 4.8km² through clearance and land release and 0.08km² through cancellation as a result of database clean-up.⁴⁰

SURVEY IN 2018

According to UNMAS, no non-technical survey or technical survey of CMR-contaminated area occurred in 2018.⁴¹ UNMAS reported that a total of 83,223m² of recorded CMR contamination was cancelled in database clean-up.⁴²

In 2017, 57 areas with a size of just over 1.45km² of CMR contamination were confirmed through survey: nearly 0.69km² by DML and 0.77km² by NPA.⁴³

CLEARANCE IN 2018

In 2018, total CMR clearance output decreased from 6.1km² in 2017 to 4.8km²; the number of submunitions found and destroyed increased from 688 to 833.⁴⁴

In 2018, a total of 95 areas of CMR contamination with a size of just over 4.8km² were cleared, with the destruction of more than 830 submunitions.⁴⁵ This compares with 2017, when a total of 62 cluster munition strike areas with a size of just over 6.1km² were cleared, with the destruction of 688 submunitions.⁴⁶ No CMR were reported destroyed in spot tasks in 2018.⁴⁷ UNMAS stated that the reasons for the decrease in CMR clearance output in 2018 were the loss of one MTT for the final six months of the year, along with a higher priority placed on mine clearance tasks due to accidents and local requirements, which took teams away from CMR tasks.⁴⁸

NPA reported clearing a total of four areas with a size of 30,098m² in Bir Lahlou region in 2018, destroying a total of 56 submunitions.⁴⁹ It reported that in 2018 its teams were deployed on the last remaining CMR contaminated areas in Bir Lahlou, which consisted of small tasks with scattered contamination, located far from the Berm, which accounted for the significant drop in CMR clearance output from the 1.1km² of CMR cleared in 2017.⁵⁰

Table 2: Clearance of CMR-contaminated area in 2018⁵¹

Operator	Areas cleared	Area cleared (m ²)	Submunitions destroyed	Other UXO destroyed*
SLG/DML (North region)	78	2,886,991	440	128
SLG/DML (South region)	13	1,918,574	337	152
NPA (North region)	4	30,098	56	0
Totals	95	4,835,663	833	280

* UXO = unexploded ordnance (other than submunitions)

PROGRESS TOWARDS COMPLETION

Western Sahara is neither a state party nor a signatory to the CCM and therefore does not have a specific clearance deadline under Article 4. However, the SADR submitted a voluntary CCM Article 7 transparency report to the UN in 2014, stating that "By submitting its voluntary report, the SADR would like to reaffirm its commitment to a total ban on cluster munitions as well as its willingness to accede to the Convention on Cluster Munitions and be bound by its provisions".⁵² The SADR has obligations under international human rights law to clear CMR as soon as possible.

Under Western Sahara's draft mine action strategic plan, all recorded cluster munition strike areas to the east of the Berm, outside of the buffer strip, were to be released by 2019.⁵³ UNMAS expected to complete clearance of all cluster munition contamination in the Northern Sector (Bir Lahlou, Mehaires, and Tifariti districts) east of the Berm by the end of 2018.⁵⁴ This did not happen, however, and UNMAS informed Mine Action Review in April 2019 that clearance of CMR contamination would not be completed in 2019 and that a revised extension of the date for completion was being calculated.⁵⁵ UNMAS claimed the main reason for Western Sahara not meeting its 2019 goal was a lack of funding for activities to the east of the Berm.⁵⁶ In May 2019, UNMAS reported that the new target in the forthcoming revised strategy for completing clearance of all known hazards to the east of the Berm would be the end of 2023.⁵⁷

UNMAS has previously reported that delays to clearing confirmed CMR-contaminated areas continued as a result of restrictions on accessing certain areas of the buffer strip established by various MINURSO mission agreements.⁵⁸ NPA cited other challenges to operations, including working in a remote desert environment allied to serious difficulties with the procurement of certain equipment and materials.⁵⁹ Temperatures of up to 60 degrees Celsius, strong winds, sandstorms, and heavy rain during the wet season can also cause mine action activities to be suspended.⁶⁰

In 2019, with the loss of NPA as a key mine action implementer, along with the cessation of both German and Norwegian funding for mine clearance activities, the future of Western Sahara's mine action programme remained uncertain. Additional resources and capacity, along with support to SMACO, needed to be secured urgently.

