MINE ACTION REVIEW

CLEARING CLUSTER MUNITION REMNANTS 2018

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

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A Report by Mine Action Review for the Eighth Meeting of States Parties to the Convention on Cluster Munitions

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Other information

The publication is available for download at **www.mineactionreview.org**.

Mine Action Review conducted the mine action research in 2018, including on cluster munition remnants survey and clearance, and shared all its country reports with the International Campaign to Ban Landmines (ICBL) and Cluster Munition Coalition (CMC)'s Cluster Munition Monitor.

Please send any comments to **feedback@mineactionreview.org**.

● Global contamination from cluster munition remnants

FOREWORD

The year 2017 saw considerable progress achieved by some countries towards ridding their territory of the scourge of cluster munition remnants (CMR). We welcome the many steps that help to meet the aspirations and obligations of the 2008 Convention on Cluster Munitions (CCM). In some states, advances have resulted from increased support for survey and clearance. In others, such as Lebanon, faster progress is being achieved by embracing and implementing international best practice to enhance operational efficiencies, and through the establishment of a "mine action forum" (equivalent to a country coalition). The mine action forum provides a vehicle for national authorities to enhance dialogue and collaboration with donors, clearance operators, and partner organisations. This is an approach that could be used more widely in the mine action sector.

All affected states parties to the CCM should be conducting clearance every year in accordance with their international legal obligations under Article 4 of the treaty. Most have taken these obligations seriously, and Afghanistan and Croatia are on course to complete clearance in advance of their respective treaty deadlines. But as this year's *Clearing Cluster Munition Remnants* report also illustrates, a few have not made sufficient efforts, to the extent that their compliance with the CCM is being thrown into question and they risk breaching their international legal obligations.

Due to the different nature of the cluster munition threat CMR clearance can be faster than mine clearance. This affords opportunities for rapid advances to be made in the furtherance of the CCM and the protection of human rights. Indeed, with 5 states parties having the extent of contamination on their territory rated as low (less than 5 square kilometres) and a further 5 having medium-level contamination (5 to 99 square kilometres), significant successes could be achieved in the coming two years until the Second Review Conference.

What is needed is for states individually and internationally to demonstrate leadership; to show what can be accomplished in only a few years when collaboration and commitment go hand in hand. A positive role model within a region encourages others: national ownership, a clear strategy, and political commitment are key to success. A particular opportunity exists with respect to survey, which remains a vital component in effective and efficient mine action. For CMR, the aim of survey should be to identify *confirmed* hazardous areas (CHAs) based on evidence and not to report large suspected hazardous areas (SHAs), as has too often been the case in the last decade. CHAs ensure appropriate targeting of clearance assets; SHAs lead to inefficiencies and can delay priority clearance.

As humanitarian demining organisations we acknowledge that affected countries can and do have other issues and priorities, especially where a prevalent mine threat has significant humanitarian consequences. But CMR can and should be addressed rapidly through national plans to complete clearance and fulfil the requirements of Article 4 of the CCM – this is a treaty requirement. Moreover, integrated mine action programmes, such as the one in Croatia, show that progress in mine clearance need not jeopardise progress in ridding the country of CMR. Contrariwise, a failure to construct a national mine action programme with supportive legislation in a timely fashion, as has occurred in Ukraine, can impede both demining and battle area clearance.

Large-scale contamination, a feature of Cambodia, the Lao People's Democratic Republic (Lao PDR), and Vietnam, remains a huge, long-term challenge in a small handful of countries, but great headway in tackling the threat can still be made. In states parties, such as Lao PDR (which suffers from the world's worst contamination), it has now been recognised that a baseline nationwide survey is essential to ensure clearance resources are deployed to confirmed contamination, to inform prioritisation and planning, and to attract additional and sustained funding. As demining operators we will continue to play our part, supporting the development of local capacity and the use of local clearance assets, and working hand in hand with the authorities. As the successes and failures of 2017 show, achieving completion requires a concerted joint effort of national authorities, organisations, donors, and the treaty community, putting the needs of affected communities at the centre of all efforts.

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CLEARING CLUSTER MUNITION REMNANTS

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OVERVIEW

SUMMARY

Twenty-seven states and three other areas are believed to be contaminated with cluster munition remnants (CMR). Since the last report by Mine Action Review in mid-2017, Colombia, a state party to the Convention on Cluster Munitions (CCM), is no longer believed to have areas containing CMR, based on reports by the authorities and by clearance operators. When going to press, the status of the Democratic Republic of Congo (DR Congo), which was previously believed to have completed clearance in May 2017, was unclear following discovery of a previously unrecorded cluster munition strike area later in the year.

Mine Action Review has recorded meaningful progress in the destruction of CMR in 14 states and 3 other areas. Over 153,000 submunitions were destroyed by clearance operations in 2017 from over 95km^2 of contaminated area. Globally, this represented an increase of 7km^2 of cleared area compared with the 2016 total, and with destruction of around 12,500 more submunitions during clearance and technical survey. The greatest area of clearance again occurred in the Lao People's Democratic Republic (Lao PDR), the world's most heavily contaminated state, where output was 33km^2, up from 30km^2 the previous year.

Contamination was added globally in 2017 through new use of cluster munitions: according to Cluster Munition Monitor, since 1 July 2016, cluster munitions have been used in Syria by Syrian government forces with Russia's support and in Yemen by a Saudi Arabia-led coalition of states fighting the Houthi forces there.[1] According to the Cluster Munition Monitor's latest reporting period (July 2017–July 2018), cluster munitions were used in Syria and Yemen, while suspected new use in Egypt and Libya could not be confirmed.[2]

GLOBAL CONTAMINATION

As at June 2018, 12 states parties to the CCM were confirmed or strongly suspected to have areas containing CMR on their sovereign territory, along with 2 signatory states, 13 states not party, and 3 other areas (see Table 1). As noted in the Summary above, this is a reduction of one state party (Colombia),[3] on the total in Mine Action Review's report last year, and signatory state, DR Congo, has been returned to the list of affected states. There is no reliable estimate for total global CMR contamination.

Tajikistan, a state not party, which was expected to complete clearance in the course of 2017, confirmed a new area of CMR contamination in 2018, and reported that it also still has battle areas which may contain CMR and which have still to be surveyed. The United Nations Mine Action Service (UNMAS) expects that clearance of all remaining CMR contamination in Western Sahara will be completed by the end of 2019 (outside the buffer strip and four areas in Mijek that are "off limits" to the Polisario).

Table 1: Global CMR contamination (as at June 2018)

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.

In Armenia, in September–October 2017 during technical survey and battle area clearance in Kornidzor, two submunitions were found and destroyed during release of an area of 64,191m^2.[4] It is not certain that contamination in Eritrea and Ethiopia resulting from the 1998–2000 conflict[5] has been fully cleared, though no suspected or confirmed hazardous areas containing CMR are recorded by either state.

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 1,000km^2 of land), while heavy contamination exists in Cambodia and Iraq (covering more than 100km^2). Clearance in all four states will take many years and possibly decades.

Most other states are far less affected, although in several cases the extent is simply unknown or, as yet, unclear. Furthermore, inadequate earlier surveys 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 2 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 2: 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	**Afghanistan**	Angola
Vietnam	**Iraq**	Azerbaijan**	**Chad**
		Bosnia and Herzegovina	**Croatia**
		Chile	DR Congo
		Germany	Georgia
		Lebanon	Iran
		Libya	**Montenegro**
		South Sudan	Serbia
		Syria	**Somalia**
		Ukraine	Sudan
		Yemen	Tajikistan
		Kosovo	**United Kingdom*** **
		Nagorno-Karabakh	Western Sahara
2 states	**2 states**	**11 states and 2 other areas**	**12 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.

Eleven states are no longer suspected to be contaminated with CMR since the CCM was adopted in August 2008. Of these, nine are states parties to the CCM (Albania, Colombia, the Republic of Congo, Grenada, Guinea-Bissau, Mauritania, Mozambique[6], Norway, and Zambia) while one is a signatory state (Uganda), and one is a state not party (Thailand). DR Congo has been provisionally removed from this list following the discovery of previously unrecorded contamination in 2017.

CLEARANCE IN 2017

In 2017, a total of just over 153,000 submunitions[7] were destroyed by clearance around the world from over 95km² of contaminated area. This does not capture all global clearance because much is not publicly reported, for instance in Ukraine or Vietnam by national operators. Table 3 summarises the outputs of major CMR clearance operations in 2017 with a comparison to output in 2016.

Table 3: Major recorded CMR clearance in 2017 compared to 2016

State or other area*	Clearance in 2017 (km²)	Submunitions destroyed in 2017**	Clearance in 2016 (km²)	Change in area cleared in 2017 (km²)
Lao PDR	33	117,974	30.2	+ 2.8
Cambodia	23.5	8,367	22.4	+ 1.1
Vietnam	16.7	6,157	17.4	- 0.7
Western Sahara	6.1	688	1.2	+ 4.9
Iraq	4.7	1,188	3.1	+ 1.6
Afghanistan	2.8	111	1.9	+ 0.9
Yemen	***2.0	3,245	N/R	+ 2.0
Lebanon	1.4	5,525	1.9	- 0.5
Nagorno-Karabakh	1.1	52	3.3	- 2.2
Croatia	1.0	123	1.2	- 0.2
South Sudan	1.0	629	3.5	- 2.5
Kosovo	0.9	69	0.5	+ 0.4
Other programmes combined	1.2	8,879	1.7	
Totals	****95.4	153,007	88.3	

* CCM states parties are in bold. ** Includes submunitions destroyed during survey and EOD spot tasks.
*** Area estimated from battle area clearance total. **** Rounded to nearest decimal point. N/R = Not reported.

As in previous years, the largest area of clearance in 2017 took place in Lao PDR, with output increasing slightly to over 33km² from 30km² the previous year, and the total number of submunitions destroyed increasing from 106,636 in 2016, to 117,974 in 2017. Given the extent of contamination in Lao PDR, at current rates of clearance it is likely to be decades before the country is free of the impact of unexploded submunitions despite substantial advances in land release approaches. In 2018, Lao PDR began a national baseline survey of CMR contamination that will help to define the extent of the problem.

In Lebanon, even though clearance output dipped in 2017, the programme strengthened as a result of greater collaboration between the national authorities and non-governmental clearance operators on revision of national mine action standards, generating the potential for improving operational efficiencies.

In Vietnam, the world's second most contaminated state, land released through clearance by international operators saw a small reduction year on year to fall below 17km². In neighbouring Cambodia, however, a small rise was recorded in clearance of CMR-contaminated area. Clearance output in heavily-affected Iraq was also on the rise in 2017 compared to the previous year, despite the ongoing armed conflict. The largest increase in clearance output was reported by UNMAS for Western Sahara, which is expected to complete clearance in accessible areas by the end of 2019.

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 4 summarises progress towards these deadlines, the first of which expires in less than two years' time. Of CCM states parties, only Croatia is firmly on track to meet its treaty deadline, although Afghanistan has expressed its hopes to Mine Action Review that it will complete in 2019, two and a half years ahead of 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 Chile. Chad and Montenegro again did not conduct CMR clearance in 2017, though Montenegro has since received funding to complete clearance. Germany finally began clearance in 2017, six years after it first reported contamination, but it is unclear whether it will meet its Article 4 deadline. The United Kingdom still needs to conduct survey and clearance of hazardous areas in which submunitions are suspected to remain: to date, it has still not acknowledged its legal obligations under CCM Article 4.

Table 4: 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	Continue clearance in line with national action plan
Lao PDR	1 August 2020	Not on track to meet deadline Will need first extension request in 2019	National baseline survey of contamination
Germany	1 August 2020	Unclear if on track to meet deadline	Accelerate clearance to complete by deadline
Montenegro	1 August 2020	Unclear if on track to meet deadline	Clearance as soon as possible
United Kingdom	1 November 2020	Unclear if on track to meet deadline	Verification of areas where cluster munitions were targeted
Bosnia and Herzegovina	1 March 2021	Unclear if 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	Survey and clearance as soon as possible
Afghanistan	1 March 2022	Unclear if on track to meet deadline	Plan to complete clearance
Chad	1 September 2023	Unclear if on track to meet deadline	Targeted survey
Iraq	1 November 2023	Not on track to meet deadline Will need extension given contamination and conflict	National baseline survey and strategic plan for clearance
Somalia	1 March 2026	Too soon to say	Targeted survey

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". Any affected state party is further required to develop a national plan to implement its obligations to survey and clear all CMR. As at June 2018, Croatia was the only state party with a clear time-bound and costed plan for fulfilment of its Article 4 obligations. To date, only Afghanistan, Croatia, Germany, and Montenegro have established reasonably accurate baselines of the extent of their CMR contamination.

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.

Among affected "other areas", Western Sahara is expected to complete clearance in accessible areas by the end of 2019, while Kosovo will likely not complete clearance before 2024.

PROGRAMME PERFORMANCE

The quality of programmes for the survey and clearance of CMR varies widely among states and territories. To help affected states 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. Ten areas with a particularly strong influence on the effectiveness and efficiency of a CMR survey and clearance programme are assessed, as explained in Table 5.

A score of between 0 and 10 is accorded for each of the ten criteria 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". The factors that determine each score are summarised in the table below.

Table 5: Programme performance – criteria and factors

Criterion	Key factors affecting scoring
Understanding of the problem	Has a national baseline of CMR contamination been established? Has the extent of the CMR threat been identified with a reasonable degree of accuracy? Does the estimate include confirmed hazardous areas (CHAs) as well as suspected hazardous areas (SHAs)?
Target date for completion	Is a state seeking effectively to clear all contamination from its territory? Has a date been set by the mine action centre (MAC) or national mine action authority for completion of clearance? Is the target date realistic based on existing capacity? Is there a strategic plan in place to meet the target date? Is it sufficiently ambitious?
Targeted clearance	Is clearance focused on confirmed contamination? Are significant areas of land being cleared that prove to have no contamination? If clearance is ongoing for weeks in an area without finding contamination, what happens?
Efficient clearance	Are dogs integrated into demining operations (where appropriate)? Are machines integrated into demining operations (where appropriate)?
National funding of programme	Is national funding covering the cost of the MAC? Is national funding covering any survey or clearance costs? Is national funding being used efficiently? Is national funding used in accordance with good governance principles?
Timely clearance	Are contaminated areas prioritised for clearance according to explicit criteria? Are areas of high impact dealt with swiftly? Are there delays to clearing an area for political reasons?
Land release system	Is there a coherent land release system in place for the programme? Is this system understood and used by all the operators? Is there an effectively functioning non-technical survey capacity? Is there an effectively functioning technical survey capacity?
National standards	Do national mine action standards exist? Do they respect the International Mine Action Standards (IMAS)? Are they adapted to the local threat and context? How well are they applied?
Reporting on progress	Does the state submit regular Article 7 transparency reports on progress in fulfilling its CCM Article 4 clearance obligations? Does it report regularly and meaningfully to donors and civil society? Do these reports disaggregate progress by the land release method? Are they accurate?
Improving performance	Has the national programme, or have key parts of it, improved or deteriorated over the previous year?

The table below summarises CMR programme performance for states and other areas in 2017. Croatia, which had the highest score in 2014 and 2015, was again the highest rated programme in 2017, and the only programme to achieve a rating of "Very Good". Certain affected states that were engaged in very limited CMR operations in 2017 or else did not conduct any CMR-related operations during the year are not given a performance scoring. The table also does not include rankings for Libya or Syria.

Table 6: States and other areas by CMR programme performance score in 2017

State/other area	Performance score	Performance rating	Change in performance score
Croatia	8.0	Very Good	+ 0.8
Western Sahara	6.6	Average	+ 0.5
Afghanistan	6.5	Average	+ 0.2
Kosovo	6.4	Average	+ 0.3
Lao PDR	6.4	Average	+ 0.7
Lebanon	6.1	Average	+ 0.7
Germany	6.0	Average	+ 0.5
South Sudan	6.0	Average	- 0.2
United Kingdom	5.9	Average	+ 0.4
DR Congo	5.6	Average	- 0.4
Bosnia-Herzegovina	5.5	Average	- 0.1
Cambodia	5.2	Average	+ 0.2
Vietnam	5.2	Average	+ 0.2
Sudan	5.1	Average	+/- 0
Azerbaijan	5.0	Average	+/- 0
Iraq	5.0	Average	+ 0.4
Nagorno-Karabakh	4.9	Poor	- 0.1
Ukraine	4.9	Poor	+/- 0
Montenegro	4.7	Poor	+ 0.1
Serbia	4.2	Poor	+/- 0
Somalia	4.2	Poor	+/- 0
Yemen	3.9	Very Poor	+ 0.2
Chad	3.5	Very Poor	- 0.1
Chile	3.0	Very Poor	- 0.1

REPORTING ON SURVEY AND CLEARANCE

It continues to be unacceptable how poorly many states report on their efforts to tackle CMR. Too many are either unable or unwilling to provide simple and accurate reports on the extent of contamination and progress in survey and clearance.

For states parties to the CCM, detailed reporting is an obligation under international law. Under Article 7, each affected state party is required to report annually on:

- The size and location of all CMR-contaminated areas under its jurisdiction or control, with detail on the type and quantity of each type of remnant "to the extent possible"; and
- The status and progress during the previous calendar year of clearance and destruction of all CMR.

Failure to comply with this reporting obligation is a violation of the CCM.

Mine Action Review has a set of reporting templates that it provides to affected states to ensure reporting in accordance with good practice, including IMAS. They cover contamination, survey, and clearance, and are set out in Annex 2. In particular, the tables for survey and clearance set out the data the national mine action centre should require operators to report on a monthly basis, and which all states should be able to present.

The most common problems Mine Action Review has encountered in reports by states and operators are:

- An inability or refusal to distinguish mine clearance from cluster munition clearance
- An inability to report accurately on the number and extent of cluster munition contaminated-areas in which the presence of CMR is confirmed or suspected to be present
- Reporting as "land release" an initial survey of a large, previously unsurveyed area (even a district) that may contain contamination but which in fact does not
- Failure to disaggregate reported data by the amount of land cancelled by non-technical survey, reduced by technical survey, and released by clearance, and
- Failure to disaggregate submunitions from other forms of unexploded ordnance (UXO) in clearance figures.

OUTLOOK

Efficient release of CMR-contaminated or suspected areas depends on high-quality non-technical and technical survey. Each affected state that has not yet done so should conduct a national baseline survey and develop a strategic plan to release all identified areas of CMR contamination.

Too many states parties have still to meet their legal obligations under Article 4 of the CCM and at least Chile may already be in violation of its duty to clear CMR " as soon as possible". Of the 12 affected states parties, only one is currently on track to meet its deadline, suggesting that most others will need to request an extension to their deadline. This includes Germany, the world's fourth largest economy and Europe's richest country. These are challenges that all CCM states parties need to meet.

1 *Cluster Munition Monitor 2017*, Major Findings: New Use, at: http://the-monitor.org/en-gb/reports/2017/cluster-munition-monitor-2017/major-findings.aspx.

2 Email from Mary Wareham, Advocacy Director, Arms Division, Human Rights Watch, and Member, Cluster Munition Monitor Editorial Team, 16 July 2018.

3 In its Article 7 transparency report submitted in 2018, Colombia reported that it "has no knowledge or suspicion of the existence of cluster munitions in its territory". CCM Article 7 Report, Form F, April 2018. Colombia ratified the CCM on 10 September 2015, declaring that "it is possible that there remain, in national territory, cluster munitions or cluster munition remnants of whose location the State has no knowledge or suspicion. ... Colombia understands 'cluster munition remnants' to mean those whose location is known or suspected by the State." In its Article 7 report for 2016, Colombia reported that it was in the process of determining the extent of CMR contamination and requested international assistance for training and equipment in order to carry out survey and clearance at a cost of almost $4.2 million in 2016–26. CCM Article 7 Report, Forms F and I, August 2016.

4 Email from Reuben Arakelyan, Director, Centre for Humanitarian Demining and Expertise, 14 June 2018.

5 See, e.g., "Cluster Munitions in Africa", Regional Fact Sheet prepared by Human Rights Watch, March 2008, at: https://www.hrw.org/sites/default/files/related_material/CMC.ClusterMunitions.Africa.2008.pdf.

6 Mozambique completed clearance of CMR in November 2016, officially announcing completion and compliance with their CCM Article 4 obligations at the CCM Seventh Meeting of States Parties in September 2017, well in advance of their treaty deadline of 1 September 2021. Statement by Amb. Pedro Comissário, Permanent Representative of Mozambique to the United Nations in Geneva, CCM 7th MSP, Geneva, 4 September 2017.

7 CMR destroyed during technical survey are included in this total.

STATES PARTIES

AFGHANISTAN

ARTICLE 4 DEADLINE: 1 MARCH 2022
(UNCLEAR WHETHER ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	7	7
Target date for completion of cluster munition clearance	6	6
Targeted clearance	7	7
Efficient clearance	7	7
National funding of programme	5	5
Timely clearance	7	6
Land-release system in place	7	7
National mine action standards	7	7
Reporting on progress	6	6
Improving performance	6	5
PERFORMANCE SCORE: AVERAGE	**6.5**	**6.3**

PERFORMANCE COMMENTARY

Afghanistan resumed clearance of CMR-affected areas in 2017 after a year in which funding constraints and insecurity stalled progress towards meeting its clearance targets and Article 4 deadline under the Convention on Cluster Munitions (CCM). Most of Afghanistan's clearance, though, concerned an area in which no submunitions were found.

RECOMMENDATIONS FOR ACTION

- The Directorate of Mine Action Coordination (DMAC) should set out a detailed schedule and timelines for clearing cluster munition remnant (CMR)-affected sites.
- DMAC should ensure the consistency of data across all reporting formats.

CONTAMINATION

Afghanistan reports CMR contamination in four provinces which, at the end of 2017, was reported to affect a total area of 6.86km^2. Nearly half of the contamination was in a single district of north-eastern Takhar province. The other affected provinces were Nangahar, Paktia, and Wardak. Despite some CMR clearance undertaken in 2017, DMAC said one CMR hazard affecting 1.86km^2 was added to the database during the year.[1]

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.[2] CMR are said to affect less than 7,000 people, but block access to grazing and agricultural land.[3]

CMR contamination, however, is more widespread than the clearly defined US cluster strike sites. Soviet forces used cluster munitions during the decade-long war of resistance to the Soviet-backed government and demining operators continue to find unexploded submunitions on demining and battle area clearance tasks.[4]

Other Explosive Remnants of War and Landmines

Afghanistan's CMR problem is a tiny part of explosive contamination totalling 640km^2 at the end of 2017, including 206km^2 of mined area containing anti-personnel mines, 302km^2 of mined area containing anti-vehicle mines, and 112km^2 of explosive remnants of war (ERW) contamination, which includes NATO firing ranges. The total did not include extensive contamination by victim-activated improvised landmines which account for a major share of Afghanistan's munition casualties (see Mine Action Review's *Clearing the Mines* report on Afghanistan for further information).[5]

PROGRAMME MANAGEMENT

The Mine Action Programme of Afghanistan (MAPA) is led by DMAC, which comes under the Afghan National Disaster Management Authority. It received operational support in planning, prioritising and information management from UNMACA, which changed its name to "UNMAS in support of DMAC" (UNMAS/DMAC) in November 2016.[6]

DMAC staff increased to 159 working in 15 departments by the end of 2017 after personnel transitioned from UN to DMAC contracts.[7] Department heads were due to continue as UNMAS advisers to DMAC until also coming under DMAC management by the end of June 2018.[8] A total of 240 personnel were still employed in UNMAS/DMAC in 2017 but the number was due to fall to 209 in 2018.[9]

The MAPA employed a total of 7,156 people at the end of 2017 but the sector has been facing severe financial constraints and the number was due to fall to 5,376 in 2018.