- 1 A defensive wall (the Berm) was built during the conflict between the Royal Moroccan Armed Forces and the Popular Front for the Liberation of Saguia el Hamra and Rio de Oro (Polisario Front) forces, dividing control of the territory between Morocco on the west, and the Polisario Front on the east.
- 2 Email from Robert Thompson, Operations and Quality Assurance Officer, UNMAS, 29 April 2019. The buffer strip is an area 5km wide, east of the Berm.
- 3 Email from Graeme Abernethy, UNMAS, 1 March 2018.
- 4 Email from El Hadji Mamadou Kebe, Programme Manager, NPA, 4 May 2019.
- 5 Email from Robert Thompson, UNMAS, 29 April 2019.
- 6 Emails from Robert Thompson, UNMAS, 29 April 2019; and Dandan Xu, Associate Programme Management Officer, UNMAS, 28 June 2018. Bir Lahlou (also spelled Bir Lehlou), Mehaires (also spelled Meharrize) and Tifariti are considered to make up the north, and Mijek and Agwanit the south. Email from Graeme Abernethy, UNMAS, 9 June 2015.
- 7 SADR Voluntary CCM Article 7 Report, Form F, 20 June 2014; and Cluster Munition Monitor, "Cluster Munition Ban Policy: Western Sahara", updated 12 August 2014.
- 8 Email from Karl Greenwood, Chief of Operations, Action On Armed Violence/ Mechem Western Sahara Programme, 18 June 2012.
- 9 Emails from Robert Thompson, UNMAS, 29 April 2019; Dandan Xu, UNMAS, 28 June 2019; and Graeme Abernethy, UNMAS, 1 March 2018.
- 10 Emails from Virginie Auger, UNMAS, 15 March 2017; Sarah Holland, UNMAS, 23 May 2016; and Graeme Abernethy, UNMAS, 27 May 2016. The six areas were identified in a 2008 survey.
- 11 "Report of the Secretary-General on the situation concerning Western Sahara", UN doc. S/2017/307, 10 April 2017, p. 8.
- 12 Response to questionnaire by Sarah Holland, UNMAS, 24 February 2014, and email, 25 February 2014.
- 13 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.
- 14 Ibid.
- 15 Ibid.
- 16 Email from El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 17 Ibid.
- 18 Email from Dandan Xu, UNMAS, 28 June 2019.
- 19 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.
- 20 Emails from El Hadji Mamadou Kebe, NPA, 4 May 2019 and 14 March 2018.
- 21 Email from El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 22 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.
- 23 Email from Robert Thompson, UNMAS, 29 April 2019.
- 24 Email from Robert Thompson, UNMAS, 31 May 2019.
- 25 Ibid. UNMAS previously reported that it planned to develop a mine action strategy specific to Western Sahara in the second half of 2015. According to UNMAS, the strategy was finalised in 2017, but still was considered an internal document and was not made publicly available as at May 2018. Emails from Sarah Holland, UNMAS, 5 June 2015; and Graeme Abernethy, UNMAS, 1 March, 5 May, and 18 May 2018.
- 26 Emails from Graeme Abernethy, UNMAS, 18 May 2018; and Virginie Auger, UNMAS, 24 April and 29 March 2017.
- 27 Ibid.
- 28 Email from Robert Thompson, UNMAS, 31 May 2019.
- 29 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.
- 30 Emails from El Hadji Mamadou Kebe, NPA, 4 May 2019 and 14 March 2018.
- 31 Email from El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 32 Emails from Virginie Auger, UNMAS, 24 April and 29 March 2017; El Hadji Mamadou Kebe, NPA, 8 April 2017; and Graeme Abernethy, UNMAS, 31 May 2018.
- 33 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.
- 34 Emails from Robert Thompson, UNMAS, 29 April 2019; and Dandan Xu, UNMAS, 28 June 2019.
- 35 Email from Robert Thompson, UNMAS, 29 April 2019.
- 36 Email from El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 37 Email from Robert Thompson, UNMAS, 31 May 2019.
- 38 Email from El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 39 Ibid.
- 40 Email from Robert Thompson, UNMAS, 29 April 2019.
- 41 Ibid.
- 42 Ibid.
- 43 Emails from Graeme Abernethy, UNMAS, 1 March and 22 May 2018; and El Hadji Mamadou Kebe, NPA, 20 and 27 May 2018.
- 44 Emails from Robert Thompson, UNMAS, 29 April 2019; El Hadji Mamadou Kebe, NPA, 26 May 2019; and Graeme Abernethy, UNMAS, 1 March 2018.
- 45 Ibid.
- 46 Emails from Graeme Abernethy, UNMAS, 1 March and 20 May 2018; and El Hadji Mamadou Kebe, NPA, 20 and 27 May 2018.
- 47 Emails from Robert Thompson, UNMAS, 29 April 2019; and El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 48 Email from Robert Thompson, UNMAS, 31 May 2019.
- 49 Email from El Hadji Mamadou Kebe, NPA, 4 May 2019.
- 50 Emails from El Hadji Mamadou Kebe, NPA, 4 May 2019 and 14 March 2018.
- 51 Emails from Robert Thompson, UNMAS, 29 April 2019; Dandan Xu, UNMAS, 28 June 2019; and El Hadji Mamadou Kebe, NPA, 26 May 2019. UNMAS reported conflicting figures for NPA's clearance output: that NPA cleared a total of two areas with a size of 27,809m², destroying three submunitions and 171 other items of unexploded ordnance; and alternatively that NPA cleared a total of one area with a size of 19,030m² with the destruction of three submunitions.
- 52 SADR Voluntary CCM Article 7 Report, Form F, 20 June 2014; and Cluster Munition Monitor, "Cluster Munition Ban Policy: Western Sahara", updated 12 August 2014.
- 53 Emails from Virginie Auger, UNMAS, 29 March 2017; and Graeme Abernethy, UNMAS, 31 March 2018.
- 54 Email from Graeme Abernethy, UNMAS, 1 March 2018.
- 55 Email from Robert Thompson, UNMAS, 29 April 2019.
- 56 Ibid.
- 57 Email from Robert Thompson, UNMAS, 31 May 2019.
- 58 Email from Virginie Auger, UNMAS, 15 March 2017.
- 59 Emails from El Hadji Mamadou Kebe, NPA, 8 April 2017 and 14 March 2018.
- 60 UNMAS, "About UNMAS in Western Sahara", updated January 2017, at: <http://bit.ly/2MEmsjN>.



ANNEX:
ARTICLE 4 OF THE
CONVENTION ON
CLUSTER MUNITIONS

ARTICLE 4: CLEARANCE AND DESTRUCTION OF CLUSTER MUNITION REMNANTS AND RISK REDUCTION EDUCATION

1. Each State Party undertakes to clear and destroy, or ensure the clearance and destruction of, cluster munition remnants located in cluster munition contaminated areas under its jurisdiction or control, as follows:
 - (a) Where cluster munition remnants are located in areas under its jurisdiction or control at the date of entry into force of this Convention for that State Party, such clearance and destruction shall be completed as soon as possible but not later than ten years from that date;
 - (b) Where, after entry into force of this Convention for that State Party, cluster munitions have become cluster munition remnants located in areas under its jurisdiction or control, such clearance and destruction must be completed as soon as possible but not later than ten years after the end of the active hostilities during which such cluster munitions became cluster munition remnants; and
 - (c) Upon fulfilling either of its obligations set out in sub-paragraphs (a) and (b) of this paragraph, that State Party shall make a declaration of compliance to the next Meeting of States Parties.

2. In fulfilling its obligations under paragraph 1 of this Article, each State Party shall take the following measures as soon as possible, taking into consideration the provisions of Article 6 of this Convention regarding international cooperation and assistance:
 - (a) Survey, assess and record the threat posed by cluster munition remnants, making every effort to identify all cluster munition contaminated areas under its jurisdiction or control;
 - (b) Assess and prioritise needs in terms of marking, protection of civilians, clearance and destruction, and take steps to mobilise resources and develop a national plan to carry out these activities, building, where appropriate, upon existing structures, experiences and methodologies;
 - (c) Take all feasible steps to ensure that all cluster munition contaminated areas under its jurisdiction or control are perimeter-marked, monitored and protected by fencing or other means to ensure the effective exclusion of civilians. Warning signs based on methods of marking readily recognisable by the affected community should be utilised in the marking of suspected hazardous areas. Signs and other hazardous area boundary markers should, as far as possible, be visible, legible, durable and resistant to environmental effects and should clearly identify which side of the marked boundary is considered to be within the cluster munition contaminated areas and which side is considered to be safe;
 - (d) Clear and destroy all cluster munition remnants located in areas under its jurisdiction or control; and
 - (e) Conduct risk reduction education to ensure awareness among civilians living in or around cluster munition contaminated areas of the risks posed by such remnants.

3. In conducting the activities referred to in paragraph 2 of this Article, each State Party shall take into account international standards, including the International Mine Action Standards (IMAS).

4. This paragraph shall apply in cases in which cluster munitions have been used or abandoned by one State Party prior to entry into force of this Convention for that State Party and have become cluster munition remnants that are located in areas under the jurisdiction or control of another State Party at the time of entry into force of this Convention for the latter.
 - (a) In such cases, upon entry into force of this Convention for both States Parties, the former State Party is strongly encouraged to provide, inter alia, technical, financial, material or human resources assistance to the latter State Party, either bilaterally or through a mutually agreed third party, including through the United Nations system or other relevant organisations, to facilitate the marking, clearance and destruction of such cluster munition remnants.
 - (b) Such assistance shall include, where available, information on types and quantities of the cluster munitions used, precise locations of cluster munition strikes and areas in which cluster munition remnants are known to be located.