Strategic Planning

At the end of 2016, the government circulated a proposal to donors to complete clearance of all 17 identified sites of CMR contamination, at a cost of $1.85 million, but the plan did not attract donor funding.[10]

Legislation and Standards

There is no national law governing CMR survey and clearance.

Quality Management

DMAC had 26 QA/QC staff working in 7 regions, which conducted 2,399 monitoring visits in 2017. The staff reported 57 major and 59 minor non-conformities.[11]

Information Management

DMAC uses the Information Management System for Mine Action (IMSMA) database. In 2017, there were problems of consistency in reporting on contamination and clearance.

Operators

Clearance of explosive contamination is conducted by five long-established national and two international NGOs and a total of 18 national and international commercial companies.[12] The Afghan NGOs are: Afghan Technical Consultants (ATC), Demining Agency for Afghanistan (DAFA), Mine Clearance Planning Agency (MCPA), Mine Detection and Dog Centre (MDC), and the Organization for Mine Clearance and Afghan Rehabilitation (OMAR). AREA, a national non-governmental organisation (NGO) accredited in 2014, became operational at the end of 2016.

The most active international NGOs are Danish Demining Group (DDG) and The HALO Trust. Since 2012, the Swiss Foundation for Mine Action (FSD) has had a small operation near the border with Tajikistan. Janus Demining Afghanistan (previously Sterling International) has been contracted to undertake clearance of firing ranges used by militaries serving with the NATO-led International Security Assistance Force.[13]

LAND RELEASE

Survey in 2017

No area of CMR was reported to have been released by survey in 2017.

Clearance in 2017

DMAC had not reported any CMR clearance for 2016, but told Mine Action Review that in 2017 two operators cleared four CMR-affected sites and a total area of 2,497,625m^2. This did, though, encompass clearance by AREA of 1,625,000m^2 (including 225,200m^2 subsurface clearance), which destroyed 77 UXO items but no submunitions. DAFA conducted subsurface clearance of three areas covering 872,625m^2 destroying 108 submunitions and 295 other UXO items.[14] In addition, HALO Trust destroyed three submunitions and twelve items of UXO in the course of clearing a battle area of 328,650m^2.[15] Afghanistan's Article 7 transparency report for 2017 reports a total clearance figure of 2,887,952m^2, with 418 "devises" destroyed.[16]

ARTICLE 4 COMPLIANCE

Under Article 4 of the CCM, Afghanistan is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 March 2022.

Afghanistan's Anti-Personnel Mine Ban Convention Article 5 deadline extension request in 2012 provided for clearance of all ERW, including unexploded submunitions, by the end of 2020.[17] CMR clearance has been overshadowed by funding constraints, competing priorities, and insecurity, which has hindered access to some CMR-affected areas, but DMAC continues to assert that with financial support Afghanistan can meet its Article 4 deadline in 2019, more than two years ahead of its Article 4 deadline.[18]

Table 1: Five-year summary of CMR clearance[19]

Year	Area cleared (km^2)
2017	2.8
2016	0
2015	0
2014	0
2013	0
Total	**2.8**

1 Email from DMAC, 11 April 2018. The estimate of remaining CMR contamination does not appear consistent with newly recorded contamination added to the database and the extent of reported clearance.

2 Human Rights Watch and Landmine Action, *Banning Cluster Munitions: Government Policy and Practice*, Mines Action Canada, Ottawa, May 2009, p. 27.

3 Email from DMAC, 11 April 2018; Statement of Afghanistan, CCM intersessional meetings (Clearance and Risk Education Session), Geneva, 15 April 2013.

4 Interviews with MACCA implementing partners, Kabul, May 2013.

5 Email from DMAC, 11 April 2018; UNAMA, "Afghanistan, Protection of Civilians in Armed Conflict, Annual Report 2017", February 2018, pp. 31–32.

6 Email from Mohammad Wakil Jamshidi, Chief of Staff, UNMAS/DMAC, 16 May 2017.

7 Email from /DMAC, 11 April 2018. DMAC said staff responsibilities included Front office, Communications, Operations, Plan and program, Human Resources, Finance, ICT, Logistics, Mine Risk Education, Quality Management, Regional offices, Security, Transport, Victim Assistance and NATO Firing Ranges.

8 Email from Abdul Qudos Ziaee, UNMAS/DMAC, 10 May 2017.

9 Email from DMAC, 11 April 2018.

10 "Proposal for Complete Removal of the Known Cluster Sub-munitions Contamination in Afghanistan", UNMAS/DMAC, undated but 2016.

11 Email from DMAC, 11 April 2018.

12 Ibid.

13 Email from MACCA, 10 May 2011.

14 Email from DMAC, 11 April 2018.

15 Email from Calvin Ruysen, Desk Officer, Central Asia Desk, HALO Trust, 16 May 2018.

16 CCM Article 7 Report (for 2017), p. 15.

17 APMBC Article 5 deadline Extension Request, 29 March 2012, p. 194.

18 Interview with Mohammad Shafiq Yosufi, Director, DMAC, in Geneva, 16 February 2018.

19 See Cluster Munition Monitor and Mine Action Review reports on clearance in Afghanistan covering 2013–16.

BOSNIA AND HERZEGOVINA

ARTICLE 4 DEADLINE: 1 MARCH 2021
(UNCLEAR WHETHER ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE	2017	2016
Problem understood	8	8
Target date for completion of cluster munition clearance	3	3
Targeted clearance	6	6
Efficient clearance	6	6
National funding of programme	7	7
Timely clearance	4	4
Land-release system in place	5	5
National mine action standards	6	6
Reporting on progress	5	5
Improving performance	5	6
PERFORMANCE SCORE: AVERAGE	5.5	5.6

PERFORMANCE COMMENTARY

In 2017, Bosnia and Herzegovina (BiH) finished developing a new National Mine Action Strategy for 2018–25, with support from the Geneva International Centre for Humanitarian demining (GICHD). 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. Furthermore, as at June 2018, the new strategy had not yet been formally approved by parliament and nor had the amended demining law, also completed in 2017.

While CMR clearance output in 2017 was higher than the previous year, it was still small, and puts into doubt whether BiH will meet its Convention on Cluster Munitions (CCM) Article 4 deadline for clearance.

RECOMMENDATIONS FOR ACTION

- → BiH should accelerate clearance of CMR to fulfil its CCM Article 4 obligations in advance of its treaty deadline.
- → BiH should formally adopt the amended demining law which was drafted in 2017.
- → BiH should ensure approval of its National Mine Action Strategy for 2018–25 and develop a resourced, time-bound action plan to release areas confirmed or suspected to contain CMR.
- → In both its CCM reporting and its 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 contamination 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.
- → The BiH Armed Forces and the Federal Administration of Civil Protection should be provided with the necessary demining equipment, in a timely manner, to ensure that their respective demining capacities can be fully and efficiently deployed.
- → BiH should implement the recommendations of both the United Nations Development Programme (UNDP) Mine Action Governance and Management Assessment of 2015, 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 report more accurately and consistently on land release data in a manner consistent with the International Mine Action Standards (IMAS). In particular, it should disaggregate by product (cancelled, reduced, and cleared); by activity (non-technical survey, technical survey, and clearance); and by classification of area (suspected hazardous area (SHA) and confirmed hazardous area (CHA)).

CONTAMINATION

As at the end of 2017, BiH reported a total of 6.47km^2 of CMR-contaminated area (see Table 1).[2] This compares to reported contamination as at the end of 2016, of 7.31km^2.[3]

However, the difference in total CMR contamination between the end of 2016 and the end of 2017, cannot be explained or reconciled by area released by technical survey and clearance or the amount of land confirmed as CMR contaminated.

Table 1: CMR contamination (as at end 2017)[4]

Canton	Area (m^2)
Unsko-Sanski	70,000
Tuzlanski	680,000
Zenicko-Dobojski	2,080,000
Srednje-Bosanski	1,780,000
Zapadno-Hercegovacki	0
Sarajevo	380,000
Canton 10	350,000
Total Federation BiH	**5,340,000**
Total Republika Srpska	**1,130,000**
Total	**6,470,000**

Of the total suspected CMR contamination, 2.7km^2 is the result of individually launched KB-1 submunitions fired from modified AK-47 rifles.[5] 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.[6] Therefore, this 2.7km^2 of contamination is not subject to the clearance obligations under Article 4 of the CCM.[7]

BHMAC had planned to undertake a survey to more accurately delineate areas containing the contamination from the improvised use of individual submunitions,[8] but as at June 2018, the status of this work was unclear. As a result, despite BHMAC being aware of this issue, in its Article 7 transparency reporting for 2017 BiH did not remove contamination resulting from the use of individual submunitions fired from modified rifles.[9]

A total of 4.47km^2 of contamination is in areas which also contain mines,[10] including 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.[11] A survey and initial general assessment of cluster munition contamination was jointly conducted by BHMAC and Norwegian People's Aid (NPA) in 2011. This estimated the total area suspected to contain CMR at almost 12.2km^2, scattered across 140 areas. This estimate was subsequently revised upwards to 14.6km^2 following the start of land release operations in 2012.[12] Of this, around 5km^2 was deemed as contaminated and marked for clearance.[13]

CMR contamination in BiH poses a small humanitarian risk but has a greater impact on development, impeding access to natural resources and posing an obstacle to rehabilitation and building of infrastructure.[14] Sixty communities have been identified as affected with submunitions, of which thirty-one are also affected by mines.[15] In August 2016, a boy was injured by a KB-1 submunition while tending livestock in Sehovina, Mostar.[16] Prior to that incident, the last recorded submunition casualty occurred in 2009.[17]

Other Explosive Remnants of War and Landmines

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

PROGRAMME MANAGEMENT

The Demining Commission, under the BiH Ministry of Civil Affairs, supervises the state-wide BHMAC and represents BiH in its relations with the international community on mine-related issues.[18] The Demining Commission is composed of representatives from three ministries (Civil Affairs, Security, and Defence) elected from the three constituent "peoples" of BiH and representing BiH's three majority ethnic groups (Bosniaks, Croats, and Serbs).[19] Three new Demining Commission members were given a two-year mandate on 23 July 2015,[20] which expired in July 2017.

A new Demining Commission was expected to be appointed imminently, but there was a delay during which the existing representatives served as an "acting" Demining Commission in the interim.[21] Subsequently, the existing Demining Commission representatives were re-elected for a further two-year term, from October 2017 to October 2019.[22] Whereas the Minister for Civil Affairs remains ultimately responsible for mine action, the Demining Commission represents the strategic body responsible for setting mine action policy, and it proposes the appointment of BHMAC senior staff, for approval by the Council of Ministers.[23]

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.[24] Furthermore, according to the 2016 audit office report, "The Commission has not developed a methodology on how to monitor the work of the BHMAC".[25]

BHMAC, 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.[26] BHMAC 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).

Strategic Planning

In 2017, BiH developed a new National Mine Action Strategy for 2018–25, with support from the GICHD, which addresses all contamination, including CMR. However, as at June 2018, it had not yet been formally approved.[27]

The BiH Mine Action Strategy for 2009–19 guides mine action in BiH, but does not mention CMR clearance. BHMAC conducted the first of three planned revisions of the strategy in 2012–13.[28] Although the 2012 revision did refer to CMR clearance,[29] the revised strategy was not formally approved by the Council of Ministers, highlighting a lack of political attention to mine action in BiH.[30] The second revision of the strategy, in 2015,[31] conducted in consultation with the Demining Commission and UNDP,[32] did include strategic and operational goals regarding CMR clearance. This second revision was endorsed by the Demining Commission in BiH in March 2016, but was again not approved by the Council of Ministers.[33]

The third revision of the strategy was due to be concluded by the end of 2017. In 2016, BHMAC, in consultation with the GICHD, started the revision process. However, rather than revising the existing Mine Action Strategy 2009–19 (revision II, with proposed amendments), BiH, with support from the GICHD, produced an entirely new national mine action strategy for the period through to projected completion of mine and CMR clearance (2018–25).[34] As part of this process, a first workshop was held in November 2016, followed by a second entitled "Bosnia and Herzegovina National Mine Action Strategy Working Group Sessions", organised with the participation of relevant government ministries, clearance operators, and other stakeholders in Sarajevo in February 2017.[35]

The new draft strategy is said to contain a plan and timeframe for the completion of CMR clearance as well as for mine clearance, which represents by far the biggest challenge in BiH.[36] The new strategy also includes a section on management of residual contamination and national capacities once clearance of all contaminated areas is completed.[37] The new strategy will be presented to the government as a suggested format and timeframe for completion of mine and CMR clearance in BiH.

However, as at June 2018, despite being submitted for approval more than six months ago, the new national strategy had still not been formally approved. As the GICHD has stated, "it is unclear why the process is taking so much time. It is important for this to be finalised, especially given the fact that operational and financial plans need to be developed accordingly, which will require additional time."[38]

Donors are hoping that the strategy will contain clear, realistic indicators and milestones, and incorporate up-to-date land release methodologies.[39] BHMAC has reported that it intends to factor at least two revisions into its new mine action strategy, to help monitor progress and ensure it remains valid.[40]

Legislation and Standards

Legislation

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. A new draft demining law, first submitted to parliament in 2010, did not receive the approval of the Council of Ministers.[41] The last attempt to amend the law took place in the second half of 2015 but the Council of Ministers concluded that instead of adopting a new law, the existing law on demining should be amended.[42]

BiH demining authorities are following the recommendation to amend the existing law, but; as such; they are restricted to the number of changes that can be incorporated, as amendments are not permitted to exceed 40% of an original Act or else a new law is needed.[43] In August 2016, the 68th session of the Council of Ministers of BiH issued a "Decision of the establishment of working group for the design of changes on the Demining law in BH".[44] The 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,[45] which as at June 2018 was awaiting parliamentary adoption.[46] As stressed by the GICHD: "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."[47]

Standards

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.[48] The Demining Commission adopted new standards for CMR at the beginning of 2017.[49] The previous year, BHMAC adopted a new standing operating procedure (SOP) for non-technical survey of areas suspected to contain CMR, based on NPA's own SOPs.[50]

In 2016, in collaboration with the GICHD and UNDP, BHMAC held a workshop on "standards and SOP revisions".[51] At the end of 2016, in order to further optimise efficiency and effectiveness, and ensure that the standards and SOPs allow for the optimal release of land through survey, including by technical survey, BHMAC created four expert working groups, to work on amendments and additional to all the chapters of the national mine action standards and SOPs.[52] The working groups expected to complete their work by the end of September 2017, after which recommendations were to be sent to the demining commission for adoption.[53] Two SOP chapters were adopted by the Demining Commission in April 2018; one on non-technical survey and the other on the opening and monitoring of tasks.[54]

In addition, BiH announced that technical survey and CMR clearance would also be conducted with the use of special detection dogs (SDDs), through NPA.[55] Successful results from a 2014 pilot project using SDDs for technical survey and clearance of CMR-contaminated areas, implemented by NPA,[56] led to BHMAC updating the relevant NMAS to include the use of dogs in targeted technical survey of CMR.[57] However, as at March 2018, the corresponding SOPs for SDDs had not yet been approved.[58]

Quality Management

BHMAC'S two main offices in Banja Luka and Sarajevo coordinate the activities of regional offices in planning, survey, and quality control/QA. QA inspectors are based in the regional offices.[59]

Information Management

BHMAC does not report accurately or consistently on land release data (disaggregated by product (cancelled, reduced and cleared), activity (non-technical survey, technical survey, and clearance), and classification (SHA and CHA), in a manner consistent with IMAS.[60]

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.[61]

Operators

Three organisations were accredited for CMR survey and clearance in BiH and conducted operations in 2017: two national bodies (the Armed Forces of BiH and Federal Administration of Civil Protection), and one international non-governmental organisation, NPA.[62] 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.[63] BHMAC did not expect any major change in CMR capacity in 2018.[64]

Two of thirty-four of the BiH Armed Forces' ten-strong demining teams (eight deminers, plus a team leader and a medic) are specialised in CMR clearance.[65] As at June 2018, both teams were deployed.[66] The general view is that the BiH Armed Forces and Civil Protection are both good partners, and have effective capacities, but have suffered from logistical challenges and equipment deficits, which prevent them from working at full capacity.[67] For example, both the Federal Administration of Civil Protection and the BiH lack detectors for CMR clearance,[68] and 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.[69]

Furthermore, both entities suffer recruitment challenges, but of a differing nature. 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.[70] The Federal Administration of Civil Protection, on the other hand, is unable to employ new deminers, as this is a Federal Government decision. Therefore, the capacity of the Federal Administration of Civil Protection has been reduced as pensioned deminers or those absent due to sickness have not been replaced.[71]

As per the previous year, NPA deployed one manual BAC team, with six deminers, in 2017. It expected capacity to remain constant in 2018.[72]

In addition, Mines Advisory Group (MAG) received operational accreditation in April 2017, and began demining in May 2017, but was engaged in landmine survey and clearance only.[73]

LAND RELEASE

In 2017, close to 0.27km^2 of CMR-contaminated area was released by clearance, and a further 0.6km^2 reduced by technical survey. During technical survey and clearance, a total of 1,246 submunitions were destroyed.[74]

Survey in 2017

In 2017, nearly 0.6km^2 of CMR-contaminated area was reduced by technical survey, during which 632 submunitions and 26 other items of ERW were destroyed.[75] This represents a slight decrease on the 0.76km^2 was reduced by technical survey in 2016.[76]

Clearance in 2017

In 2017, nearly 0.27km^2 of CMR contaminated was cleared, with the destruction of 1,246 submunitions and 4 other items of UXO, all in the Federation of BiH (see Table 2).[77] Clearance output in the Federation BiH in 2017, conducted by the BiH Armed Forces, the Federal Administration of Civil Protection, and NPA, was therefore more than double the 0.1km^2 cleared in 2016.[78]

Table 2: Clearance of CMR-contaminated area in 2017[79]

Canton	Operators	Area cleared (m^2)	Submunitions destroyed	Other UXO destroyed
Tuzlanski	BiH Armed Forces	36,255	529	0
Unsko-Sanski	Federal Administration of Civil Protection and NPA	122,903	38	1
Zenicko-Dobojski	BiH Armed Forces and NPA	32,462	250	0
Srednje-Bosanski	BiH Armed Forces	11,509	20	3
Hercegovacko-Neretvanski	Federal Administration of Civil Protection and NPA	39,787	9	0
Canton 10	NPA	24,856	77	0
Sarajevo	BiH Armed Forces	0	323	0
Totals		**267,772**	**1,246**	**4**

NPA conducted CMR operations in four cantons in 2017: Canton 10, Hercegovacko-Neretvanski, Unsko-Sanski, and Zenicko-Dobojski. In total, NPA reported releasing 130,522m^2 through technical survey and 139,555m^2 through clearance, during which a total of 124 submunitions and 1 other item of UXO were destroyed.[80] Of the five clearance tasks NPA undertook in 2017, there was one task in Zenicko-Dobojski canton, in which no submunitions were discovered, but 105 pieces of exploded CMR were found.[81]

ARTICLE 4 COMPLIANCE

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. It is unclear whether BiH is on track to meet this deadline.

The 2012 Mine Action Strategy Revision had predicted that BiH would "completely eliminate" all CMR-contaminated areas by 2015.[82] In the second Mine Action Strategy Revision, conducted in 2015 and adopted by the Demining Commission in March 2016, this target was pushed back to the end of 2017.[83] However, by May 2017, based on the status of current CMR survey and clearance operations, BiH no longer expected to meet its Article 4 obligations by the end of 2017, as it had previously stated at the CCM First Review Conference in September 2015 and forecast in its second Mine Action Strategy Review.[84] More recently, however, in September 2017, BiH announced that, "In accordance with the Draft of Strategy in Mine Action 2018–2025, prepared by BHMAC in cooperation with GICHD, Bosnia and Herzegovina will fulfil its CCM Article 4 obligations to clear and destroy or ensure the clearance and destruction of, all cluster munition remnants by March 2021."[85]

While BHMAC has stated previously that it does not expect any obstacles in meeting its Article 4 deadline of 1 March 2021,[86] the fact that only 1km^2 of CMR-contaminated land has been cleared in the last five years (see Table 3) is cause for concern. It is not certain that BiH will indeed meet its Article 4 deadline.

Table 3: Five-year summary of CMR clearance[87]

Year	Area cleared (km^2)
2017	0.27
2016	0.10
2015	0.23
2014	0.26
2013	0.24
Total	**1.10**

NPA reported a target of 1km^2 for technical survey and clearance operations in 2018; 250,000m^2 for non-technical survey and targeted investigation in partnership with BHMAC; and 250,000m^2 as direct operational support to the demining battalion BiH Armed Forces.[88]

BHMAC is funded by the common institutions of BiH and other institutions at state level.[89] 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.[90] According to BHMAC, small-scale investments in equipment and training could significantly increase the capabilities of both the Federal Administration of Civil Protection and the Armed Forces.[91]

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 CCM Article 7 Report (for 2017), Form F.

3 CCM Article 7 Report (for 2016), Form F.

4 CCM Article 7 Report (for 2017), Form F; and email from Ljiljana Ilić, BHMAC, 22 June 2018.

5 Interview with Braco Pandurevic, Head of Operations, Norwegian People's Aid (NPA) BiH, Sarajevo, 9 May 2017; and BHMAC, "Analysis of implementation of mine action strategy of Bosnia and Herzegovina (2009-2019) and draft amendments", adopted by the Demining Commission on 28 March 2016, p. 9.

6 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].

7 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".

8 Interview with Saša Obradovic, Director of BHMAC, Sarajevo, 10 May 2017.

9 CCM Article 7 Report (for 2017), Form F.

10 Email from Ljiljana Ilić, BHMAC, 22 June 2018.

11 BHMAC, "Mine Action Report in BiH for 2015 approved by the BH Ministry Council", 16 May 2016, at: http://www.bhmac.org/en/stream.daenet?sta=3&pid=937&kat=19.

12 Statements of BiH, First CCM Review Conference, Dubrovnik, 9 September 2015; and High-level Segment, First CCM Review Conference, 7 September 2015.

13 Statement of BiH, High-level Segment, First CCM Review Conference, Dubrovnik, 7 September 2015.

14 Email from Darvin Lisica, Programme Manager, NPA BiH, 5 May 2016.

15 Email from Ljiljana Ilić, BHMAC, 22 June 2018.

16 Email from Goran Zdrale, BHMAC, 17 May 2017; CCM Article 7 Report (for 2015), Form J; and BHMAC, "Report on Mine Action in BiH for 2016", February 2017, p. 6.

17 Statement of BiH, High-level Segment, First CCM Review Conference, Dubrovnik, 7 September 2015.

18 BHMAC Organisational chart, at: http://www.bhmac.org/?page_id=704&lang=en, accessed 28 May 2017.

19 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 email from Suad Baljak, UNDP, 15 June 2017.

20 BHMAC, "The appointment of new members of Demining Commission in Bosnia and Herzegovina", News item, 24 July 2015; and "Official Gazette of BH", No. 67/15 – Decision of establishment of demining commission of BH by Counsel of Ministers of BH, 30 July 2015.

21 Email from Suad Baljak, UNDP, 15 September 2017.

22 Emails from Ljiljana Ilić, BHMAC, 26 June 2018; and Suad Baljak, UNDP, 27 June 2018.

23 UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015, p. 22.

24 Ibid.; 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.

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. 8.

26 Bosnia and Herzegovina Official Gazette, Sarajevo, 17 March 2002.

27 Statement of GICHD, Anti-Personnel Mine Ban Convention (APMBC) Intersessional meetings, Geneva, 7 June 2018.

28 Statement of BiH, APMBC Thirteenth Meeting of States Parties, Geneva, 5 December 2013, p. 2.

29 BHMAC, "Revision of Mine Action Strategy in Bosnia and Herzegovina 2009–2019 (First Revision 2012)", 14 March 2013.

30 UNDP, "Draft Mine Action Governance and Management Assessment for Bosnia and Herzegovina", 13 May 2015, p. 17.

31 Statement of BiH, APMBC Fourteenth Meeting of States Parties, Geneva, 18 December 2015; and email from Tarik Serak, BHMAC, 26 May 2016.

32 Email from Tarik Serak, BHMAC, 26 May 2016.

33 Email from Goran Zdrale, BHMAC, 17 May 2017; and Audit Office of the Institutions of Bosnia and Herzegovina, "Performance Audit Report. Efficiency of the Demining System in Bosnia and Herzegovina", p. 25.

34 Interview with Åsa Massleberg, Advisor, Strategic Management, GICHD, Geneva, 9 March 2017; email from Goran Zdrale, BHMAC, 17 May 2017; and Statement of BiH, APMBC Intersessional meetings, Geneva, 8 June 2017.

35 BHMAC, "From 7 till 11 November a workshop on National Mine Action Strategy and prioritisation is being held", 7 November 2016, at: http://www.bhmac.org/?p=2853&lang=en; "Workshop on "Revision of Mine Action Strategy 2009-2019" held in Sarajevo", 17 February 2017, at: http://www.bhmac.org/?p=3067&lang=en; and emails from Anna-Lena Schluchter, containing information from Åsa Massleberg, GICHD, 20 and 29 June 2017.

36 Email from Goran Zdrale, BHMAC, 17 May 2017; and interview with Saša Obradovic, BHMAC, Sarajevo, 10 May 2017.

37 Interviews with Åsa Massleberg, GICHD, Geneva, 9 March 2017; and Saša Obradovic, BHMAC, Sarajevo, 10 May 2017.

38 Statement of GICHD, APMBC Intersessional meetings, Geneva, 7 June 2018.

39 Interview with Haris Lokvancic, Advisor on Political Affairs, Programme Officer – Human Security/Justice, Swiss Embassy, Sarajevo, 9 May 2017.

40 Interview with Saša Obradovic, BHMAC, Sarajevo, 10 May 2017.

41 UNDP, "Mine Action Board of Donors Meeting", 31 March 2016, at: http://www.ba.undp.org/content/bosnia_and_herzegovina/en/home/presscenter/articles/2016/03/31/sastanak-odbora-donatora-za-protuminske-akcije.html; and email from Amela Balic, NPA, 17 June 2016.

42 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.

43 Interview with Zdravko Jonjić, Assistant Director for Operations, BHMAC, Sarajevo, 10 May 2017.

44 Email from Suad Baljak, UNDP, 15 June 2017; and see: http://sllist.ba/glasnik/2016/broj70/broj070.pdf, p. 8.

45 Statement of BiH, Intersessional meetings, Geneva, 8 June 2017.

46 Statement of GICHD, APMBC Intersessional meetings, Geneva, 7 June 2018.

47 Ibid.

48 BHMAC, "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.; and BHMAC, "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.

49 Interview with Saša Obradovic, BHMAC, Sarajevo, 10 May 2017.

50 Emails from Darvin Lisica, NPA, 11 August 2015, and Tarik Serak, BHMAC, 26 May 2016; and Statement of BiH, First CCM Review Conference, Dubrovnik, 9 September 2015.

51 BHMAC, "Report on Mine Action in BiH for 2016", February 2017, p. 20.

52 Email from Goran Zdrale, BHMAC, 17 May 2017; and BHMAC, "Report on Mine Action in BiH for 2016", February 2017, pp. 18 and 24.

53 Emails from Goran Zdrale, BHMAC, 17 May 2017 and Suad Baljak, UNDP, 15 September 2017; and Statement of BiH, Intersessional meetings, Geneva, 8 June 2017.

54 Emails from Ljiljana Ilić, BHMAC, 26 June 2018; and Suad Baljak, UNDP, 27 June 2018.

55 Statement of BiH, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.

56 Email from Amela Balic, NPA Bosnia, 15 April 2015.

57 Email from Goran Zdrale, BHMAC, 17 May 2017.

58 Email from Goran Šehić, Deputy Programme Manager, NPA BiH, 30 March 2018.

59 BHMAC, "Bosnia and Herzegovina Mine Action Annual Report 2011", adopted by the Demining Commission, May 2012, p. 22; and email from Tarik Serak, BHMAC, 6 May 2014.

60 CCM Article 7 Report (for 2017), Form F.

61 Statement of GICHD, APMBC Intersessional meetings, Geneva, 7 June 2018.

62 Email from Ljiljana Ilić, BHMAC, 22 June 2018.

63 Email from Suad Baljak, UNDP, 27 June 2018.

64 Email from Ljiljana Ilić, BHMAC, 22 June 2018.

65 Interview with Blažen Kovač, Ministry of Defense, Chair of the Demining Commission, Sarajevo, 10 May 2017; and email from Fotini Antonopoulou, EU, 23 July 2018.

66 Email from Fotini Antonopoulou, EU, 23 July 2018.

67 UNDP, Draft Mine Action Governance and Management Assessment for BiH, 13 May 2015, p. 29; interview with Darvin Lisica, NPA, Sarajevo, 8 May 2017; and interviews with Haris Lokvancic, Swiss Embassy, Sarajevo, 9 May 2017; and Tarik Serak, BHMAC, Sarajevo, 10 May 2017.

68 Interview with Muamer Husilović, Expert Advisor, and Ahmet Dulović, Documenter, the Federal Civil Protection of BiH, Sarajevo, 10 May 2017.

69 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.

70 Interview with Lt.-Col. Dzevad Zenunovic, Demining Battalion of the Armed Forces of BiH, Sarajevo, 10 May 2017.

71 Interview with Muamer Husilović and Ahmet Dulović, the Federal Civil Protection of BiH, Sarajevo, 10 May 2017; and interview with Tarik Serak, BHMAC, Sarajevo, 10 May 2017.

72 Email from Goran Šehić, NPA, 30 March 2018.

73 Interview with Josephine Dresner, Programme Manager, MAG, Sarajevo, 9 May 2017.

74 Emails from Ljiljana Ilić, BHMAC, 26 June 2018; and Tarik Serak, BHMAC, 27 June 2018.

75 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 863,066m^2, were 632 pieces of submunition and 26 pieces of ERW." BHMAC subsequently confirmed that 863,066m^2 refers to the total land released through clearance and technical survey, and that of this, 267,772m^2 was released through clearance and 595,294m^2 through technical survey. Email from Ljiljana Ilić, BHMAC, 26 June 2018.

76 Email from Goran Zdrale, BHMAC, 17 May 2017.

77 CCM Article 7 Report (for 2017), Form F; and email from Ljiljana Ilić, BHMAC, 22 June 2018.

78 Email from Goran Zdrale, BHMAC, 17 May 2017; and BHMAC, "Report on Mine Action in BiH for 2016", February 2017, p. 14.

79 CCM Article 7 Report (for 2016), Form F (though the area reduced by technical survey was not disaggregated from that released through clearance in the reporting form); and email from Goran Zdrale, BHMAC, 17 May 2017. Whereas BHMAC did not record the area cleared by NPA, NPA reported that it cleared had 258,126m^2. Furthermore, the 7,618m^2 reported to have been cleared by the Federal Administration of Civil Protection only includes the area of the one task that was completed in 2016. However, the Federal Administration of Civil Protection reported that it had cleared an additional 275,916m^2 in 2016, in clearance tasks which had not yet been completed as at the end of 2016. Email from Muamer Husilović, the Federal Civil Protection of BiH, Sarajevo, 10 May 2017.

80 Email from Goran Šehić, NPA, 30 March 2018.

81 Ibid.

82 BHMAC, "Revision of Mine Action Strategy in Bosnia and Herzegovina 2009–2019 (First Revision 2012)", 14 March 2013, p. 13; and email from Darvin Lisica, NPA, 5 May 2016.

83 BHMAC, "Analysis of implementation of mine action strategy of Bosnia and Herzegovina (2009–2019) and draft amendments", adopted by the Demining Commission on 28 March 2016, p. 17.

84 Email from Tarik Serak, BHMAC, 26 May 2016, and email from Goran Zdrale, BHMAC, 17 May 2017.

85 Statement of BiH, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.

86 Email from Goran Zdrale, BHMAC, 17 May 2017.

87 See Cluster Munition Monitor and Mine Action Review reports on clearance in BiH covering 2013–17.

88 Email from Goran Šehić, NPA, 30 March 2018.

89 Email from Goran Zdrale, BHMAC, 17 May 2017.

90 Emails from Goran Zdrale, BHMAC, 17 May 2017; and Fotini Antonopoulou, EU, 23 July 2018.

91 Statement of BiH, First CCM Review Conference, Dubrovnik, 9 September 2015; and interview with Tarik, BHMAC, Sarajevo, 10 May 2017.

ARTICLE 4 DEADLINE: 1 SEPTEMBER 2023
(UNCLEAR WHETHER ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	3	3
Target date for completion of cluster munition clearance	3	3
Targeted clearance	3	3
Efficient clearance	4	4
National funding of programme	2	2
Timely clearance	2	2
Land-release system in place	6	6
National mine action standards	7	7
Reporting on progress	3	3
Improving performance	2	3
PERFORMANCE SCORE: VERY POOR	**3.5**	**3.6**

PERFORMANCE COMMENTARY

While the extent of remaining contamination from cluster munition remnants (CMR) is not known, it is thought to be low. But large portions of the northern regions of Chad, which are heavily contaminated by mines and explosive remnants of war (ERW), are still to be surveyed, and it is possible CMR contamination could remain there.

RECOMMENDATIONS FOR ACTION

- → Targeted survey is needed, particularly in the northern Borkou and Tibesti regions, to identify mine and ERW contamination, including CMR.
- → Chad should elaborate a resourced workplan/action plan to complete survey and clearance of CMR as soon as possible.

CONTAMINATION

The extent of CMR contamination remaining in Chad is unknown, but is not believed to be heavy. In July 2017, Mines Advisory Group (MAG) reported that its programme in the north of the country has, to date, only found very limited evidence of CMR.[1] In 2017, MAG did not receive any reports of casualties due to CMR or conduct any survey or clearance operations in Chad.[2]

Following the end of armed conflict with Libya in 1987, unexploded submunitions and cluster munition containers 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.[3] In 2011, MAG found unexploded Soviet anti-tank PTAB-1.5 submunitions during survey in an area close to Faya Largeau.[4]

The most recent discovery of CMR was in 2015, when 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-1SCh submunition in the Borkou region.[5] In January 2015, four children (three girls and one boy) were reportedly injured after handling a submunition in Faya Largeau.[6]

In May 2017, both MAG and Humanity and Inclusion (HI, formerly Handicap International) informed Mine Action Review they had not seen any evidence of significant CMR contamination remaining in Chad. According to MAG, since the beginning of its activities in 2004, no significant area of CMR contamination had been reported or identified. However, MAG emphasised that the majority of the Tibesti region, thought to be one of the most heavily contaminated regions with mines and ERW, had still to be surveyed, and there were few local informants who might know of contamination. It also noted the possibility that CMR might be found around former Libyan military bases. This will be confirmed once MAG deploys to the field.[7]

In 2012, Chad stated 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. Chad said that the Tibesti region was being surveyed to determine the extent of the contamination.[8] In 2014, Chad reported that, after Libyan troops withdrew in 1987, members of the French Sixth Engineers Regiment discovered and subsequently destroyed CMR around Libyan positions, prior to the building of the national mine action centre. It reiterated its suspicion of additional contamination in the Tibesti region.[9]

Other Explosive Remnants of War and Landmines

Chad has a significant mine and ERW problem as a result of 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). Mines and ERW are said to obstruct safe access to housing, roads, pastures, water points, and mining areas, especially in northern Chad. Contamination is said to be an ongoing threat to communities and to have a severe negative impact on the socio-economic development of Borkou, Ennedi, and Tibesti (among its poorest regions).[10]

PROGRAMME MANAGEMENT

The national mine action programme is managed by what is effectively a national mine action centre, the National High Commission for Demining (Haut Commissariat National de Déminage, HCND).[11] The National Demining Centre (Centre National de Déminage, CND), which earlier conducted clearance operations, appears to have been dissolved. In July 2017, a new governmental decree restructured the HCND, reducing the number of personnel by more than half from 744 to 329.[12]

In December 2016, funding for a two-year European Union (EU)-funded mine action project (Projet d'appui au secteur du déminage au Tchad, PADEMIN) came to an end.[13] Under this project, MAG conducted survey and clearance of mines and ERW, focusing on Borkou, Ennedi, and Tibesti. HI provided capacity-building support to the CND, in particular for information and quality management, and carried out non-technical survey in three southern regions of the country thought to be contaminated by mines and ERW.[14]

In September 2017, the EU agreed to support a new four-year mine action project (PRODECO) in Chad.[15] As part of this project, HI is focusing on survey and clearance in the Borkou and Ennedi regions while MAG is working in the Tibesti and Lake Chad regions.[16] A third international operator, the Swiss Foundation for Demining (La Fondation Suisse pour le Déminage, FSD), is to provide technical support, training, and capacity building to the HCND, including support for the use of the Information Management System for Mine Action (IMSMA).[17]

Since 2008, Chad's mine action programme has suffered from a lack of international funding, weak government oversight, and mismanagement issues within the HCND.[18] Demining operations, previously conducted by the CND, have also been plagued by poor equipment and lack of funding.

Strategic Planning

In 2013, the Government of Chad approved a new strategic mine action plan for 2013–17. The goals of the plan included the development and maintenance of an effective data collection and management system in addition to the release of contaminated areas.[19]

Following the request of the Thirteenth Meeting of States Parties to the Anti-Personnel Mine Ban Convention (APMBC), the HCND elaborated a national mine action plan for 2014–19, with technical support from the United Nations Development Programme (UNDP). The plan notes that Chad adhered to the CCM but does not detail plans to clear CMR.[20] According to MAG, the HCND assigns areas for clearance and decides on priorities in consultation with mine action operators.[21]

Legislation and Standards

There are no CMR-specific standards in Chad.

Quality Management

HI reviewed Chad's national mine action standards on land release and quality management in the beginning of 2016, with a new version expected to be produced in June 2016.[22] Both MAG and HI reported that internal quality assurance and quality control activities (QA/QC) were done on a regular basis in 2015, and that the HCND carried out a number of external QA/QC visits, evaluations, and accreditations during the year.[23] In 2017, Level 1 EOD (explosive ordnance disposal) quality assurance training was carried out with HCND as part of the PRODECO project.[24]

Information Management

The HCND uses the IMSMA database. As part of the PRODECO project, the database was being updated in 2018 by the HCND's information management team supervised by an expert from FSD.[25]

Operators

MAG has been the main clearance operator in recent years. In 2016, MAG concluded operations under the EU PADEMIN project. As at May 2018, MAG had not yet deployed its demining teams under the new EU PROCECO project due to delays in obtaining the correct permissions from the administrative authorities without which their demining equipment will not be released by customs.[26] MAG was planning to finally begin deployment in June 2018.[27]

LAND RELEASE

No CMR survey or clearance occurred in 2017. In 2016, MAG concluded operations under the EU PADEMIN project, with the release of a total of 98 hazardous areas with a size of nearly 1.4km^2, along with over 100,000m^2 of traffic routes in the Tibesti region.[28]

Survey in 2017

There was no reported CMR survey in 2017.

Clearance in 2017

There was no reported CMR clearance in 2017.

ARTICLE 4 COMPLIANCE

Under Article 4 of the CCM, Chad is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 September 2023. It is unclear whether Chad is on track to meet this deadline. It has conducted no clearance of CMR-contaminated areas in the last five years.

Table 1: Five-year summary of CMR clearance[29]

Year	Area cleared (km^2)
2017	0
2016	0
2015	0
2014	0
2013	0
Total	**0**

In its Article 7 transparency report for 2016, Chad reported that two submunitions had been found and cleared in the regions of Borkou and Tibesti.[30] In Chad's Article 7 report for 2017, Form F (which concerns contamination and clearance) was reported as "Not Applicable".[31]

In May 2017, MAG reiterated its concerns over the lack of financial resources provided by the Government of Chad for the HCND and demining activities.[32] Previously, in 2015, Chad requested international cooperation and assistance in the form of two Multi-Task Teams to carry out non-technical survey, risk education, and explosive ordnance disposal for CMR.[33]

1 Email from Jeannette von Däniken, Programme Support Coordinator, Sahel and West Africa, MAG, 19 July 2017.

2 Email from Romain Coupez, Country Director, MAG, 17 May 2018.

3 Handicap International (HI), *Fatal Footprint: The Global Human Impact of Cluster Munitions*, Brussels, 2006, p. 17; HI, *Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities*, Brussels, 2007, p. 48; Survey Action Centre, "Landmine Impact Survey, Republic of Chad", Washington DC, 2002, p. 59; and Human Rights Watch and Landmine Action, *Banning Cluster Munitions: Government Policy and Practice*, Mines Action Canada, Ottawa, 2009, p. 56.

4 Emails from Liebeschitz Rodolphe, United Nations Development Programme (UNDP), 21 February 2011; and Bruno Bouchardy, MAG Chad, 11 March 2011.

5 CCM Article 7 Report (for 2015), Form F; and email from Llewelyn Jones, Director of Programmes, MAG, 31 May 2016.

6 CCM Article 7 Report (for 2015), Form H.

7 Email from Romain Coupez, MAG, 10 May 2017 and 31 May 2018; and response to questionnaire, 3 May 2017.

8 Statement of Chad, CCM Third Meeting of States Parties, Oslo, 13 September 2012.

9 CCM Article 7 Report (for 2013), Form F.

10 National High Commission for Demining (HCND), Mine Action Plan 2014–2019, May 2014; and emails from Romain Coupez, MAG, 3 May 2017; and Benjamin Westercamp and Seydou N'Gaye, HI, 22 March 2017.

11 Email from Romain Coupez, MAG, 4 July 2018.

12 Emails from Soultani Moussa, Manager/Administrator, HCND, 19 June and 3 July 2018.

13 Email from Romain Coupez, MAG, 3 May 2017.

14 Email from Julien Kempeneers, HI, 2 May 2016; and HI, "Landmine Clearance Efforts Begin in Chad", undated, at: http://www.handicap-international.us/landmine_clearance_efforts_begin_in_chad.

15 HI "Country Profile Chad", September 2017, at: https://www.handicapinternational.be/sites/default/files/paginas/bijlagen/201710_fp_tchad_fr.pdf

16 Ibid.

17 Ibid.

18 Presentation of Chad at African Union/ICRC Weapons Contamination Workshop, Addis Ababa, 3–5 March 2013; Anti-Personnel Mine Ban Convention (APMBC) Third Article 5 deadline Extension Request, 2 May 2013, p. 12.

19 Mine Action Strategic Plan 2013–2017, annexed to Third APMBC Article 5 deadline Extension Request, 2 May 2013.

20 HCND, Mine Action Plan 2014–2019, May 2014, p. 4.

21 Email from Romain Coupez, MAG, 3 May 2017.

22 Emails from Julien Kempeneers, HI, 2 May 2016; and Llewelyn Jones, MAG, 7 May 2016.

23 Ibid.

24 Email from Soultani Moussa, HCND, 19 June 2018.

25 Ibid.

26 Email from Romain Coupez, MAG, 31 May 2018.

27 Ibid.

28 Email from Romain Coupez, MAG, 3 May 2017.

29 See Cluster Munition Monitor and Mine Action Review reports on clearance in Chad covering 2013–16.

30 CCM Article 7 Report (for 2016), Form F.

31 CCM Article 7 Report (for 2017), Form F.

32 Email from Romain Coupez, MAG, 3 May 2017.

33 CCM Article 7 Report (for 2015), Form F.

CHILE

ARTICLE 4 DEADLINE: 1 JUNE 2021
(NOT ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	6	6
Target date for completion of cluster munition clearance	1	1
Targeted clearance	0	0
Efficient clearance	0	0
National funding of programme	7	7
Timely clearance	0	0
Land-release system in place	7	7
National mine action standards	7	7
Reporting on progress	2	1
Improving performance	0	2
PERFORMANCE SCORE: VERY POOR	**3.0**	**3.1**

PERFORMANCE COMMENTARY

Chile has failed to initiate survey and clearance of cluster munition remnant (CMR) contaminated areas, despite being a state party since 2011. This is a violation of the duty under Article 4 of the Convention on Cluster Munitions (CCM) to clear CMR "as soon as possible".

RECOMMENDATIONS FOR ACTION

- → Chile should begin survey and clearance of CMR-contaminated areas immediately to bring it back into compliance with the CCM.
- → Chile should also elaborate a resourced workplan with clear timelines for the completion of survey and clearance of CMR.

CONTAMINATION

Chile has reported almost 97km^2 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.[1]

The impact of CMR contamination is believed to be minimal, and there have been no reports of any casualties.

Other Explosive Remnants of War and Landmines

Chile is also affected, to a limited extent, by other unexploded ordnance (UXO), and has some 5.1km^2 of mined areas still to release (see the Mine Action Review's *Clearing the Mines* report on Chile for further information).[2]

Table 1: CMR contamination (as at July 2017)[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

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.