5. If a State Party believes that it will be unable to clear and destroy or ensure the clearance and destruction of all cluster munition remnants referred to in paragraph 1 of this Article within ten years of the entry into force of this Convention for that State Party, it may submit a request to a Meeting of States Parties or a Review Conference for an extension of the deadline for completing the clearance and destruction of such cluster munition remnants by a period of up to five years. The requested extension shall not exceed the number of years strictly necessary for that State Party to complete its obligations under paragraph 1 of this Article.

6. A request for an extension shall be submitted to a Meeting of States Parties or a Review Conference prior to the expiry of the time period referred to in paragraph 1 of this Article for that State Party. Each request shall be submitted a minimum of nine months prior to the Meeting of States Parties or Review Conference at which it is to be considered. Each request shall set out:
 - (a) The duration of the proposed extension;
 - (b) A detailed explanation of the reasons for the proposed extension, including the financial and technical means available to and required by the State Party for the clearance and destruction of all cluster munition remnants during the proposed extension;
 - (c) The preparation of future work and the status of work already conducted under national clearance and demining programmes during the initial ten year period referred to in paragraph 1 of this Article and any subsequent extensions;
 - (d) The total area containing cluster munition remnants at the time of entry into force of this Convention for that State Party and any additional areas containing cluster munition remnants discovered after such entry into force;
 - (e) The total area containing cluster munition remnants cleared since entry into force of this Convention;
 - (f) The total area containing cluster munition remnants remaining to be cleared during the proposed extension;
 - (g) The circumstances that have impeded the ability of the State Party to destroy all cluster munition remnants located in areas under its jurisdiction or control during the initial ten year period referred to in paragraph 1 of this Article, and those that may impede this ability during the proposed extension;
 - (h) The humanitarian, social, economic and environmental implications of the proposed extension; and
 - (i) Any other information relevant to the request for the proposed extension.

7. The Meeting of States Parties or the Review Conference shall, taking into consideration the factors referred to in paragraph 6 of this Article, including, inter alia, the quantities of cluster munition remnants reported, assess the request and decide by a majority of votes of States Parties present and voting whether to grant the request for an extension. The States Parties may decide to grant a shorter extension than that requested and may propose benchmarks for the extension, as appropriate.

8. Such an extension may be renewed by a period of up to five years upon the submission of a new request, in accordance with paragraphs 5, 6 and 7 of this Article. In requesting a further extension a State Party shall submit relevant additional information on what has been undertaken during the previous extension granted pursuant to this Article.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AP mine	Anti-personnel mine	MTT	Multi-task team
APMBC	Anti-Personnel Mine Ban Convention	NATO	North Atlantic Treaty Organization
AV mine	Anti-vehicle mine	NGO	Non-governmental organisation
AXO	Abandoned explosive ordnance	NMAA	National Mine Action Authority
BAC	Battle area clearance	NMAS	National Mine Action Standards
BLS	Baseline survey	NPA	Norwegian People's Aid
CHA	Confirmed hazardous area	NTS	Non-technical survey
CCM	Convention on Cluster Munitions	NTSG	National Technical Standards and Guidelines
CCW	Convention on Certain Conventional Weapons	QA	Quality assurance
CMR	Cluster munition remnants	QC	Quality control
CMRS	Cluster Munition Remnants Survey	SHA	Suspected hazardous area
DCA	DanChurchAid	TS	Technical survey
DDG	Danish Demining Group	UK	United Kingdom
DRC	Democratic Republic of Congo	UN	United Nations
EDD	Explosives detection dog (team)	UNDP	United Nations Development Programme
EOD	Explosive ordnance disposal	UNICEF	United Nations Children's Fund
ERW	Explosive remnants of war	UNMAS	United Nations Mine Action Service
EU	European Union	US	United States
FSD	Swiss Foundation for Mine Action	UXO	Unexploded ordnance
HALO	The HALO Trust		
HI	Humanity and Inclusion (formerly Handicap International)		
IED	Improvised explosive devices		
IMAS	International Mine Action Standards		
IMSMA	Information Management System for Mine Action		
Lao PDR	Lao People's Democratic Republic		
MAC	Mine action centre		
MAG	Mines Advisory Group		
MDD	Mine detection dog (team)		
MoU	Memorandum of Understanding		

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