Strategic Planning

Chile has not reported on any steps taken to elaborate a strategic plan or workplan to address its four contaminated areas.

Legislation and Standards

Chile developed a joint demining manual for its armed forces in 2014, which includes procedures for destruction of UXO.[4]

Quality Management

CNAD is responsible for quality management.

Information Management

CNAD is responsible for mine action information management. It uses the Information Management System for Mine Action (IMSMA) database.

Operators

Mine clearance in Chile is conducted by the Army Corps of Engineers and the Navy Peace and Demining Division. Mechanical resources are used to support manual demining.

LAND RELEASE

Cluster munition contamination in Chile is limited to land that has been used for military training. Chile has claimed that the military usually conducts clearance of submunitions and UXO after their use.[5] As at the end of July 2017, however, Chile had not reported conducting any survey or additional clearance of its four CMR-contaminated areas.[6]

Survey in 2017

There was no reported CMR survey in 2017.

Clearance in 2017

There was no reported CMR clearance in 2017.

ARTICLE 4 COMPLIANCE

Under Article 4 of the CCM, Chile is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 June 2021. Its failure to act means that it is not currently on target to meet its deadline. Indeed, Chile should already have completed requisite survey and be conducting full clearance of hazardous areas. Its failure to do so is a violation of the Convention.

Table 2: Five-year summary of CMR clearance[7]

Year	Area cleared (km^2)
2017	0
2016	0
2015	0
2014	0
2013	0
Total	**0**

1 CCM Article 7 Report (for 1 April 2016 to 31 July 2017), Form F.

2 APMBC Article 7 Report (for 2017), Form F.

3 Email from Juan Pablo Rosso, Expert in International Security, International and Human Security Department, Chilean Ministry of Foreign Affairs, 16 June 2015; and see CCM Article 7 Report, Form F, July 2017. Chile has reported the number of cluster munitions that were launched in these areas but the number of cluster munition remnants is unknown.

4 Manual No. MDO-90402. CCM Article 7 Report (for 2015), Form F2.1.

5 CCM Article 7 Report, (for 1 April 2016 to 31 July 2017), Form F.

6 Ibid.

7 See Cluster Munition Monitor and Mine Action Review reports on clearance in Chile covering 2013–16.

CROATIA

ARTICLE 4 DEADLINE: 1 AUGUST 2020
(ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	9	9
Target date for completion of cluster munition clearance	9	7
Targeted clearance	8	7
Efficient clearance	8	7
National funding of programme	9	9
Timely clearance	8	6
Land-release system in place	7	7
National mine action standards	6	6
Reporting on progress	8	6
Improving performance	8	8
PERFORMANCE SCORE: VERY GOOD	**8.0**	**7.2**

PERFORMANCE COMMENTARY

Croatia continued to make steady progress in clearance of cluster munition remnants (CMR) in 2017, despite a small drop in clearance output compared to the previous year. Croatia maintained its dedicated national funding and strong political commitment to meeting its obligations under Article 4 of the Convention on Cluster Munitions (CCM). The Croatian Mine Action Centre (CROMAC)'s national workplan aims to complete clearance of all known CMR-contaminated areas by the end of 2018 – well in advance of its Article 4 deadline.

RECOMMENDATIONS FOR ACTION

- Croatia should revisit its 2015 Mine Action Law to rectify some of the unintended challenges it poses to the implementation of mine action operations.
- Croatia should ensure that sustainable capacity and systems are in place to address residual risk from CMR that may arise following completion of its CCM Article 4 obligations.

CONTAMINATION

At the end of 2017, Croatia had 11 areas confirmed to contain CMR, covering a total area of over 1.05km^2 (see Table 1).[1] This compares to reported contamination a year earlier of 10 confirmed hazardous areas (CHAs) over a total of 1.74km^2.[2]

While more than 1km of CMR-contaminated land was cleared in 2017, some new areas of previously unknown contamination were also discovered, including a very small amount in Split-Dalmatia, a county which had been declared completed in 2016, as well as in three other counties.[3] The CMR in Split-Dalmatia were discovered during the regular course of demining activity.[4]

Table 1: CMR contamination by county (as at end 2017)[5]

County	CHAs	Area (m^2)
Lika-Senj	5	731,162
Zadar	3	18,564
Šibenik-Knin	2	167,641
Split-Dalmatia	1	448
Sisak-Moslavina	1	136,276
Totals	**12**	**1,054,091**

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] CROMAC reports that CMR have more of a socio-economic than humanitarian impact,[7] and the last recorded CMR-related incident was more than 10 years ago.[8] As at September 2017, 25.7% of the remaining CMR-contaminated area was defined as agricultural; 72.1% as forested, and 2.2% as "other area" (e.g. water, marshland, landslides, coast).[9]

Other Explosive Remnants of War and Landmines

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

PROGRAMME MANAGEMENT

CROMAC was established on 19 February 1998 as the umbrella organisation for mine action coordination.[10] CROMAC is responsible for the collection, processing, and recording of data on mine and explosive remnants of war (ERW) contamination, survey, and clearance; marking of contaminated areas; non-technical survey; quality control (QC) of clearance; and technical survey.[11] CROMAC is accountable to the Government of Croatia through the Managing Board (formerly known as the CROMAC Council) whose members are representatives of the relevant ministries and other stakeholders, appointed by the Government.[12]

The mandate of the previous government-appointed members expired in August 2016,[13] and between August 2016 and the establishment of the CROMAC council by Government Decree in July 2017, the council did not meet on a monthly basis, as was foreseen. During this period, the lack of a government decree posed administrative challenges, such as delay in the CROMAC's annual workplan being sent for government approval and restrictions regarding recruitment decisions.[14] A new Director of CROMAC, Zdravko Modrušan, was appointed at the end of September 2017.[15]

In April 2012, the government created the Office for Mine Action (OMA), reporting to the Prime Minister's office, to function as a focal point for mine action, strengthen coordination among stakeholders and funding agencies, and raise public awareness about mine and ERW hazards.[16] The OMA does not sit above CROMAC; rather, it is the government institution dealing with the political aspects of mine action whereas CROMAC deals with operations.[17] The OMA includes a Unit for European Union (EU) Funds, tasked with promoting access to a range of EU funds to support the mine action sector.[18] The establishment of the OMA has elevated the status of mine action within the country as it can politically pressure the government and international actors in ways that CROMAC, as a technical body, cannot.[19]

Strategic Planning

Croatia has a National Mine Action Strategy 2009–2019, 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 with hazardous areas.[20] 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.[21] All CMR-contaminated areas are said to be cleared in accordance with county and state priorities.[22]

Based on the approved funding, CROMAC drafts annual workplans, which are submitted to the responsible ministries, the OMA, and other state bodies for comment and approval.[23] The national mine action plan for 2018 was officially approved by the Croatian government in March 2018, and one of its main goals is to eliminate all known CMR contaminated areas by the end of 2018.[24]

Legislation and Standards

A new law on mine action was adopted by the Croatian Parliament on 21 October 2015, incorporating developments from the latest International Mine Action Standards (IMAS), and specifically those relating to the use of technical survey to confirm the presence or absence of contamination.[25] 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.[26] The 2015 law has eliminated the need for standing operating procedures (SOPs), as all aspects of mine action are now clearly defined.[27] National mine action standards are also encompassed within it.[28]

While the 2015 Law, which was initiated by the OMA with the text drafted by the Ministry of Interior, marks an improvement in certain respects (for instance, by permitting land release through technical survey), there is widespread agreement among mine action experts and professionals with significant experience in the field (e.g. CROMAC staff and deminers), that overall the new law is not practical to implement in the field, and impedes efficient and effective mine action.[29]

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.[30] CROMAC only undertake quality control (QC) of executed demining operations.[31] 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.[32]

Under the 2015 law, the Ministry of Interior assesses authorised legal entities for conducting demining; this was formerly CROMAC's responsibility.[33] 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 license.[34]

Quality Management

With the adoption of the 2015 Law on Mine Action, CROMAC now undertakes only QC of executed demining operations.[35] Supervision during and after survey and clearance has been replaced by ongoing QC of cleared land during demining operations, and final QC, when the company has reported completion of demining of an area. Required "ongoing QC" for clearance operators has increased to 5% of each worksite, no later than three working days from the last conducted QC, in order to increase safety and quality.[36] In addition, CROMAC QC officers review a minimum of 5% of control samples at least every three days, and final quality control of 1% of the total demined surface is conducted by a commission consisting of two CROMAC representatives and an inspector from the Ministry of Interior.[37]

The shift in focus away from QA practices prior to and during demining operations to QC practices post-clearance is a concern for CROMAC (see section on Legislation and standards). The QC requirements of the 2015 Law are said to pose a significant capacity challenge for both operators and CROMAC, and rather than strengthen quality management as intended, they threaten to weaken it[38] and have negative impacts on the implementation of the land release plans.[39]

Information Management

For the purposes of information management, CROMAC established a mine information system (MIS), which is compliant with 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.[40]

Operators

In 2017, 40 authorised commercial demining companies were accredited for mine and CMR clearance operations, with a total capacity of 676 deminers, 45 demining machines, and 99 mine detection dogs (MDDs).[41] Of this, four companies were engaged in CMR clearance operations in 2017, namely DIZ-EKO, MINA PLUS, RUMITAL, and TITAN. CROMAC reported that it had retained a high quality of CMR operations throughout 2017, to help meet its Article 4 obligations, and it expected capacity to remain the same in 2018.[42]

LAND RELEASE

Croatia released 1.01km² of CMR area by clearance in 2017.[43] Output was a slight decrease on 2016, when 1.2km² of area containing only CMR was cleared, in addition to a further 0.1km² of mixed mine and CMR clearance.[44]

Survey in 2017

CROMAC identified and confirmed four CMR-contaminated areas totalling 158,750m² in 2017: 8,158m² in Lika-Senj county; 448m² in Split-Dalmatia county; 136,276m² in Sisak-Moslavina county; and 13,868m² in Šibenik-Knin county.[45]

Clearance in 2017

Croatia cleared six areas in three counties covering just over 1.01km² of CMR-contaminated area in 2017, destroying a total of 123 KB-1 submunitions (see Table 2).[46]

Table 2: Clearance of CMR-contaminated area in 2017[47]

County	Areas cleared	Area cleared (m²)	Submunitions destroyed
Lika-Senj	2	53,476	24
Šibenik-Knin	3	245,953	52
Zadar	1	715,034	47
Totals	**6**	**1,014,463**	**123**

Clearance was in five demining projects which contained exclusively CMR contamination, and one additional contracted mine clearance project completed in Zadar county, which also resulted in destruction of CMR.[48] All the areas cleared were found to have CMR.[49]

ARTICLE 4 COMPLIANCE

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.

In 2017, Croatia contributed around €4.3 million (approximately US$5.1 million) in national funding towards the cost of CROMAC, but did not report the amount of national funding contributed towards CMR survey and clearance operations.[50] However, CROMAC did maintain that it still expects to complete CMR clearance using national funding and believes funding is sufficient for it to complete CMR clearance by the end of 2018, in accordance with its national mine action plan.[51]

Croatia has cleared a total of 4.45km² of CMR-contaminated area over the past five years (see Table 3). Croatia plans to meet its Article 4 deadline by completing clearance of all known CMR contamination by the end of 2018, well in advance of its August 2020 deadline.[52] Challenges to CMR clearance are posed by rocky, forested, and mountainous areas, which prevent use of demining machines.[53]

Table 3: Five-year summary of CMR clearance[54]

Year	Area cleared (km²)
2017	1.01
2016	1.20
2015	0.43
2014	0.66
2013	1.15
Total	**4.45**

1 Email from Davor Laura, Head of Quality Control, CROMAC, 6 April 2018; and CCM Article 7 Report (for 2017), Form F.

2 Email from Nataša Mateković, Assistant Director and Head of Planning and Analysis Department, CROMAC, 22 March 2017.

3 Email from Davor Laura, CROMAC, 6 April 2018.

4 Email from Dejan Rendulić, CROMAC, 14 June 2018.

5 Ibid.; and CCM Article 7 Report (for 2017), Form F.

6 CCM Article 7 Report (for 2017), Form F.

7 Email from Nataša Mateković, CROMAC, 22 March 2017.

8 Email from Davor Laura, CROMAC, 6 April 2018.

9 Statement of Croatia, Clearance Session, Seventh Meeting of States Parties to the CCM, Geneva, 5 September 2017.

10 CROMAC, "National Mine Action Strategy of Croatia 2009–2019", Zagreb, June 2009, p. 2.

11 APMBC Article 5 Extension Request (draft), 29 March 2018, p. 24.

12 Ibid., p. 25.

13 Emails from Miljenko Vahtarić, CROMAC, 24 August 2016; and Nataša Mateković, CROMAC, 20 June 2017.

14 Email from Davor Laura, CROMAC, 6 April 2018; interviews with Hrvoje Debač, Acting Director, Government Office for Mine Action (OMA), 17 May 2017, Zagreb; and Neven Karas, Assistant Director and Head of Sector for General and Financial Affairs, CROMAC, Sisak, 18 May 2017.

15 Interview with Hrjove Debač, OMA and Davor Laura, CROMAC, in Geneva, February 2018; and email from Davor Laura, 6 April 2018.

16 Interview with Dijana Pleština, Director, OMA, in Geneva, 23 May 2012 and 10 April 2014; and email from Miljenko Vahtarić, CROMAC, 4 July 2013.

17 Email from Miljenko Vahtarić, CROMAC, 3 June 2016.

18 Interview with Miljenko Vahtarić, CROMAC, in Geneva, 11 April 2013, and email, 4 July 2013.

19 Interview with Miljenko Vahtarić, CROMAC, Sisak, 14 April 2014.

20 APMBC Article 5 deadline Extension Request (draft), 29 March 2018, p. 25.

21 Email from Miljenko Vahtarić, CROMAC, 13 May 2016.

22 Email from Miljenko Vahtarić, CROMAC, 10 June 2015.

23 APMBC Article 5 deadline Extension Request (draft), p.25, 29 March 2018; and email from Davor Laura, CROMAC, 6 April 2018.

24 Email from Davor Laura, CROMAC, 6 April 2018.

25 National Gazette No. 110/15; and CCM Article 7 Report (for 2017), Form A.

26 CCM Article 7 Report (for 2017), Form A; and emails from Miljenko Vahtarić, CROMAC, 13 and 18 May 2016.

27 Email from Miljenko Vahtarić, CROMAC, 13 May 2016; and CCM Article 7 Report (for 2015), Form A.

28 Email from Miljenko Vahtarić, CROMAC, 13 May 2016.

29 Interviews with Neven Karas, CROMAC; and Tomislav Ban, Assistant Director and Head of Sector for Operational Planning and Programming, CROMAC, Sisak, 18 May 2017.

30 Email from Dejan Rendulić, CROMAC, 14 June 2018.

31 Email from Nataša Mateković, CROMAC, 30 August 2017.

32 Ibid.; and interview with Ante Brkljačić, CROMAC, in Geneva, 9 June 2017.

33 Email from Miljenko Vahtarić, CROMAC, 24 August 2016.

34 Ibid.

35 Ibid; and APMBC Article 5 deadline Extension Request (draft), 29 March 2018, p. 28.

36 Emails from Miljenko Vahtarić, CROMAC, 13 May 2016; Nataša Mateković, CROMAC, 2 May and 20 June 2017; and APMBC Article 5 deadline Extension Request (draft), 29 March 2018, p. 28.

37 Emails from Miljenko Vahtarić, CROMAC, 13 May 2016; Nataša Mateković, CROMAC, 2 May and 20 June 2017; and APMBC Article 5 deadline Extension Request (draft), 29 March 2018, p. 28.

38 Interviews with Tomislav Ban, CROMAC, Sisak, 18 May 2017; and a representative of the CEA, Humanitarian Demining Association, Zagreb, 17 May 2017.

39 APMBC Article 5 deadline Extension Request (draft), 29 March 2018, p. 29.

40 CROMAC website, "CROMAC's Mine Information System", accessed 26 June 2018, at: https://www.hcr.hr/pdf/MISWebENG.pdf.

41 Ibid., p. 26; and email from Davor Laura, CROMAC, 6 April 2018.

42 Email from Davor Laura, CROMAC, 6 April 2018.

43 CCM Article 7 Report (for 2017), Form F.

44 Email from Nataša Mateković, CROMAC, 20 June 2017; and CCM Article 7 Report (for 2016), Form F.

45 Email from Davor Laura, CROMAC, 6 April 2018.

46 CCM Article 7 Report (for 2017), Form F.

47 Ibid.

48 Ibid.

49 Email from Davor Laura, CROMAC, 6 April 2018.

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, 7th 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 Davor Laura, CROMAC, 6 April 2018.

53 Ibid.

54 See Cluster Munition Monitor and Mine Action Review reports on clearance in Croatia covering 2013–16.

GERMANY

ARTICLE 4 DEADLINE: 1 AUGUST 2020
(UNCLEAR WHETHER ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	8	8
Target date for completion of cluster munition clearance	4	4
Targeted clearance	6	5
Efficient clearance	2	2
National funding of programme	8	8
Timely clearance	5	4
Land-release system in place	5	5
National mine action standards	8	8
Reporting on progress	7	5
Improving performance	7	6
PERFORMANCE SCORE: AVERAGE	**6.0**	**5.5**

PERFORMANCE COMMENTARY

Germany's programme for the release of cluster munition remnants (CMR) performed better in 2017, with clearance finally beginning and expanding its demining capacity. However, the density of the CMR and other unexploded ordnance (UXO) contamination encountered during clearance in 2017 was higher than expected, and the almost 0.5km^2 of land cleared during the year was less than planned.

While Germany aims to complete CMR clearance by its August 2020 deadline under the Convention on Cluster Munitions (CCM), there is no margin for delays and it is unclear whether it will meet its deadline. It has taken Germany more than five years since it first identified it had cluster munition-contaminated area on its territory to start clearance. Under the CCM it is required to complete clearance "as soon as possible".

RECOMMENDATIONS FOR ACTION

- → Germany should assess ways in which it can speed up release to ensure that it meets its CCM Article 4 deadline.
- → If staffing shortages prevent Germany upscaling clearance capacity to the level required, Germany should consider deploying army engineers or contracting non-governmental organisation (NGO) or commercial expertise to ensure it meets its Article 4 deadline.

CONTAMINATION

As at December 2017, Germany had approximately 11km^2 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 contamination reported for 2016,[2] despite clearance of 470,000m^2 in 2017.[3] The Soviet-era ShOAB-0.5 submunitions contaminating Wittstock result from testing of the weapon in 1952–93.[4] The area is heavily contaminated with various kinds of explosive ordnance, and "especially ordnance with considerable explosive power", as well as scrap metal.[5]

In its initial CCM Article 7 transparency report, submitted in January 2011, Germany declared having no areas confirmed or suspected to contain CMR.[6] In June 2011, however, at an Anti-Personnel Mine Ban Convention (APMBC) Standing Committee meeting, Germany declared that the area at Wittstock was suspected to contain CMR.[7] Germany repeated the information at the CCM intersessional meetings a week later, noting that the remnants were "principally found within the confines of a target range" located at the south of the training area.[8]

From 2011 to early 2014, suspected CMR contamination was reported to total 4km^2.[9] In August 2014, however, Germany reported that the total suspected hazardous area (SHA) was actually 11km^2.[10] The greatly increased estimate was ascribed to discovery of submunitions during non-technical survey across a wider area than previously reported.[11]

PROGRAMME MANAGEMENT

In early October 2011, ownership of the Wittstock former training range was transferred from the military to the federal government authority in charge of real estate, Bundesanstalt für Immobilienaufgaben (BImA). Beginning in 2012, BImA implemented a risk education programme in collaboration with local authorities based on a "danger prevention plan". The plan was described as a "crucial prerequisite" for further technical survey of the area.[12] Activities included marking the perimeter and preventing civilian access to the area.[13] It was planned to conduct an initial survey of access routes and areas of suspected UXO contamination in neighbouring locations, and, subsequently, technical survey.[14] The cost of any clearance would be covered by BImA.

Once safely released, the site is due to remain part of a "nature protection area" in the Kyritz-Ruppiner-Heide, managed by BImA as part of the Europa NATURA 2000 site, under the European Union (EU) Habitats Directive.[15]

Strategic Planning

Germany has not yet developed a national plan to complete clearance of all CMR as the CCM requires; nor has it set specific milestones for the release of areas confirmed or suspected to contain CMR. It has explained that their decision is due to the high level of contamination at the site, which includes different types of ERW, and the varying spatial distribution of contamination, due to overlapping contamination from multiple weapon types, encountered during clearance efforts in 2017.[16]

Legislation and Standards

The legislation and standards governing demining operations in Germany are not known.

Quality Management

The quality management system for demining operations in Germany is not known.

Information Management

The information management system for demining operations in Germany is not known.

Operators

Clearance capacity during the first months of 2017 comprised some 20 deminers, which later increased to a monthly average of 40–45.[17] As at July 2018, three private companies were being tasked to conduct operations at the site.[18] Germany was hoping to further increase clearance capacity to around 150 deminers in 2018, but may not be able to achieve this.[19] There are reportedly staff shortages for deminers in companies and in the market in general in Germany, in particular for the specially licenced team leaders required by German law.[20]

LAND RELEASE

In 2017, Germany conducted clearance, for the first time, of CMR-contaminated area at Wittstock. It reported total clearance of 470,000m^2.

Survey in 2017

No CMR-contaminated area was released by survey in 2017.

Clearance in 2017

Clearance efforts at Wittstock finally began in March 2017, following completion of preparation of a fire protection system the same month, during which 2km^2 of heathland was burnt.[21] Germany cleared 470,000m^2, between March and December 2017, during which 513 submunitions were destroyed (329 shOAB-0.5; 33 AO-1SCh; 1 AO-1 SC; 61 ZAB 2.5M; 87 PTAB 2.5M; and 2 PTAB 10-5), along with 2,395 items of other UXO.[22] Magnetometers were used for pre-clearance of large ferrous items, and metal detectors for CMR detection.[23]

Survey and clearance in 2012–16

Germany has been very slow to begin clearance of its sole CMR-contaminated area. At the CCM intersessional meetings in April 2012, Germany announced plans to conduct technical survey and, if necessary, clearance during 2012 of a 40km-long, 50-metre-wide tract of land to ensure fire prevention and environment protection. During the same period, it would also clear a network of paths and tracks to enable emergency management.[24] By August 2014, however, it was stated only that preparations for a "technical investigation" were "underway".[25]

According to Germany, in order to start technical survey, an area of 100 hectares (1km^2) of vegetation had first to be burnt to form a corridor around the targeted area. This was envisaged to take place in March 2015, followed by a technical survey pilot phase later in the year. The length of the survey would be dictated by what was found, and mechanical assets were not to be deployed because of the mixed nature of contamination.[26] In April 2015, Germany again reported that a technical survey was scheduled for later in the year.[27] In June 2015, Germany confirmed that technical survey was finally underway, but provided no further information on the expected timeframe for the survey or any clearance operations.[28]

In September 2015, Germany reported having carried out extensive non-technical and technical survey.[29] During preparation of the technical survey in 2015, four ShOAB-0.5 submunitions were cleared.[30] Site and "geophysical investigation" revealed strong evidence that CMR contamination existed only on the surface.[31] Germany subsequently confirmed that all required survey had been completed in 2015, and the results had formed the basis for the subsequent preparatory work in 2016.[32]

Germany reported that following non-technical and technical survey, 46km of affected roads had been "cleared" in order to guarantee safe access to the area.[33] Despite a request for clarification from Mine Action Review, Germany did not confirm if the 46km of affected road was actually released by clearance, as reported, or was in fact released by survey, which seems more probable. Germany also did not confirm the number and type of UXO discovered and destroyed during this process.

As at September 2015, Germany reported that it was in the process of planning the final steps to clear the area of CMR, and that it would commence clearance in the first quarter of 2016.[34]

Due to the dense vegetation in the contaminated area, Germany opted to burn the area in sections, to ensure an unobstructed view of the natural ground surface, where submunitions will be detected by visual and "geophysical means".[35] As at July 2016, Germany reported it was "making progress with the fire protection system and everything is so far working as planned".[36] Preparation of the site-wide fire protection system was implemented by remote-controlled caterpillar machinery operated by a team of five explosive ordnance disposal (EOD) personnel (one senior EOD technician and four machinery operators/surveyors). This was completed in 2016, with the exception of a small forest area on the eastern edge of the SHA.[37] During this process, a further five ShOAB-0.5 submunitions were destroyed.[38]

Survey of the area of suspected CMR-contamination was completed in 2015, and in 2016 Germany undertook preparations for CMR clearance.[39]

ARTICLE 4 COMPLIANCE

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. It is unclear whether Germany is on track to meet this deadline.

In the last five years, Germany has conducted clearance in only one year, clearing less than 0.5km^2 of cluster munition remnant-contaminated area (see Table 1). Furthermore, the 0.47km^2 of area cleared in 2017 is substantially less than the 2km^2 of area prepared for clearance along with some of the forest on the eastern edge of the SHA that could not be burnt as part of the fire protection system, which Germany had planned to clear in 2017.[40]

Table 1: CMR clearance in 2013–17

Year	Area cleared (km^2)
2017	0.47
2016	0
2015	0
2014	0
2013	0
Total	**0.47**

Clearance capacity in 2017 did, however, increase from 20 personnel at the start of clearance, to a monthly average of 40–45, and would potentially be increased up to as many as 150 in 2018.[41] However, staffing shortages in Germany may pose challenges to achieving this.[42]

Furthermore, in addition to possible staffing shortfalls, Germany foresees other potential obstacles that could impact its ability to meet its Article 4 deadline, including the very high level of CMR and UXO contamination; the very different spatial distribution of the contamination; higher levels of contamination than expected; restrictions due to legal requirements (fire protection and nature conservation); reduced burning of heathland due to unfavourable meteorological conditions; and shortage of destruction capacities at the responsible state authorities.[43]

Germany reported that it intends to meet its Article 4 deadline, but that these factors could lead to unplanned delays.[44] Given the tight timetable, such delays could prevent Germany from meeting its Article 4 deadline of 1 August 2020.

The cost of the clearance of 470,000m^2 in 2017 stood at almost €1.63 million (approximately US$ 2 million),[45] and CMR clearance at Wittstock is funded entirely by an agency of the federal government.[46]

1 CCM Article 7 Report (for 2017), Form F; and email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

2 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 19 April 2017; and CCM Article 7 Report (for 2016), Form F.

3 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

4 CCM Article 7 Report (for 2016), Form F; and Statement of Germany, High-Level Segment, First CCM Review Conference, Dubrovnik, 7 September 2015.

5 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.

6 CCM Article 7 Report (for 2010), Form F.

7 Statement of Germany, APMBC intersessional meetings (Standing Committee on Mine Action), Geneva, 21 June 2011.

8 Statement of Germany, CCM intersessional meetings (Clearance and Risk Reduction Session), Geneva, 28 June 2011.

9 Ibid.; and Statement of Germany, CCM Third Meeting of States Parties, Oslo, 13 September 2012; CCM Article 7 Report (for 2012), Form F; and CCM Article 7 Report (for 2013), Form F.

10 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 4 August 2014.

11 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.

12 Statement of Germany, APMBC intersessional meetings (Standing Committee on Mine Action), Geneva, 23 May 2012.

13 CCM Article 7 Report (for 2011), Form G.

14 Statements of Germany, APMBC intersessional meetings (Standing Committee on Mine Action), Geneva, 27 May 2012; and APMBC Twelfth Meeting of States Parties, Geneva, 6 December 2012.

15 APMBC Article 5 deadline Extension Request, 15 April 2013, p. 7; and CCM Article 7 Report (for 2015), Form F.

16 Emails from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May and 12 July 2018.

17 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

18 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 12 July 2018.

19 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

20 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 12 July 2018.

21 Emails from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 19 April and 13 June 2017; and CCM Article 7 Report (for 2016), Form F.

22 CCM Article 7 Report (for 2017), Form F; and email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

23 CCM Article 7 Report (for 2017), Form F.

24 Statement of Germany, CCM intersessional meetings (Clearance and Risk Reduction Session), 17 April 2012.

25 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 4 August 2014.

26 Meeting with official from the Desk for Conventional Arms Control, German Federal Foreign Office, in San José, September 2014.

27 CCM Article 7 Report (for 2014), Form F.

28 Meeting with official from the German Mission to the Conference on Disarmament, Geneva, 25 June 2015.

29 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.

30 CCM Article 7 Report (for 2015), Form F.

31 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 19 April 2017.

32 Ibid.

33 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.

34 Ibid.

35 CCM Article 7 Report (for 2015), Form F.

36 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 14 July 2016.

37 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 19 April 2017; and CCM Article 7 Report (for 2016), Form F.

38 CCM Article 7 Report (for 2016), Form F; and email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 14 June 2017.

39 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 19 April 2017; and CCM Article 7 Report (for 2016), Form F.

40 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 19 April 2017.

41 Ibid.; and CCM Article 7 Report (for 2017), Form F.

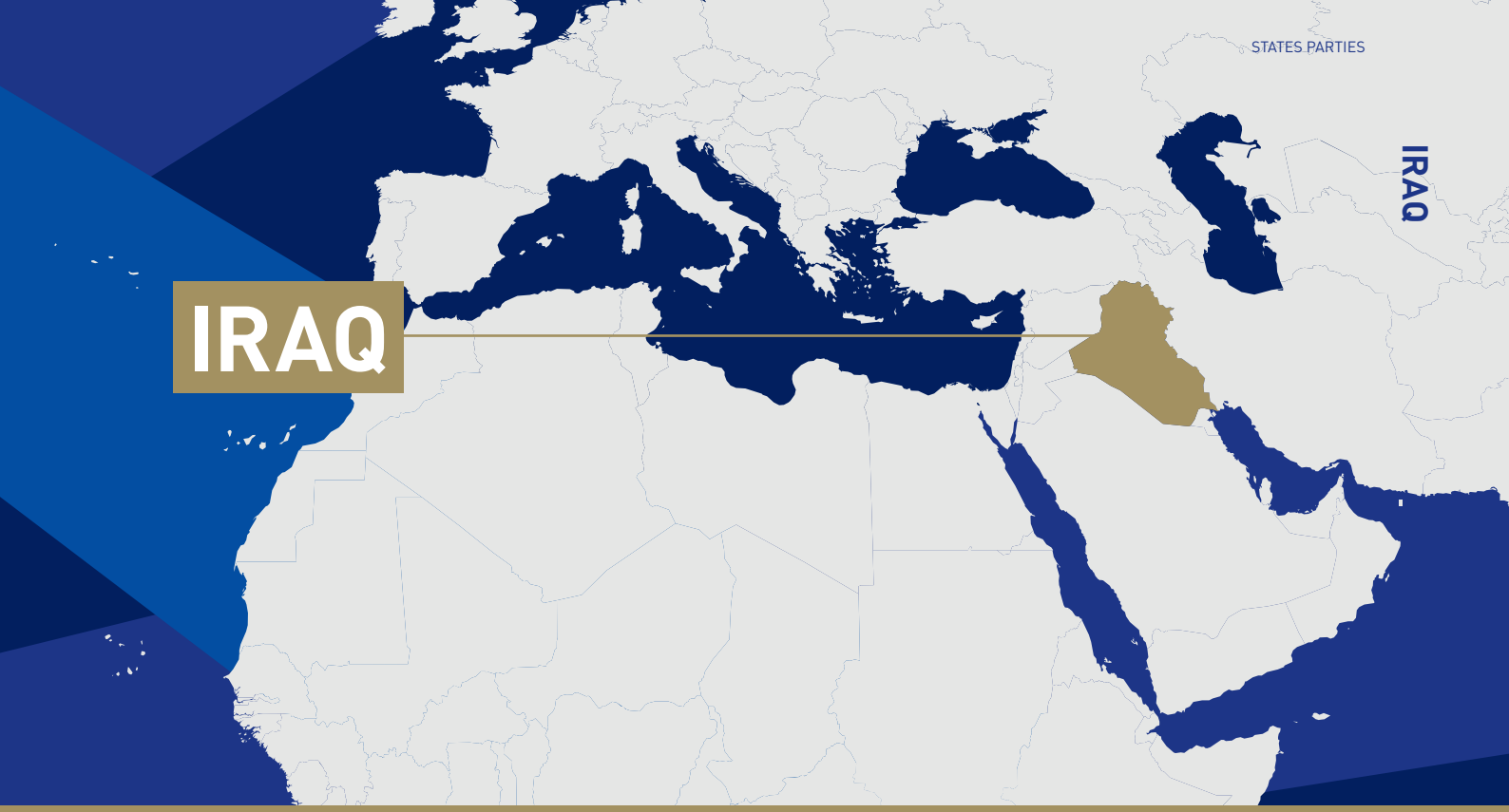
42 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

43 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

44 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

45 CCM Article 7 Report (for 2017), Form F; and email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.

46 Email from official from the Desk for Conventional Arms Control, German Federal Foreign Office, 7 May 2018.



ARTICLE 4 DEADLINE: 1 NOVEMBER 2023
(NOT ON TARGET TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	6	5
Target date for completion of cluster munition clearance	3	3
Targeted clearance	5	4
Efficient clearance	6	6
National funding of programme	5	5
Timely clearance	4	3
Land-release system in place	6	6
National mine action standards	5	5
Reporting on progress	5	5
Improving performance	5	4
PERFORMANCE SCORE: AVERAGE	**5.0**	**4.6**

PERFORMANCE COMMENTARY

The mine action priority for authorities in Kurdish areas and the centre/south of Iraq is clearance of areas recaptured from Islamic State, but planning, survey, and clearance of cluster munition remnant (CMR)-affected areas in southern Iraq started to gain momentum in 2017.

RECOMMENDATIONS FOR ACTION

- Iraq should draw up a strategic plan setting priorities and milestones for tackling CMR contamination and fulfilling its treaty obligations.
- Iraq should work with operators to develop national standards for CMR survey and clearance.
- Iraq should publish regular comprehensive reports on mine action undertaken by state, commercial, and non-governmental organisations.
- Mine action authorities should work to ensure their information management capacities are capable of accurately recording contamination and clearance.
- The Department of Mine Action (DMA) should expedite accreditation for mine action organisations and visas for personnel to avoid delays and loss of working time.

CONTAMINATION

CMR contaminate significant areas of central and southern Iraq, a legacy of the 1991 Gulf War and the 2003 invasion of Iraq. It reports confirmed hazardous areas (CHAs) containing CMR at the end of 2017 as covering a total of 131km^2 in eight governorates, an area that was one-third less than at the end of the previous year. Three governorates, Basra, Muthanna, and Najaf accounted for 98% of the total.[1]

Iraq's Kurdish region authorities do not report the presence of any CHAs containing CMR but say some contamination remains in Kirkuk and Ninava governorates, believed to be a legacy of US-led coalition air strikes, and operators continue to report clearance of some CMR tasks. Operators have reported these still need to be surveyed to determine the extent of contamination.[2]

Table 1: CMR contamination (as at end 2017)[3]

Province	CHAs	CHA area (m^2)	SHAs	SHA area (m^2)
Anbar	1	15,726	0	0
Basrah	50	7,695,422	0	0
Kerbala	5	1,855,267	3	33,470
Missan	15	481,048	0	0
Muthanna	29	116,779,320	0	0
Najaf	2	3,829,017	0	0
Thi Qar	4	121,394	0	0
Wassit	2	299,143	0	0
Totals	**108**	**131,076,337**	**3**	**33,470**

SHA = Suspected hazardous area

Other Explosive Remnants of War and Landmines

Iraq also has very heavy ERW contamination across the north, centre, and south, including more than a thousand square kilometres of confirmed anti-personnel mine contamination and dense contamination by improvised mines in areas liberated from Islamic State (see Mine Action Review's *Clearing the Mines* report on Iraq for further information).[4]

PROGRAMME MANAGEMENT

The mine action programme in Iraq is managed along regional lines. The DMA represents Iraq internationally and manages mine action for humanitarian purposes in the centre and the south, implementing policies set by an inter-ministerial Higher Council of Mine Action which reports to the Prime Minister. Commercial companies undertaking oilfield clearance operations report to the Ministry of Oil.[5]

The DMA oversees four Regional Mine Action Centres (RMACs): for the north (covering the governorates of Anbar, Kirkuk, Mosul, and Saladin), the centre (Baghdad, Diyala, and Wassit), a region identified as "ME" (Middle Euphrates: Babylon, Karbala, Najaf, and al-Qadisiyah), and the south (Basra, Missan, Muthanna, and Thi-Qar).[6] RMAC South, based in Basra, is active coordinating the activities of non-commercial operators and collecting survey and clearance data, but the extent to which other RMACs are functioning is unclear.

Mine action in Iraq's northern governorates under the Kurdistan Regional Government (KRG) is managed by the Iraqi Kurdistan Mine Action Agency (IKMAA). It coordinates four directorates in Dohuk, Erbil, Garmiyan, and Sulimaniya (Slemani).

Between September 2015 and October 2017, the DMA and IKMAA shared operations in a so-called Grey Zone, an area of about 69,000km^2 controlled or contested by Islamic State forces after 2014 and overlapping their respective operating areas. The line separating DMA and IKMAA areas of responsibility in the Grey Zone was determined by which forces had liberated areas from Islamic State and taken control of the territory. A Joint Operations Centre in Erbil managed by iMMAP coordinated operations in the zone. The arrangement ended after the Kurdistan Region of Iraq (KRI) conducted a referendum on independence in September 2017 and Iraqi authorities took control of the area.[7]

Strategic Planning

Iraq does not have a strategic plan for clearance of CMR. Its vision for mine action is "Iraq free from the impact of mines and explosive remnants of war, including cluster munitions."[8] In the south, RMAC-S and NPA have developed a long-term operating plan and system of prioritising tasks taking account of accidents, land use and beneficiaries.[9]

Legislation and Standards

In 2018, the DMA was seeking support from the Geneva International Centre for Humanitarian Demining (GICHD) for the development of new mine action legislation for Iraq. There are no CMR-specific standards in Iraq.

Quality Management

Both the DMA and IKMAA have quality management personnel.

Information Management

The DMA and IKMAA maintain IMSMA databases at their headquarters in Baghdad and Irbil, respectively. In southern Iraq, RMAC-S receives operator data which it uploads to the DMA database. Both the DMA and IKMAA depend heavily on information management support from iMMAP for recording survey, clearance, and victim data. Major discrepancies between results recorded by operators and those released by the DMA reflect delays in uploading data and procedural delays. Clearance of oilfields conducted by commercial operators under contract to the Ministry of Oil is not reported to the DMA.

Operators

The DMA identified nine organisations involved in survey and/or clearance of CMR in central and southern Iraq. National organisations included the Ministry of Defence, Civil Defence, Iraq Mine, and UXO Clearance Company. International humanitarian organisations were Norwegian People's Aid and the Danish Demining Group. The DMA also reported activities by two commercial companies, Al-Safsafah Mine Action Company and previously unidentified Akad International Company for Mine and UXO Clearance.[10]

In the KRI, only Humanity and Inclusion (HI, formerly Handicap International) and Mines Advisory Group (MAG) reported conducting survey and/or clearance of CMR-affected areas in 2017.[11]

LAND RELEASE

Iraq's response to CMR contamination has been eclipsed at a national level by the priority given to tackling densely mine-contaminated areas liberated from Islamic State to permit the return of displaced populations.[12] However, RMAC-S, covering the area most affected by CMRs, has continued to develop plans for CMR survey and clearance.[13] Assessing the extent of progress is hampered by major inconsistencies between results reported by the DMA and operators.

Survey in 2017

The DMA did not report any SHAs cancelled by non-technical survey in 2017 but said operators confirmed 86 CHAs with CMR affecting 22.45km^2 (see Table 2), more than double the areas confirmed in 2016.[14]

NPA, however, reported that in three southern governorates it cancelled 35 SHAs totalling 73km^2 while confirming 79 other areas totalling 36km^2. In the process of non-technical survey, it also cleared 2,344 submunitions and 1,496 other UXO items. Only Iraq's military is authorised to conduct demolitions. HI also reported confirming three CMR-affected areas totalling 149,511m^2 in and around Kirkuk, which was not reflected in official data.[15]

In January 2018, NPA convened a workshop with RMAC-S, iMMAP, and DDG on the Cluster Munition Remnant Survey (CMRS) methodology that it applies in Lebanon and south-east Asia and the same month it started a CMRS survey in Muthanna governorate.[16] By May 2018, teams had identified more than 2,500 items, mainly BLU 63 and M77 devices.[17]

Table 2: Survey of CMR-contaminated areas in 2017[18]

Operator	CHAs confirmed	Area confirmed (m^2)
Al- Safsafah	1	44,061
Civil Defence	15	8,038,369
DDG	3	68,184
IMCO	4	3,495,999
Army	3	119,264
NPA	58	10,575,377
RMAC South	2	110,406
Totals	**86**	**22,451,660**

Clearance in 2017

Iraq reported clearing at least 4.73km² of CMR-contaminated land in 2017, 50% more than the previous year, and this may have understated the result (see Table 3). Clearance in the KRI conducted only by MAG was fractionally less than the previous year, although it destroyed more than three times the number of submunitions. The increase in area clearance occurred in central and southern Iraq where the DMA recorded clearance of 4.38km², compared with 2.89km² in 2016, although the number of items destroyed was less than half the number in 2016.

NPA, operating with five survey and six clearance teams accounted for most of the CMR clearance in Iraq. It reported clearing 3.91km² along with 1,087 submunitions and 1,002 other UXO items, a smaller area than in 2016 but more than double the number of submunitions.[19] DDG, which was not active in southern Iraq in 2016, operated with six survey and two EOD/BAC teams in Basra governorate in 2017, clearing 0.67km² and 183 submunitions.[20]

The lower figure recorded by DMA (see Table 3) appeared to reflect delays in official sign-off of tasks or uploading clearance reports.

Table 3: Clearance of CMR Contamination in 2017[21]

Operator	Areas cleared	Area cleared (m²)	Submunitions destroyed	UXO destroyed
Centre & South				
Akad	1	52,744	0	0
Civil Defence	8	1,063,824	172	177
DDG	1	117,804	0	0
NPA	23	3,147,345	553	224
Subtotals	**33**	**4,381,717**	**725**	**401**
KRI				
HI[22]	2	149,511	82	0
MAG[23]	2	198,763	381	0
Subtotals	**4**	**348,274**	**463**	**0**
Totals	**37**	**4,729,991**	**1,188**	**401**

ARTICLE 4 COMPLIANCE

Under Article 4 of the Convention on Cluster Munitions, Iraq is required to destroy all cluster munition remnants in areas under its jurisdiction or control as soon as possible, but not later than 1 November 2023.

Iraq's extensive CMR contamination, competing mine action priorities and funding constraints make it improbable it will achieve its CMR clearance deadline in five years.

Table 4: CMR clearance in 2015–17

Year	Central and Southern Iraq (m²)	KRI (m²)	Total (m²)
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**
Totals	**15,506,396**	**1,104,565**	**16,610,961**

1 Email from Ahmed Al-Jasim, Head of Information Management Department, DMA, 10 April 2018.

2 Email from Khatab Omer Ahmed, Planning Manager, Directorate General of Technical Affairs, Iraqi Kurdistan Mine Action Agency (IKMAA), 8 May 2018; email from Steven Warner, Desk Officer, MAG, 10 April 2018.

3 Email from Ahmed Al-Jasim, Head of Information Management Department, DMA, 10 April 2018.

4 Emails from Ahmed Al-Jasim, DMA, 10 April 2018; and Khatab Omer Ahmad, IKMAA, 8 May 2018.

5 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.

6 DMA presentation to 2015 Mine Action Country Planning Workshop for Iraq, Istanbul, 13 May 2015.

7 Email from Isam Ghareeb, iMMAP, 1 August 2016; and interview with Obaid Ahmad, General Director of Technical Affairs, IKMAA, Erbil, 22 July 2017.

8 DMA presentation to 2015 Mine Action Country Planning Workshop for Iraq, Istanbul, 13 May 2015.

9 Email from Email from Jonathon Guthrie, Country Director Iraq, NPA, Craig McInally, Northern Iraq Operations Manager, NPA, and Mats Hektor, Project Manager South Iraq, NPA 2 April 2018.

10 Email from Ahmed Al-Jasim, DMA, 10 April 2018.

11 Emails from Steven Warner, Desk Officer, MAG, 10 April 2018; and from Fanny Del, Operations Coordinator – Iraq, HI, 18 May 2018.

12 Email from Ahmed Al-Jasim, DMA, 10 April 2018.

13 Email from Jonathon Guthrie, Craig McInally, and Mats Hektor, NPA, 2 April 2018.

14 Email from Ahmed Al-Jasim, DMA, 10 April 2018.

15 Email from Fanny Del, HI, 18 May 2018.

16 Email from Jonathon Guthrie, Craig McInally, and Mats Hektor, NPA, 2 April 2018.

17 Skype interview with Mats Hektor, NPA, 14 May 2018.

18 Email from Ahmed Al-Jasim, DMA, 10 April.

19 Email from Jonathon Guthrie, Craig McInally, and Mats Hektor, NPA, 2 April 2018.

20 Email from Lene Rasmussen, Regional Manager MENA, DDG, 3 June 2018.

21 Except as specified, data provided by emails from Ahmed Al-Jasim, DMA, 10 April 2018.

22 Email from Fanny Del, HI, 18 May 2018.

23 Email from Steven Warner, MAG, 10 April 2018.

LAO PEOPLE'S DEMOCRATIC REPUBLIC

ARTICLE 4 DEADLINE: 1 AUGUST 2020
(NOT ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE	2017	2016
Problem understood	6	5
Target date for completion of cluster munition clearance	5	5
Targeted clearance	8	7
Efficient clearance	7	6
National funding of programme	5	5
Timely clearance	5	5
Land-release system in place	7	5
National mine action standards	7	7
Reporting on progress	7	6
Improving performance	7	6
PERFORMANCE SCORE: AVERAGE	6.4	5.7

PERFORMANCE COMMENTARY

The national mine action programme in the Lao People's Democratic Republic (Lao PDR) made solid progress in 2017, particularly in formalising procedures and plans for the national cluster munition remnant survey (CMRS) that began in 2018 and which will form the basis for longer-term planning and prioritisation of clearance. Acceptance and adoption of an evidence-based methodology to survey and clear cluster munition remnants (CMR), in line with international best practice, is an improvement on the request- and response-based system of the past.

The development and approval of a first-ever mine action sector-wide annual workplan for Lao PDR (for 2018), is an important step forward, as too was the announcement and completion of the long-awaited revised "Lao PDR UXO Survey Standards" for CMRS. The standards, completed in late 2017, were formally approved in July 2018.

Progress continued in cleaning-up the many historical errors in the Information Management System for Mine Action (IMSMA) database, largely relating to UXO Lao data, and which impede efficient implementation of the national baseline survey of CMR contamination now underway. However, evidence of falsification of UXO Lao data also came to light in 2017; this is subject to internal and external investigation.

RECOMMENDATIONS FOR ACTION

- The National Regulatory Authority (NRA) should strengthen guidance on the prioritisation processes and criteria for CMR clearance tasks, in order to effectively address the large number of confirmed hazardous areas (CHA) being generated by the national CMRS.
- The NRA should continue to develop and expand its provincial-level capacity, and the NRA and clearance operators should strengthen coordination with provincial, district and village-level authorities during implementation and planning of CMRS and clearance.
- The NRA should maintain efforts to address inaccurate and incomplete historical data in the IMSMA database, including making full use of the data correction tool developed by Sterling International.
- Improved cooperation and coordination is needed between clearance operators. In particular, national operator, UXO Lao, should ensure its data for historic tasks are made available to international operators as and when needed, to help inform survey and clearance operations.
- Procedures for issuing or renewing Memoranda of Understanding (MoU) should be streamlined, standardised, and made transparent, to avoid inefficiencies and excessive delays.
- Operators should ensure that the local communities fully understand the CMRS process and outputs, in particular through community liaison. This should clarify that technical survey is not the same as clearance, and that CHAs identified during the CMRS remain hazardous until the land is cleared.
- The NRA should seek to expand its external quality management (QM) capacity.
- Lao PDR should consider expanding the clearance capacity of the Lao armed forces.
- Lao PDR should ensure that investigations into the falsification of data by UXO Lao are completed in a transparent manner, and systems are put in place to prevent such occurrences in the future.

CONTAMINATION

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,[1] including more than 270 million submunitions (known locally as bombies). The failure rate is not known.

Lao PDR does not yet have a reliable estimate of CMR contamination, but in 2016 it embarked on plans for a nationwide CMRS that should produce an evidence-based assessment of the extent of CMR contamination (see, below, the section on Standards and Legislation).[2] US bombing data indicate 70,000 individual target locations across Lao PDR. Fourteen of the country's seventeen provinces are contaminated, with nine heavily affected: Attapeu, Champasak, Houaphanh, Khammouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhuang.[3] International operators believe total CMR contamination is likely to amount to less than 2,000km^2.[4]

Bombies accounted for almost 78% of all items cleared in 2017,[5] a decrease from the 84% the previous year.[6] CMR continue to present a humanitarian and socio-economic challenge, causing deaths and injuries and contributing to food insecurity by limiting safe access to potentially rich agricultural land, and adding to the cost of development projects when land needs to be cleared.[7]

High-risk activities, such as foraging on contaminated area or lighting fires directly on the ground surface, also continue to pose a risk and result in CMR accidents.[8] The United Nations Development Programme (UNDP) reported that "economic opportunities in tourism, hydroelectric power, mining, forestry and many other areas of activity considered main engines of growth for the Lao PDR are restricted, complicated and made more expensive" by submunition contamination.[9]

In 2017, there were 19 UXO incidents in total, which resulted in four deaths (one girl and three men) and 37 injured (6 girls, 8 boys, 11 women, and 12 men).[10] Of these, 19 people were injured in incidents involving CMR (five girls, four boys, five women, and five men) and two people were killed (one girl and one man).[11] Submunitions are said to be the type of explosive remnants of war (ERW) most feared by the population.[12]

Other Explosive Remnants of War and Landmines

Extensive contamination from other ERW includes 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.[13] These range from 20lb fragmentation bombs to 2,000lb general-purpose bombs and sometimes bigger items,[14] as well as artillery shells, grenades, mortars, and rockets.[15] Lao PDR is also contaminated, but to a much lesser extent, by anti-personnel mines and anti-vehicle mines (see the *Clearing the Mines* report on Lao PDR for further information).

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.[16] Until 2011, the NRA came under the supervision of the Ministry of Labour and Social Welfare. A decree issued in June 2011 appointed a minister in the Prime Minister's Office responsible for rural development and poverty reduction as Vice-Chair of the Board, together with the Vice-Minister of Foreign Affairs.[17] A February 2015 decree expanded the NRA board to 22 members, which was chaired by the Minister in the Prime Minister's Office responsible for rural development, Bounheuang Douangphachanh, and with ministers of Defence, Foreign Affairs and Labour and Social Welfare as vice-chairmen.[18]

A parliamentary election in March 2016 led to leadership changes, including the retirement of Bounheuang Douangphachanh. In September 2016, the government transferred the NRA and the mine action sector back under the control of the Ministry of Labour and Social Welfare. This move was reportedly aimed at helping improve efficiency by distributing responsibility for committees across ministries, rather than too many committees falling under the responsibility of the Prime Minister's office.[19] It is, however, said to have resulted in confusion at provincial and district level about responsibilities. In 2018, there were moves to make the Director of UXO Lao a deputy director of the NRA, alongside two existing deputy directors, and with a responsibility for overseeing UXO Lao (the national operator).[20]

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. The transfer of the NRA back to the Ministry of Labour and Social Welfare was also reported to have exacerbated existing delays in obtaining approval of MoUs.[21] MoUs are typically issued to international clearance operators on a project basis, although NPA reported that its pending MoU covers multiple donors and survey and clearance projects. Operators are required to report and get approval for completed projects before an MoU for a new project can be approved. While operation permits enable the continuation of survey and clearance activities by international operators on the ground, the lack of an MoU prevents expansion of operations or acquisition of new equipment.[22] Furthermore, even after formal approval of MoU, operators may still experience challenges importing necessary equipment.[23]

The NRA acknowledged that the delay in procurement of vehicles and equipment is a challenge,[24] and that some improvements could be made on the part of the national and local authorities involved in the MoU process. However, it also highlighted that some delays in project proposals and MoU approval are due to incorrect reporting or failure to follow correct procedures by clearance operators, something that can be exacerbated by high staff turnover and inadequate internal handover processes.[25] At the same time, operators highlighted that it is very difficult to get clarity on correct processes and procedures for reporting and MoU. Projects must also be consistent with the government's five-year plan and annual plans.[26]

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.[27] Further capacity development in information management, quality management, and operations support, is provided primarily to UXO Lao, and to a lesser extent the NRA, through a US-funded grant manager, Sterling International. As part of its work, Sterling International also provided training in both survey and data analysis and correction to UXO Lao and international clearance operators.[28] In May 2018, it was announced that Tetra Tech had won the new tender for this role.

Strategic Planning

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.[29] In 2013, the government identified 64 priority areas planned to become small rural townships, 167 focal sites to consolidate and "stabilise" remote rural communities, and more than 1,680 priority projects.[30] By 2018, this had risen to 231 focal development areas identified across Lao PDR.[31]

Strategic goals were set out in the "Safe Path Forward II" (SPF) plan, as revised in June 2015, when the NRA set a number of specific targets for the remaining five years up to 2020. These included non-technical survey of 3,860 villages, pursuing technical survey, keeping clearance as a priority of the government's poverty eradication programme, bringing down the number of casualties to less than 40 a year, and providing medical care, vocational training, and economic support to 1,500 UXO victims.[32]

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, with a view to producing Lao PDR's first baseline estimate of CMR contamination.[33] Survey would be conducted mostly by international non-governmental organisations (NGOs), and to a lesser extent by UXO Lao, possibly with some involvement of the Lao Army in non-technical survey. The paper also stated, without explanation, that the government expects international humanitarian operators, who account for about half the capacity of the humanitarian UXO sector, to cease conducting clearance after technical survey has been completed. The paper called for completing non-technical survey of all villages in the 14 CMR-affected provinces within four years, at an estimated cost of $6.84 million, and technical survey of all evidence points in five years (by the end of 2021), at a projected cost of at least $20 million.[34]

The socio-economic development plan (2016–20) and Agreement No. 65/PM of 2016, on the approval of Priority Development Areas (2016–20), inform land release prioritisation in Laos, by identifying 20 government development priorities; 71 local development priorities, 145 settlement areas; and plans to build 213 big villages to become small towns. In addition, the NRA cooperates with relevant ministries and local authorities to identify annual clearance needs, and in 2017, 45km^2 of land was thereby identified for clearance.[35] For 2018, the plan was for survey to target 938 villages and for 44.8km^2 of land to be cleared.[36]

During the Association of Southeast Asian Nations (ASEAN) summit in September 2016, Lao PDR launched sustainable development goal (SDG) 18, which aims to reduce the numbers of casualties caused by UXO, improve the socio-economic development of affected areas, and guarantee better support for victims.[37]

The NRA set out amended targets in a sector working group meeting in November 2016. These called for non-technical survey of 3,160 villages between 2017 and 2019 at an estimated cost of $5.6 million and completion of technical survey in 2,700 villages in five years (2017–21) at a cost of $69.7 million.[38] The five-year Lao PDR UXO Plan for 2016–20 (the multi-year workplan), approved in March 2016, and outlined at the November meeting, also targeted clearance for 2017–21 of 45km^2 a year, far in excess of actual clearance rates. The plan called for spending on clearance of $57 million.[39]

Throughout 2017, the mine action sector, with the support of the United States and UNDP, reviewed the initial work of the non-technical and technical survey (CMRS) that began in 2015 in nine of the most heavily contaminated provinces, in order to determine how to improve efficiency of follow-on clearance.[40]

In a very positive development, a first-ever sector-wide annual workplan for Lao PDR (for 2018), was developed with input from all relevant stakeholders and subsequently approved by the NRA Board.[41] As part of this process, in June 2017 the chair of the NRA board — the Minister of Labour and Social Welfare — called on the 14 CMR-contaminated provinces to share their priorities for the year 2018.[42] A first-ever UXO sector annual work planning meeting, hosted by NRA, took place in Vientiane Province on 8–9 February 2018, with participation from The HALO Trust, Mines Advisory Group (MAG), Norwegian People's Aid (NPA), Humanity and Inclusion (formerly Handicap International (HI)), UXO Lao, victim assistance (VA) operators, national and provincial authorities, and donors. The objective of the meeting was to discuss each operator's 2018 workplan and reach agreement for submission to the NRA Board. Stakeholders discussed coordination, problems, and overlaps, and examined province targets. 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.[43] The annual UXO sector-wide survey workplan in Lao PDR for 2018 aimed to survey a total of 622 villages (108 by UXO Lao; 230 by NPA; 126 by MAG; 121 by HALO Trust; 7 by HI, and 30 by the Lao PDR army company 58).[44]

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 Xiengkhuang.[45] The baseline survey, which will then expand to the other CMR-contaminated provinces, will support efforts by the Government of Lao PDR to quantify the extent of CMR contamination and support planning mechanisms for prioritising clearance of CHAs.[46]

National operator UXO Lao is receiving US funding to conduct clearance of prioritised CHAs, generated by CMRS. There is widespread agreement on the need for improved cooperation and coordination between international clearance operators and UXO Lao, regarding the timely and full sharing of data (including on spot tasks, survey, clearance, and accident data), so that survey and clearance can be implemented efficiently and appropriately.[47]

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 CMRS. In 2017, the Lao government worked on UXO clearance priorities, collating information on priority land from the 14 UXO contaminated provinces. The provinces identified 4,700km^2 of priority land for development in 2018, of which at least 100km^2 of CHA was already earmarked for clearance.[48]

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.[49] 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."[50]

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.[51] The NRA acknowledges difficulties in sector planning and prioritisation by local authorities.[52]

According to the NRA, understanding of CMRS process, especially at the local and field levels, is sometimes limited.[53] 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 unexploded items during the CMRS process, CHAs identified through survey remain hazardous until full clearance has taken place, which may not be for many years.[54] UXO Lao highlighted that once communities know that the surrounding area is contaminated, they urge early clearance.[55]

There is a sector working group process, led by the chair of the NRA board, and co-chaired by UNDP and the US Ambassador in Vientiane, which works with donors and meets several times a year.[56]

Legislation and Standards

Over the last few years, the CMRS has been piloted in Lao PDR, and the survey methodology refined and strengthened.[57] The original national procedures for survey, approved in 2015, were out of date and completion of the long-awaited revised "Lao PDR UXO Survey Procedures", was welcomed. The new national survey procedures, which specify the minimum requirements for the survey of CMR in Lao PDR,[58] were drafted in consultation with clearance operators, and completed in September 2017.[59] Following a slight delay in formal approval by the NRA Board due to an issue with the Lao translation of the document,[60] the procedures were officially approved by chair of the NRA on 4 July 2018, and entitled "Lao PDR UXO Survey Standards".[61]

It was originally intended that once the revised survey operations had been fully established, the original 2015 survey procedures would be amended and incorporated into the relevant chapters of the Lao PDR National UXO/ Mine Action Standards. However, in 2017, additional requirements for survey were introduced to support the implementation of the upcoming national CMRS and the concurrent correcting of data errors in IMSMA, and due to time constraints and convenience, the NRA decided to keep the national survey procedures in a single document. The new survey procedures (now standards) are, however, more akin to standing operating procedures (SOPs) than national mine action standards.

As part of the new survey procedure, 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 found with data in IMSMA or in operator files.[62] Whenever possible, CMR and other ERW identified during non-technical survey are recorded and destroyed the same day, while non-technical survey is ongoing, allowing villagers to see action being taken on the information they have provided. It has also had the effect of encouraging more informants to come forward.[63]

Technical survey is only carried out based on CMR evidence points and is also conducted on whole villages. Technical survey should start as soon as possible after analysis of non-technical survey findings, and if seasonal, agricultural, or other factors prevent completion of technical survey at a single time-period, it should be suspended and resumed when possible.[64] 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. Boxes are coloured red if a cluster munition remnant is found; yellow if one or more cluster munition fragment is found; blue if only other items of UXO are found; green if no CMR or cluster munition fragments are found; and grey if the box is permanently inaccessible.[65]

CHAs are established based on red boxes and include a 50m fade-out from the location of submunitions found during technical survey, unless fade-out would extend into inaccessible or commercial concession areas (the responsibility for survey and clearance in commercial concession areas is that of the concession holder).[66]

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".[67] The NRA maintained the need to retain some flexibility to accommodate donor stipulations which sometimes require full clearance of UXO for development projects such as schools.[68] 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.[69]

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.[70] Interpretation and understanding as to what constitutes "inaccessible" is not clearly defined and has the potential to vary between clearance operators,[71] but according to the national survey standards, dense vegetation and seasonal flooding are not valid reasons for the non-completion of technical survey.[72] With regards to the 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.[73] Furthermore, in technical survey tasks in areas of massive contamination, with overlapping strikes, it is not always possible to clear to fadeout, as the red boxed areas extend too far.[74]

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 be different in different provinces based on the 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.[75]

Quality Management

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).[76] External QM inspections of clearance organisations are carried out by the NRA.[77] However, at present the NRA's QM capacity is extremely limited, with only two QM teams to cover sector-wide clearance. The NRA is trying to secure funding to double its QM capacity to four teams.[78]

During CMRS, the focus of QM should be QA rather than QC, as it is not possible to conduct a post-survey QC as there are no lanes marked during the technical survey process.

Information Management

The national IMSMA database has multiple data problems, including incorrect or incomplete historical data, missing data from the migration to IMSMA, and delays in entering new or corrected data into the database.[79]

Sterling International, which provides capacity support to the UXO Lao IM department to identify and correct historical data, has developed a tool to help identify data issues in IMSMA.[80] A 2017 report by Sterling International 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.[81] In 2018, evidence of falsification of UXO Lao CMR CHA data in Houaphanh Province, came to light, and is subject to internal and external investigation.[82]

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 information on EOD roving tasks, area clearance, and accident data.[83] It is also important that village-level data corrections made by operators during the nationwide CMRS are updated in IMSMA in a timely manner,[84] but as at June 2018, no standard procedure was in place for how this should be achieved.[85]

During implementation of the nationwide CMRS, operators have encountered challenges caused by outdated or inaccurate village boundary data, for example in instances where villages have merged or separated since the original village boundaries were determined.[86] Where possible in these instances, the boundary as understood by the villagers is used.[87]

Sometimes villagers have been moved to land where no-one has lived previously, making collection of data during non-technical survey more challenging.[88] The NRA's multi-year work plan for the period 2016-20 had identified 3,860 villages requiring non-technical survey and linked to all UXO activities in Lao PDR. In July 2017, the NRA reported that of these, 2,873 villages are known to be impacted by CMR,[89] and require CMRS as part of the nationwide survey, though the process by which the list was elaborated is unclear. The NRA has recognised that there may be anomalies in this list, and that any villages discovered to be contaminated with CMR, but not on the list, should be reported to them.[90]

Operators

Land release operations in Lao PDR are conducted by a range of implementing partners including the national operator, UXO Lao; international NGOs, The HALO Trust, HI, MAG, and NPA; commercial clearance operators; and the Lao PDR armed forces. Demining personnel of the national and international clearance operators, excluding commercial operators, totalled approximately 2,452 in 2017, of whom 680 were women, roughly unchanged from the previous year.[91]

UXO Lao, the oldest and largest clearance operator in Laos, is a government organisation operating under the Ministry of Labour and Social Welfare.[92] Operating in nine provinces (Attapeu, Champasak, Houaphanh, Khamouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhuang), it employs 1,381 staff (of whom 351 are female). In Luang Prabang, UXO Lao operates with funding from Norway and management support from NPA.[93] At present, UXO Lao is conducting more clearance than survey, which is largely determined by the donors, and 2017 capacity comprised of 80 clearance teams, 15 technical survey teams, and 9 non-technical survey teams.[94] UXO Lao would like to maintain survey capacity of at least one survey team per province, but reported the loss of Australian and Swiss funding.[95]

The HALO Trust's survey and clearance efforts are focused on Savannakhet province, where it is currently operating in the four most contaminated districts: Nong, Phine, Sepon, and Vilabouly.[96] As at the end of 2017, HALO Trust was employing a total of 303 national staff (45% women), which included a clearance capacity of 10 teams and a survey capacity of 14 teams. The HALO Trust had planned to expand its survey capacity in 2017, but was prevented from doing so due to problems securing the MoU and importing equipment.[97]

HALO Trust will reduce its 2018 clearance capacity to four BAC teams and one EOD team (to support the non-technical survey process and manage complex demolitions), and increase its survey capacity to 16 teams, under a new larger team configuration. HALO Trust's shift to survey is for the completion of the CMRS of Savannakhet province.[98] After extensive work-planning and discussion on village allocation with the local and provincial authorities, as well as UXO Lao, HALO Trust has been granted permission to work in 538 villages across 14 districts in Savannakhet Province, with first priority given to the 6 most heavily contaminated districts to the east.[99]

HI saw a big reduction in capacity in 2017, due to a fall in funding. At the start of 2016, it had nine clearance/technical survey sections, which had fallen to five sections in 2017. HI ceased technical survey operations in February 2017 and instead prioritised clearance.[100] As at April 2018, HI had ceased land release operations in Savannakhet province, and had started a new project in Houaphanh province in the north of Lao PDR, where it hoped to become operational from mid-2018 with funding from French Ministry of Foreign Affairs and the European Union (EU). HI aimed to focus its efforts solely on Huamuang district, with mobilisation of one team for technical survey, two for clearance, and one roving team. It also planned to partner with development organisations to better shape the prioritisation process.[101]

MAG is operational in two provinces in Lao PDR: Xiengkhuang (Khoun, Paxai and Nonghet districts) in the north and Khamouane (Boualapha district) in the south. In 2017, MAG was supported by the US government, Norwegian Ministry of Foreign Affairs, an American family foundation and a Japanese philanthropist to carry out survey and clearance. 17 mine action teams (MATs) carried out survey and clearance in Xiengkhouang while 5 teams focused exclusively on clearance activities in Khamouane. Also based in Xiengkhouang, MAG has 2 Quality Management teams, a mechanical support team, and a 15 person Community Liaison team which conducts non-technical survey, risk education, and dangerous area reporting. MAG subcontracted two NPA teams for six months under the NMFA grant to carry out CMRS in Khamouane.[102]

At the end of 2017, MAG employed 395 staff (25% female). However, with the shift to implementing the US-funded survey project in Xiengkhouang, as well as increased funding from both the American family foundation and Norway, MAG expanded significantly in both provinces in early 2018. By May, MAG was employing 528 staff (31% women). The additional teams were recruited and trained at the end of 2017 and focused predominantly on Xiengkhouang, where MAG will conduct CMRS across the entire province with US State Department funding as part of the national survey project, as well as clearance of priority areas.[103]

NPA is operational in the three southern provinces of Attepeu, Saravan, and Xekong, and plans to also become operational in Champasak province, as soon as its pending MoU is approved by the NRA. In addition, and as mentioned above, NPA is also subcontracted by MAG to carry out CMRS in Khamouane, after which MAG conducts follow-on clearance of the CHAs created by NPA.[104] Furthermore, NPA acts as the project coordinator for Norwegian Ministry of Foreign Affairs (NMFA) bilateral support to Lao PDR, through UXO Lao's operations in Luang Prabang, in the north of the country.[105] Survey and clearance output was lower than in previous years due a two-month stand-down period without field operations due to the delays in the issuing of an MoU.[106] NPA employed 189 staff in survey and clearance operations in 2017, comprising 23 CMRS teams and 1 BAC team.

Lao PDR accredited 16 commercial companies in 2017,[107] of which 13 were active.[108] International commercial operators include Auslao UXO Clearance, BACTEC (Battle Area Clearance, Training, Equipment and Consultancy), Milsearch, and MMG. Accredited national commercial operators include ASA Power Engineering, GREAT Company, Lao BSL UXO Clearance, Lao Uneod Cooper, L&B UXO Clearance, Longlo Lao UXO Clearance, OUMMA UXO Clearance, PSD, SBH, Sengphet UXO Clearance, and XTD UXO Clearance. One additional national commercial company, Phanvila, was registered in 2017.[109]

The Lao armed forces has five humanitarian teams in total; three funded by the government and two by the Korean International Cooperation Agency.[110] Lao army engineers not involved with humanitarian teams and not coordinated by the NRA were reportedly due to start clearance of UXO, which was holding up construction work on the $6 billion Laos-China high speed railway.[111] According to the NRA, Lao army engineers started clearance in 2017, under the Engineering Department of Ministry of National Defense, but as at April 2018, no CMR data was available.[112]

LAND RELEASE

The almost 200km^2 of land confirmed as hazardous in 2017, based on NRA data, was an increase on the 180km^2 confirmed in 2016, based on operator data.[113] The amount of land released by clearance, which totalled 41.8km^2 in 2017, was also a significant increase on the 30km^2 cleared in 2016.

Survey in 2017

The NRA reported that non-technical survey was conducted by The HALO Trust, MAG, NPA, and UXO Lao in 2017, in a total of 223 villages, during which 4,082 CMR were destroyed.[114] In addition, technical survey in 2017 identified almost 200km^2 as CMR-contaminated, and resulted in the destruction of nearly 29,000 CMR and almost 4,000 items of other UXO (see Table 1 below).

Table 1: Technical survey of CMR-suspected area in 2017[115]

Operator	Area surveyed (m^2)	Area identified (m^2)	Submunitions destroyed	Other UXO destroyed
Lao Army 58	140,000	0	4	0
HALO Trust	25,746,250	8,453,279	1,989	578
HI	1,387,500	622,230	99	6
MAG	67,174,283	65,179,171	5,957	11
NPA	54,544,335	53,990,927	4,927	107
UXO Lao	100,716,905	71,265,845	15,939	3,257
Totals	**249,709,273**	**199,511,452**	**28,915**	**3,959**

The CMRS approach has been strengthened over the last couple of years, with more emphasis placed 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.[116] 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.[117] 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.[118] Re-survey of the villages in which some of the NPA non-technical survey had previously been undertaken will be carried out as part of the US-funded nationwide survey, which includes Attapeu, Saravan, and Xekong provinces.[119]

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 Khamouane 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.[120] 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.[121] Where appropriate, skipping boxes has now become standard practice for MAG, NPA, and UXO Lao technical survey teams, where the focus is on identifying the boundaries of CHAs.[122] As at May 2018, The HALO Trust had not officially incorporated this methodology into its CMRS operations in Savannakhet province.[123]

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. Notably, in areas where MAG is applying EPP mapping, it is using its own EOD data.[124] At present, the new national survey standards stipulate that only complete CHAs – not partial iCHAs – can be reported and entered into the national IMSMA database.[125]

An end of survey report/survey conclusion form was created in 2017 to standardise the way clearance operators finish village surveys and then report to the government. The form is, however, part of the new survey procedure, which had not yet been approved as at June 2018.[126] In addition, a "UXO Hot Line" was approved on 28 November 2017, to make it easier for members of local communities to report unexploded ordnance[127] and to request support in the aftermath of an incident.[128]

Clearance in 2017

CMR clearance output per operator for 2017, as reported to Mine Action Review, totalled just over 33km^2, in the course of which 84,977 submunitions were destroyed, along with 135 bombs, 23 mines, and 23,451 other items of UXO (see Table 2).[129] This excludes 5.8km^2 of clearance reported for LAUNC, which was conducted in support of dam projects, irrigation, crops, and forestry, and other areas, but on land not contaminated with CMR or other ERW. Mine Action Review therefore does not include this in CMR clearance data.

Table 2: Battle area clearance by operator in 2017[130]

Operator	Roving tasks	Clearance tasks	Area cleared (m^2)	Submunitions destroyed	Bombs destroyed	Other UXO destroyed	Mines destroyed
Army 58	14	1	42,251	51	2	132	3
Lao Army	0	2	35,841	0	0	0	0
HALO Trust	619	39	1,510,067	5,243	19	2,400	1
HI	100	6	177,686	1,564	33	350	0
MAG	2,148	111	4,760,152	10,888	12	1,501	1
Milsearch	6	121	731,177	40	0	21	0
MMG	0	13	435,645	24	0	77	0
NPA	390	13	255,973	5,674	4	956	2
UXO Lao	1,105	886	25,075,490	61,493	65	18,014	16
Totals	**4,382**	**1,192**	**33,024,282**	**84,977**	**135**	**23,451**	**23**

According to Lao PDR's CCM Article 7 transparency report, a total of just over 41.8km^2 was cleared in 2017 across 13 provinces (see Table 3).[131] However, this contains almost 5.8km^2 of clearance reported for LAUNC, which was not in fact CMR clearance (see above).

Taking the total clearance figure of 33 km^2, 2017 clearance output represents a slight increase compared to 2016, when 30.17km^2 was cleared (or alternatively, a slight decrease compared to the 34.10km^2, according to Lao PDR's Article 7 report for 2016).

Table 3: Battle area clearance by province in 2017[132]*

Province	Area cleared (m^2)
Attapeu	3,360,393
Bolikhamxay	2,357,251
Champasak	2,206,176
Houaphanh	1,777,402
Khamouane	3,474,401
Luang Prabang	1,288,788
Oudomxay	35,841
Saravan	2,935,606
Savannakhet	8,646,986
Vientiane (province)	317,213
Xekong	1,092,027
Xaisomboun	3,147,844
Xiengkhuang	11,180,359
Total	**41,820,287**

* Includes almost 5.8km^2 cleared by LAUNC on land not contaminated by CMR or other ERW.

UXO Lao reported that lack of support from the community on the vegetation cutting required prior to survey and clearance operations, also posed a challenge,[133] especially with regards to cutting of vegetation beyond the direct area of land which will be used. As is the case with MAG and NPA, UXO Lao mainly trains and deploys local people to cut vegetation, but unlike the international operators, it does not receive specific funding for this activity.[134] The HALO Trust undertakes all of its own vegetation cutting.[135]

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.[136]

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.[137]

In 2017, UXO Lao reported clearing 32.5km^2 (99% of the 32.07km^2 2017 target), during which 72,417 items of UXO were disported, of which 80% were CMR.[138] In 2018, UXO Lao planned to conduct non-technical survey and technical survey in 108 villages, and clear 36.73km^2 of land, across the nine provinces in which it operates.[139]

ARTICLE 4 COMPLIANCE

Under Article 4 of the Convention on Cluster Munitions, 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.

Given the extent of its CMR contamination, Lao PDR will clearly need to apply for an extension. This is due for submission by the start of December 2018, as required by the Convention (i.e. a minimum of nine months prior to the meeting of states parties or review conference at which it is to be considered), and will be considered at the Eighth Meeting of States Parties in 2019. It is expected that initial results from the national CMRS will inform Lao PDR's estimate of the true extent of contamination for the purposes of the extension request, but that a more accurate assessment of CMR contamination will not be known until the nationwide survey is completed.[140]

Over the last five years, Lao PDR has cleared over 237km^2 (see Table 4).

Table 4: Five-year summary of CMR clearance

Year	Area cleared (km^2)
2017	33.02
2016	30.17
2015	41.30
2014	67.78
2013	64.86
Total	**237.13**

The NRA has highlighted the challenges in balancing resources for survey and clearance.[141] 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.[142] Over the last two years, around 500km^2 of CHA has already been identified, and as the nationwide CMRS progresses this area of confirmed contamination is expected to continue to increase rapidly.[143]

The clearance of CMR in Lao PDR will take many years and will require long-term national capacity and funding. In 2018, the NRA aimed to clear 5,000 hectares (50km^2) of CHA, based on existing capacity.[144] National funding and in-kind support by the government of Lao PDR was reported to total just under US$750,000 in 2017. This figure includes office rent of NRA and UXO Lao; support in construction of a new provincial office in Attapeu province; tax exemption on visas and operator vehicle and equipment imports; and financial support associated with the humanitarian clearance team of the Lao PDR Army.[145] It is only in the past one to two years that the Government of Lap PDR has allocated funds in its budget for UXO clearance, directed to the Lao People's Army dedicated team.[146] The 2017 funding is substantially less than financial contributions in previous years.

US President Barack Obama pledged in September 2016 that the United States would provide $90 million ($30 million a year over three years) for the UXO sector, doubling the level of US funding in 2015.[147] The committed funding is shared between survey, clearance, risk education, and victim assistance, and also includes budget for capacity development support to UXO Lao and the NRA.[148] Roughly half of the US$90 million is for survey.[149] Survey and clearance operations are implemented through The HALO Trust, MAG, NPA, and UXO Lao.[150] US funding to UXO Lao, however, is primarily for clearance, although both the NRA and UXO Lao feel that UXO Lao's capacity makes it well suited to conduct survey.[151] The Lao government also has bilateral funding agreements with the United States, Japan, and Norway.

The UXO Trust Fund established in 2010 has been replaced by a new multilateral project signed by the Government of Lao PDR and UNDP entitled "Moving towards achieving SDG 18 – Removing the UXO Obstacle to Development in the Lao PDR". The objective is to support the NRA and UXO Lao for the next five years, with the support of Canada, Ireland, Luxembourg, New Zealand, the Republic of Korea, and the EU.[152]

Overall international cooperation and assistance in 2017 was reported to total US$25,633,620, including survey and clearance, risk education, and victim assistance, and not including the contribution of domestic commercial companies to the UXO sector.[153] In 2018, Lao PDR was budgeting for US$31,637,633 of support for mine action, of which it had secured US$22,460,200 of funding as at April 2018, leaving a gap of US$9,177,433.[154] However, the NRA expected survey capacity to increase due to the US-funded survey project, but hoped that clearance capacity would also increase through Norwegian, United Kingdom (UK), EU and other donor funding.[155]

While a comprehensive plan is in place for the province-wide survey of villages in six of the most contaminated provinces, there are currently no survey or clearance operations in the affected provinces such as Borikhamxay, Bokeo, Luangnamtha, Oudomxay, Phongsaly, Vientiane, Xayabouly, and Xaysomboun.[156]

Lao PDR reported that existing funding was insufficient.[157] It also complains that international funding is often unpredictable, leading to the halting of operations or reduction in employees in some areas. According to the NRA, owing to the limited number of teams and sometimes inadequate detector technology, village clearance tasks can sometimes only cover a portion of the entire village CHA at a time.[158]

In its Article 7 transparency report for 2017, Laos PDR has identified the need for an awareness raising campaign and the recruitment of a national or international consultant to provide support for mobilising more funds and raising public awareness nationally and internationally, including by nominating a UXO goodwill ambassador for the country.[159]

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81 "Data errors on IMSMA", Nigel Orr, Technical Adviser, Sterling International, 26 April 2017.

82 Interviews with Phoukhieo Chanthasomboune, NRA Vientiane, 2 May 2018; and Thipasone Soukhathammavong, UXO Lao, Vientiane, 2 May 2018.

83 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018; NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017, p.26.

84 Presentation by HALO Trust, Sepon, 10 May 2018.

85 Email from Jason Villamil, Country Director, HALO Trust, 23 June 2018.

86 Interviews with Interview with Ulric Eriksson, NPA, Saravan, 4 May 2018; and Olivia Meader, HALO Trust, Sepon, 11 May 2018.

87 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017.

88 Interview with Ulric Eriksson, Operations Manager, NPA Laos, Saravan, 4 May 2018.

89 Email from Olivier Bauduin, UNDP, 10 July 2018.

90 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017; and interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.

91 Email from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

92 Presentation by Saomany Manivong, UXO Lao, Vientiane, 2 May 2018.

93 Interviews with Aubrey Sutherland, Country Director, NPA, 1 May 2018; and Thipasone Soukhathammavong, UXO Lao, Vientiane, 2 May 2018.

94 Presentation by Saomany Manivong, UXO Lao, Vientiane, 2 May 2018.

95 Interview with Thipasone Soukhathammavong, UXO Lao, Vientiane, 2 May 2018.

96 Interview with Olivia Meader, HALO Trust, Sepon, 11 May 2018.

97 Ibid.

98 Ibid.

99 Email from Olivia Meader, HALO Trust, 18 July 2018.

100 Email from Julien Kempeneers, Humanitarian Mine Action Coordinator, HI, 30 April 2018.

101 Emails from Julien Kempeneers, HI, 30 April and 30 June 2018.

102 Email from Blossom Gilmour, Country Director, MAG, 25 June 2018.

103 Ibid.

104 Email from Aubrey Sutherland, NPA, 21 June 2018.

105 Interview with Aubrey Sutherland, NPA, 01 May 2018.

106 Emails from Ulric Eriksson, NPA, 1 May 2018; and Aubrey Sutherland, NPA, 21 June 2018.

107 Email from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

108 Statement of Lao PDR on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4-5 September 2017.

109 Email from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

110 "Progress and Plans of Lao People's Army", presentation by Lao Army Humanitarian Team, 8 November 2016.

111 Souksakhone Vaenko, "Army deployed to clear UXO for Laos-China railway", *Vientiane Times,* 6 January 2017.

112 Email from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

113 The NRA reported 101.48km^2 confirmed as hazardous in 2015 and 113.41km^2 in 2016 but its data included major discrepancies with operators' results. In particular, the NRA did not record any survey activity by The HALO Trust and reported that NPA had confirmed 12.14km^2 as hazardous area.

114 Email from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

115 Ibid. There was a discrepancy between technical survey data reported by the NRA, compared to data reported by the clearance operators. HALO Trust reported surveying 36,182,500m^2 through technical survey, and confirming 22,981,244m^2 as CMR-contaminated. During technical survey HALO reported destruction of 1,893 submunitions and 629 other items of UXO. Response to Mine Action Review questionnaire from Olivia Meader, HALO Trust, Sepon, 11 May 2018. MAG's data on 2017 technical survey matched that of NRA's almost exactly, with the exception that MAG reported destruction of 12, rather than 11, items of other UXO during technical survey. Email from Neil Arnold, MAG, 9 May 2018. NPA reported surveying 56,317,500m^2 through technical survey, and confirming 53,963,776m^2 as CMR-contaminated. During technical survey NPA reported destruction of 3,709 submunitions and 448 other items of UXO. Email from Ulric Eriksson, NPA, 1 May 2018.

116 Emails from Jonas Zachrisson, then Country Director, NPA, 17 March and 23 May 2017; and interview, 24 April 2017.

117 Interview with Aubrey Sutherland, NPA, Vientiane, 1 May 2018, and Ulric Eriksson, NPA, Saravan, 4 May 2018.

118 Presentation by HALO Trust, Sepon, 10 May 2018.

119 Email from Ulric Eriksson, NPA, 1 May 2018.

120 Interviews with Neil Arnold, MAG, Phonsavanh, 6 May 2018, and Robby Dehondt, Sterling International, Sepon, 11 May 2018; email from Simon Rea, MAG, 11 April 2017; and Skype interview, 25 April 2017; and email from Ulric Eriksson, NPA, 1 May 2018.

121 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017, p. 17.

122 Interviews with Neil Arnold, MAG, Phonsavanh, 6 May 2018, and Robby Dehondt, Sterling International, Sepon, 11 May 2018; and email from Ulric Eriksson, NPA, 1 May 2018.

123 Interview with Jason Villamil, Acting Programme Manager, HALO Trust, Sepon, 11 May 2018.

124 Interview with Neil Arnold, MAG, Phonsavanh, 6 May 2018.

125 Ibid.

126 Response to Mine Action Review questionnaire from Olivia Meader, HALO Trust, 11 May 2018; NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017, p.19; and email from Jason Villamil, HALO Trust, 23 June 2018.

127 CCM Article 7 Report (for 2017), Form A.

128 Email from Jason Villamil, HALO Trust, 23 June 2018.

129 Email from Bouala Thongsavanh on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

130 Ibid.; Mine Action Review has excluded clearance data reported by Lao PDR for LAUNC (LAO UNEOD COOPER Co., Ltd), on 14 tasks totalling 5,799,051m^2. Clearance work by LAUNC in 2017, was in support of dam projects, irrigation, crops, and forestry, and others, in the provinces of Bolikhamxay, Champasak, and Xaisomboun. However, no items of CMR or other ERW were reported as having been destroyed during these projects. In addition, there was a discrepancy between clearance data reported by the NRA and the data reported by the clearance operators. HALO Trust reported 1,324,314m^2 of BAC, and destruction of 3,265 submunitions (1,640 during BAC and 1,625 during EOD callouts) and 1,533 other items of UXO (1,203 during BAC and 330 during EOD callouts). Response to Mine Action Review questionnaire from Olivia Meader, HALO Trust, Sepon, 11 May 2018. MAG reported a slightly higher amount of BAC (4,734,636m^2), but the same number of items destroyed: 10,888 submunitions (3,238 during BAC and 7,650 EOD call outs) and 1,513 items of other UXO (421 during BAC and 1,092 during EOD callouts). Email from Neil Arnold, MAG, 9 May 2018. NPA reported 369,904m^2 of BAC, and destruction of 7,472 submunitions (1,305 during BAC and 6,167 during EOD callouts) and 1,188 other items of UXO (19 during BAC and 1,169 during EOD callouts). Email from Ulric Eriksson, NPA, 1 May 2018.

131 CCM Article 7 Report (for 2017), Form F.

132 CCM Article 7 Report (for 2017), Form F.

133 Presentation by Saomany Manivong, UXO Lao, Vientiane, 2 May 2018.

134 Ibid.; and interviews with Ulric Eriksson, NPA Laos, Saravan, 4 May 2018, and Neil Arnold, MAG, Phonsavanh, 6 May 2018.

135 Interview with Olivia Meader, HALO Trust, Sepon, 11 May 2018.

136 Presentation by HALO Trust, Sepon, 10 May 2018.

137 Interviews with international and national operators, Laos, 1–12 May 2018.

138 Presentation by Saomany Manivong, UXO Lao, Vientiane, 2 May 2018.

139 Ibid.

140 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.

141 Email from Bouala Thongsavanh on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

142 Statement of Lao PDR, CCM Seventh Meeting of States Parties, Geneva, 4–5 September 2017.

143 Interviews with Phoukhieo Chanthasomboune, NRA, and Thipasone Soukhathammavong, UXO Lao, Vientiane, 2 May 2018.

144 Ibid.

145 Email from Bouala Thongsavanh on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018; and CCM Article 7 Report (for 2017), Form F.

146 Sweet, "Prioritisation policy, procedures and practices relating to UXO clearance in Lao PDR".

147 M. Landler, "Obama Acknowledges Scars of America's Shadow War in Laos", *New York Times*, 6 September 2016.

148 Interviews with Phil Bean, US PMWRA; and Machut Shishak, US State Department, Vientiane, 3 May 2018.

149 Email from Phil Bean, US PMWRA, 2 July 2018.

150 Interviews with Phil Bean, US PMWRA and Machut Shishak, US State Department, Vientiane, 3 May 2018; and Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.

151 Interviews with Phoukhieo Chanthasomboune, NRA, and Thipasone Soukhathammavong, UXO Lao, Vientiane, 2 May 2018.

152 Statement of Lao PDR on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4–5 September 2017.

153 CCM Article 7 Report (for 2017), Form I.

154 Email from Bouala Thongsavanh on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

155 Ibid.

156 Ibid.

157 Statements of Lao PDR on International Cooperation and Assistance, and National Implementation Efforts, CCM Seventh Meeting of States Parties, Geneva, 4–5 September 2017.

158 CCM Article 7 Report (for 2017), Form F.

159 Ibid.

LEBANON

ARTICLE 4 DEADLINE: 1 MAY 2021
(NOT ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE	2017	2016
Problem understood	5	5
Target date for completion of cluster munition clearance	6	6
Targeted clearance	5	5
Efficient clearance	6	5
National funding of programme	8	7
Timely clearance	5	5
Land-release system in place	5	4
National mine action standards	7	4
Reporting on progress	7	7
Improving performance	7	6
PERFORMANCE SCORE: AVERAGE	6.1	5.4

PERFORMANCE COMMENTARY

The performance of Lebanon's national mine action programme strengthened during 2017, with greater collaboration and consultation between the national authorities and non-governmental clearance operators regarding the revision of Lebanon's national mine action standards (NMAS) and the potential for improving operational efficiencies.

These developments were actively supported and overseen by stronger management and national ownership from the new director of the Lebanon Mine Action Centre (LMAC), who took up his post in early 2017. In collaboration with clearance operators, the United Nations Development Programme (UNDP), and other stakeholders, LMAC discussed making improvements to its accepted methodology for survey and clearance of cluster munition remnants (CMR), in line with the International Mine Action Standards (IMAS) and other best practice. These included, among others, reduction of the required clearance depth from 20cm to 15cm, and adjustments to the fade-out specifications for CMR clearance. These enhancements were incorporated into the revised NMAS which was finalised and released in March 2018.

Also in 2017, LMAC began exploring the potential for technical survey in efficient release of cluster-munition-contaminated area, which was a new and warmly welcomed development.

Finally, in October 2017, Lebanon's parliament approved the allocation of 50 billion Lebanese Pounds (approximately US$33 million) for CMR clearance over five years, with a view to expanding operational capacity and helping Lebanon to meet its Article 4 deadline under the Convention on Cluster Munitions (CCM).

RECOMMENDATIONS FOR ACTION

- → LMAC should ensure that all demining organisations update their standing operating procedures (SOPs) to incorporate the enhancements made to the revised NMAS, and that to the new CMR survey and clearance methodologies are implemented as soon as possible. Technical working groups under LMAC auspices could provide a useful forum for review of this process.
- → LMAC should, in collaboration with the clearance operators and partner organisations, continue to explore other ways to improve operational efficiency, including exploring the potential for greater use of non-technical and technical survey (both manual and with explosive detection dogs: EDDs) as a routine part of the toolbox for the release of cluster-munition-contaminated area in Lebanon.
- → LMAC should prioritise the survey of the "Dangerous Areas" recorded in its Information Management System for Mine Action (IMSMA) database, which come mostly from previous Rapid Response/explosive ordnance disposal (EOD) spot tasks. Survey of these tasks will allow LMAC to either confirm the presence and type of contamination and record the task as a confirmed hazardous area (CHA) for full clearance; or else release the task safely back to the community if no evidence of contamination is found.
- → LMAC should update its workplan for the remaining period of its National Mine Action Strategy 2011–20, to reflect the anticipated impact of the enhancements to CMR land release methodology in the revised NMAS, and based on results of the technical survey EDD pilot project once they become available.
- → The planned integration and consolidation of the LMAC and Regional Mine Action Centre (RMAC) databases and servers should be carried out as soon as possible, with a view to ensuring CMR contamination and land release data are being assessed, recorded, and extracted accurately and in a timely manner.
- → Lebanon should continue efforts to identify and mobilise the necessary national and international resources to finish CMR clearance as soon as possible.

CONTAMINATION

At the end of 2017, Lebanon had 843 areas confirmed to contain CMR, over a total area of almost 17.2km^2.[1] This compares to 883 areas confirmed or suspected to contain CMR totalling almost 20km^2 at the end of 2016,[2] and almost 18.2km^2 at the end of March 2017.[3]

In addition, LMAC reported a further 115 areas suspected to contain CMR, totalling more than 6.8km^2, to Mine Action Review, but did not include this suspected area in Lebanon's CCM Article 7 transparency report for 2017.[4] The 6.8km^2 of suspected area relates to the estimated proportion of the 15km^2 of "Dangerous Areas" suspected to contain CMR contamination; the remainder of which contain anti-personnel mines, booby-traps, or unexploded ordnance (UXO) contamination other than submunitions.[5] The "Dangerous Areas" relate predominantly to Rapid Response or EOD spot tasks, and are often the result of accidents having been reported to LMAC by the local community.[6] LMAC dispatches the Lebanese Armed Forces (LAF) engineering troops, partner non-governmental organisations (NGOs), and community liaison officers to Rapid Response call-outs, depending on the situation, the availability of response teams, and proximity to the suspected area.[7]

Historically LMAC has recorded each new "Dangerous Area" as 33,000m² in its IMSMA database. However, as part of the NMAS revisions, new "Dangerous Areas", where there are no defined boundaries, will instead be recorded as covering 10,000m², until further investigation through non-technical and technical survey can confirm the actual extent, if any, of contamination.[8] Where technical survey confirms that no evidence of contamination exists, the remainder of the area will be released. Prior to the agreed change in methodology, superfluous – and expensive – clearance of the full 33,000m² area was frequently undertaken.[9]

The ongoing Norwegian People's Aid (NPA) technical survey pilot project will investigate the Dangerous Areas, to confirm the type and extent of suspected contamination, and where possible, release any areas that are being used by local communities and where there is no evidence of contamination. This will help more accurately determine the baseline of confirmed CMR contamination. Dangerous Areas suspected to contain CMR remain the priority for survey and clearance.[10]

Table 1: CMR contamination (as at end December 2017)[11]

Province	CHAs	Area (m²)	SHAs*	Area (m²)
Beqaa	74	1,945,384	43	3,937,651
Jabal Loubnan (Mount Lebanon)	35	595,853	48	2,446,903
Janoub (South)	250	5,296,398	8	382,489
Nabatiyeh	482	9,320,509	12	23,387
Shimal (North)	2	20,000	4	42,653
Totals	**843**	**17,178,144**	**115**	**6,833,083**

* SHA = Suspected hazardous area

Previously unrecorded CMR contamination continues to be discovered, predominantly in south Lebanon, and during 2017, 43 new confirmed CMR-contaminated areas were identified, totalling 585,159m². Of this total, 36 hazardous areas totalling 515,159m² were identified during Rapid Response call-outs and 7 hazardous areas totalling an estimated 70,000m² were identified by non-technical survey.[12]

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.[13] Approximately one million submunitions failed to explode.[14] In addition, some CMR still remain from earlier conflicts with Israel in 1978 and 1982.[15] Types of submunitions found in Lebanon include M42, M43, M46, M77, M85, MK118, MZD-2, BLU26, BLU61, and BLU63.[16]

After the 2006 war, contamination was initially estimated to cover 55km². This estimate was later increased, based on surveys conducted, to almost 58km² across 1,484 areas, over the three regions of Beqaa, Mount Lebanon, and south Lebanon.[17] Final results from the 2016 milestone of the national strategic review put original baseline CMR contamination at nearly 63km², taking into account new CMR-contaminated areas reported and leaving more than 18.3km² still to release.[18]

Historically, in the south of Lebanon CMR-contaminated areas were automatically recorded in the database as 33,000m² per task, 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.[19] The 33,000m² (per strike) area automatically assigned to CMR tasks by LMAC has been proven in many instances to underestimate the actual task size. For example, based on empirical field data, Mines Advisory Group (MAG) has calculated the average CMR clearance task to be approximately 60,000m²,[20] while NPA had previously calculated it to be 65,000m² per task.[21] According to LMAC, the 33,000m² is the estimated average footprint of a cluster munition strike, and sometimes many strikes are located within the same area.[22]

The accuracy of the baseline of CMR contamination is also further complicated by clearance undertaken in the immediate aftermath of the 2006 cluster munition strikes, during which emergency clearance of submunitions spotted in and around infrastructure, schools, and roads was carried out by the LAF as well as individual Lebanese.

The UN Mine Action Coordination Centre – south Lebanon (MACC-SL) assumed the role of coordinating CMR clearance in 2007, in cooperation with the National Demining Office (now known as LMAC). It contracted out CMR clearance to NGOs, commercial operators, and government groups.[23] However, not all clearance undertaken in the years immediately following 2006 was in accordance with the IMAS. Some Israeli bombing data has been provided – most recently through the UN Interim Force in Lebanon (UNIFIL) – but has proved to be very inaccurate.[24]

MAG undertook a pre-clearance non-technical survey of 443 CMR clearance tasks between September 2013 and April 2014, with a view to confirming areas of CMR as accurately as possible, informing LMAC's operational planning and prioritisation, and identifying the socio-economic impact of remaining clearance.[25] A national NGO, Peace Generation Organization for Demining (POD), supported MAG in carrying out the survey.[26] The survey resulted in MAG recommending 96 tasks for cancellation, covering an estimated 2.8km².[27] The remaining 347 tasks surveyed by MAG were recommended for clearance.[28]

In September 2014, at the Fifth Meeting of States Parties to the CCM, Lebanon announced it was reviewing MAG's recommendations for task cancellation and that it hoped to use the survey findings to focus clearance on areas with strong evidence of contamination.[29] Lebanon further stated that, as a result of the survey, almost 1.5km^2 out of 14.5km^2 of land had already been released and handed over to the owners.[30]

After reviewing the 96 tasks recommended by MAG for cancellation, LMAC decided to cancel 51, totalling an area of 1.7km^2.[31] LMAC decided not to cancel the remaining 45 tasks recommended for cancellation, as following a review it believed these areas still contained CMR and required additional investigation. These tasks therefore remain in the database.[32] These tasks were due to be the subject of technical survey by MAG and NPA, starting in September 2018.[33]

The extent of 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.[34] Some areas contain unexploded submunitions resulting from both ground-launched and air-dropped cluster munitions, which can further complicate the picture.[35]

Throughout the period of the current national mine action strategy 2011–20, the baseline of CMR contamination in Lebanon has not reduced proportionally with the amount of CMR-contaminated area released through survey or clearance in the same period, potentially leading to the misleading and incorrect assumption that little or no progress is being made to address CMR-contamination. In reality, the actual reason for the lack of reduction to the baseline contamination is because previously unrecorded contamination continues to be discovered,[36] and because many of the CMR clearance tasks undertaken cleared a larger area than the one recorded in the database, thereby impacting the baseline contamination area.[37] LMAC has recognised the importance of improving transparency and reliability in this respect, and has determined that baseline contamination should be fixed, and that new contamination will be accounted for separately.[38]

The 842 confirmed cluster bomb unit (CBU) tasks, as at 1 October 2017, were reported to be affecting the lives of more than one million people living in 768 affected villages.[39] CMR contamination is mostly in rural areas, where communities depend on agriculture for income generation.[40] MAG's pre-clearance survey of 347 tasks recommended for clearance revealed that in four-fifths of the areas, contamination had made access to resources unsafe or had blocked access altogether.[41] Nonetheless, many landowners and workers still enter CMR-contaminated areas, declaring they have no alternative.[42]

Post-clearance surveys concerning cluster munition strike areas, carried out by LMAC in collaboration with clearance operators, have revealed that, of the cleared land which was subsequently exploited, 78% was used for agriculture, 15% for pasture, and the remainder for residential and infrastructure development.[43] LMAC aims to enhance monitoring and recording of post-clearance activities and of how land release affects livelihoods and socio-economic development.[44] Comprehensive implementation of pre- and post-impact surveys by operators, using an agreed format, could support the achievement of this aim.[45] UNDP plans to conduct a socio-economic impact assessment of CMR contamination in 2018,[46] LMAC conducted a post-clearance assessment of the socio-economic benefits of clearance.[47]

The influx of well over one million refugees from Syria has led to a huge increase in population density in Lebanon, and greater demand to use rural land for economic purposes. Many contaminated areas are inhabited by Syrian refugees and/or are used for agricultural activities, increasing the exposure of civilians to risk and causing an increase in the number of casualties from CMR, mines, and other UXO.[48]

According to Lebanon's Article 7 transparency report for 2017, there were a total of 28 incidents involving mines or explosive remnants of war (ERW) in 2017, of which 19 involved mines; 5 involved CMR; 1 involved an item of UXO; and 3 involved unknown devices. With regard to the submunition incidents, four Lebanese men were injured (three in South Lebanon and one in Bekaa) and one Syrian boy was killed, in Mount Lebanon.[49]

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).

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.[50]

LMAC, part of the LAF,[51] 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.[52] 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. A new director of LMAC started in early 2017, while a new director of RMAC started in May of that year.[53]

There is good coordination and collaboration between LMAC/RMAC and clearance operators. In south Lebanon, coordination meetings between RMAC and operators take place at least monthly, during which clearance operations, quality assurance (QA), and other operational issues are openly discussed.[54] LMAC also manages risk education and victim assistance.[55]

UNDP personnel, funded by the European Union (EU), are also seconded to LMAC and RMAC, providing support towards capacity building, including transparency reporting, strategic reviews, and IMSMA database entry, community liaison officers, and QA. UNDP does not provide technical assistance on operational decisions.[56] A donor support group meeting is convened annually, which brings together donors, operators, and the national authorities.[57]

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.[58] The role of the ARCP includes supporting the national authorities in mine action in the MENA region; providing technical assistance and training; coordinating and hosting exchange visits; promoting best practices and documenting lessons learned; and mobilising funding.[59] Planning, management, and coordination of the programme were handed over to LMAC at the beginning of 2017.[60]

In addition, a Regional School for Humanitarian Demining in Lebanon 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.[61] 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.[62] Training in 2017 addressed non-technical survey, EOD level 1, and gender and diversity in mine action in 2017.[63] Multiple further courses were planned for 2018.[64]

In November 2016, a Lebanon-focused workshop on implementation of CCM Article 4 was held in Beirut, convened by Norway and the Netherlands in their capacity as Convention Co-Coordinators on clearance for the CCM. The workshop, which was facilitated by the GICHD, brought together the LMAC and RMAC, with national and international clearance operators, donors, UNDP, and Mine Action Review. The aim of the workshop was to open a direct line of dialogue between the LMAC, donors, and clearance operators on best practices in CMR land-release methodology and risk management, including the potential for enhanced operational efficiencies through better use of non-technical and technical survey, as well as to offer peer-to-peer advice for the ongoing revision of Lebanon's NMAS.[65]

The workshop encouraged more open dialogue and collaboration between LMAC and demining organisations, and LMAC subsequently demonstrated a willingness to discuss changes to NMAS and ways in which to maximise operational efficiencies in the field. These included more appropriate clearance depths and adjustments to fade-out specifications, and the potential for enhanced use of evidence-based survey as part of the land release process. This approach of enhanced cooperation has been actively embraced by the new director of LMAC, who assumed his new post in early 2017.[66] In a very positive development, as part of continued discussions between LMAC and operators, a pilot project for technical survey of CMR using both manual and EDD capacity, implemented by NPA, was approved later in the year.[67]

On 17 January 2018, a follow-up workshop on survey and clearance was organised in Beirut by the Norwegian Embassy, again facilitated by GICHD, and with active participation from national and international operators, donors, and representatives from UNDP and Mine Action Review.[68] During the workshop, Norway expressed its desire to establish a regular forum for LMAC to continue dialogue and collaboration with donors, clearance operators, and partner organisations, to discuss priorities and needs in cluster munition and landmine survey and clearance at the national level. This concept received wide-ranging support from the stakeholders who participated at the workshop, and it was agreed that an informal "Mine Action Forum" is established in Lebanon, which will meet twice a year. The Mine Action Forum concept underscores the importance of national ownership as the key to successful collaboration.[69] 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.

Strategic Planning

In September 2011, LMAC adopted a strategic mine action plan for 2011–20.[70] 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,[71] which will not be met.

A first mid-term review to 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, suffered from underfunding (with consequently fewer operating teams), while previously unreported contaminated areas were also identified.[72]

A second, mid-term assessment of the period 2014–16, undertaken in 2016, but only released in March 2018, came to similar conclusions. It highlighted the huge gap between actual battle area clearance (BAC) output and planned output (according to the original strategy). The 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 to target 2020.[73]

Lebanon has set four levels of priority regarding mine action. The first is to address infrastructure (housing, roads, hospitals, schools etc.); the second is to address facilities such as water, electricity, sewage, and landlines; the third is to release agricultural land, including livestock etc.; and the fourth is to release land for activities other than agriculture (e.g. nature reserves or areas used by wildlife).[74]

LMAC selects and assigns tasks for clearance based on the priorities set according to the initial survey, while updated information may lead to a change in priority for some areas. LMAC planned to survey all designated high-priority sites, to obtain accurate information, before tasking them for clearance.[75] Analysis during the 2016 second milestone review of the national strategic plan highlighted the importance of evidence-based decisions in prioritising and tasking clearance operations, bearing in mind the linkages between mine action and the sustainable development goals.[76]

In 2017, LMAC organised a workshop on gender mainstreaming in mine action.[77]

Legislation and Standards

Lebanon developed its first NMAS in 2010.[78] Over the last couple of years, and throughout 2017, LMAC worked with UNDP and other partners, under a project funded by the EU, to revise the standards.[79] The revision took place with a view to enhancing efficiency by harmonising national standards with IMAS and international best practice, as well as to add new modules not present in the original NMAS.[80] As encouraged during the November 2016 CCM workshop, convened by Norway and the Netherlands under their remit as co-coordinators on clearance under the CCM, LMAC adopted a consultative approach to the NMAS revision process, and liaised extensively with demining operators, who submitted recommendations and comments during the revision process.[81]

In February 2018, the new revised edition of Lebanon's NMAS was sent to the Ministry of Defence for approval. In March 2018, the new NMAS were presented to operators during a workshop at the Regional School, during which next steps were discussed for operationalising the new provisions.[82] The revised NMAS has a solid focus on land release and evidence-based decision-making, in line with the IMAS, and based on analysis of operational data collected by the implementing agencies, and recommendations from demining operators. These include reduction of the required clearance depth of CMR from 20cm to 15cm; the division of the 50m required fade-out into two zones (subsurface clearance at 15cm for the first 35m and visual surface clearance for the remaining 15m, 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 allows for the use of technical survey, including on "Dangerous Areas", which is initially being trialled with the use of EDDs and is expected to significantly enhance the land release process.[84]

It is expected that these changes will dramatically improve efficiency,[85] and international clearance operators commended the constructive dialogue with LMAC and RMAC during the NMAS revision process.[86]

LMAC views the NMAS as a living document, which will need updating regularly to ensure continued harmonisation with relevant developments in IMAS, and taking into consideration field experiences in Lebanon.[87] For example, once piloted, the standards will need to be updated, or an addendum added, to include the use of EDDs for technical survey of CMR.[88]

NGOs are required to modify their SOPs according to the new NMAS. A first workshop was held in March 2018 to introduce the new standards to the clearance NGOs, and a second workshop was scheduled in early summer to discuss the field-based implementation of the new NMAS, including any challenges experienced, and whether any improvements are needed.[89] As at June 2017, the second workshop had not yet taken place.[90] In the meantime, pending updating and approval of SOPs, operators can include relevant NMAS revisions in their clearance plans for each task, which are approved by LMAC.[91]

In Lebanon it is not permitted for anyone other than a BAC team with personnel wearing personal protective equipment (PPE) to enter the area of a cluster strike footprint, largely due to the presence and threat posed by the potential explosive volatility of M-series submunitions. This, combined with the lack of flexibility for clearance operators to conduct survey on assigned tasks prior to clearance, means that operators sometimes find themselves clearing access lanes from perimeters of tasks, at distances which are sometimes a long way out from the actual CMR. However, following November 2016's CCM Article 4 workshop, in a positive development, LMAC clarified that clearance operators could cut lanes directly into the CHA and not from the Universal Transverse Mercator (UTM)/coordinates from the original non-technical survey, which in some cases is as far as 300 metres from the contaminated area.[92]

Despite these very positive revisions to the NMAS, use of non-technical survey and technical survey could be strengthened on cluster munition sites, to define present or absence of threat.[93] Historically, clearance tasks assigned to operators by LMAC are typically deemed to already reflect survey data, and LMAC does not formally permit operators to conduct additional survey as standard matter of course, other than during pre-clearance assessments.[94] At present, clearance operators do have an opportunity to discuss with LMAC/RMAC specific land release considerations for assigned clearance tasks that 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.[95] However, this approach is somewhat contingent on the decision of individual LMAC/RMAC officials and the process would benefit from a more systematic approach that employs objective land release principles, including priority being given to use of non-technical and technical survey.

NPA's technical survey pilot project, with the use of EDDs, will ensure non-technical and technical survey of an increasing number of tasks, which will then either be tasked for clearance if CMR contamination if confirmed, or else released back to the local community, if no evidence of CMR contamination is found during survey.[96] In addition, LMAC, in collaboration with the clearance operators, will continue to explore ways in which to improve operational efficiencies, including exploring the potential for greater use of non-technical survey and other modes of technical survey, including manual and mechanical techniques, in addition to the piloted use of technical survey with EDDs.[97]

Quality Management

Between 10% and 40% sampling is conducted during clearance operations by the organisation site supervisor and QA officer; 10% sampling is conducted by the LMAC QA/QC (quality control) officer during work. Up to 30% sampling of a cleared area is conducted by LMAC's sampling team at the end of the task, but the decision to conduct sampling is decided on a case-by-case basis, and not all released areas are sampled.[98] All areas released in 2017 were checked by QC teams beforehand.[99]

Information Management

IMSMA is used by LMAC and RMAC to record contamination and land release in Lebanon. LMAC has reported that the system for database entry now more accurately reflects operational data, especially in instances where the task size/area of CMR contamination exceeds the original task size in the database.[100] Previously, any area cleared in excess of the original task size was entered into the database as a new task. Now, while the contaminated area and area cleared are both recorded, area in excess of the original task size is not recorded as additional tasks in the database.[101]

Furthermore, during clearance, a single task may not always be completed in a single assignment, as 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. This explains, in part, the changing number of hazardous areas between reporting periods.[102] It should be noted that, since 2016, disclaimed areas can be cleared without the landowner's permission.[103]

As at April 2018, there were plans to integrate the RMAC information management database on the LMAC server. Full harmonisation and consolidation of the servers was expected in the course of 2018, 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, and decrease maintenance costs.[104]

Furthermore, LMAC has secured funding for the migration 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.[105] UNDP has executed an information technology (IT) assessment to determine the needs of LMAC; how to ensure harmonisation between RMAC and LMAC and enhance data security; explore the options for migration to IMSMA Core; and determine the financial costs of such projects.[106]

Operators

In 2017, CMR clearance was conducted by international operators DanChurchAid (DCA), MAG, and NPA; national operators POD and LAMINDA (Lebanese Association for Mine and Natural Disaster Action); and the Engineering Regiment of the LAF.[107] Capacity fluctuated throughout 2017.[108] At the beginning of the year, there were a total of 24 BAC teams operating (17 teams with international NGOs and 7 with national NGOs), and by the end of the year the number had decreased to 20 teams (14 with international NGOs and 6 with national NGOs).[109]

All LAF engineering companies have EOD specified personnel that are trained to deal with explosives ordnance.[110] The LAF Engineering Regiment conducted Rapid Response tasks, but did not have any BAC teams in 2017.[111] This is a reduction from the two LAF BAC teams in 2016,[112] the result of the diversion of the LAF BAC capacity to military operations on the north-eastern borders with Syria in 2017.[113] In addition, the LAF has two non-technical survey teams that were deployed in 2017.[114]

MAG began 2017 with seven BAC teams deployed (up from the five BAC teams in 2016), but ended the year with only four teams.[115] MAG is the only international operator in Lebanon with mechanical assets to support manual clearance operations, and these assets can be used by other organisations upon request of LMAC. In 2017, MAG reported using nine machines and mechanical attachments to support manual activities.[116]

NPA operated four BAC teams throughout 2017,[117] but subsequently reduced to three teams in 2018.[118]

DCA deployed five BAC teams in 2017, in addition to supervising two additional teams in partnership with LAMINDA, a national NGO founded in 2014.[119] DCA's partnership with LAMINDA also aims to strengthen LAMINDA's mine action capacity.[120] LAMINDA also deployed one BAC team independently, not under the supervision of DCA.[121]

POD deployed four BAC teams in 2017,[122] a reduction of one team compared to 2016.[123]

The decrease in BAC teams from 24 at the beginning of 2017 to 20 at the end, is reported to be largely due to a shift in interest from the donors towards mine clearance on the Blue Line, along Lebanon's southern border with Israel.[124] LMAC has consistently raised concerns over the lack of survey and clearance capacity to address CMR and mine contamination, which it ascribes to inadequate funding.[125]

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,[126] and approved a pilot project for technical survey with EDD, which is ongoing and implemented by NPA,[127] and use of manual technical survey by MAG and NPA which was planned to commence in September 2018.[128]

The cessation of EU funding in 2018 will negatively affect CMR survey and clearance capacity, though this will, in part, be compensated by the new addition of DFID survey and clearance funding, which will increase MAG and NPA's CMR technical survey and clearance capacity from September 2018.

LAND RELEASE

Total CMR-contaminated area released by clearance in 2017 was just over 1.41km^2,[129] a decrease on the 1.9km^2 of area cleared in 2016.[130]

No area was reported as reduced by technical survey or cancelled by non-technical survey in 2017.[131]

Survey in 2017

Lebanon did not report any land release from survey in 2017, marking a reduction compared to 2016, when 514,866m^2 was cancelled by LMAC/RMAC.[132] It did, however, report the discovery of seven previously unrecorded areas of CMR contamination through non-technical survey, totalling 70,000m^2.

In addition, 36 further CMR hazardous areas totalling 515,159m^2, were identified during Rapid Response call-outs, typically from the public, alerting LMAC to previously undiscovered ERW. LMAC community liaison officers visit each call-out, followed by LMAC's chief of operations when necessary. New CMR hazardous areas, also referred to as "Dangerous Areas", are recorded for those call-outs where CMR contamination is confirmed.[133] These new areas used to be automatically recorded as 33,000m^2, but are now recorded as 10,000m^2 instead.[134]

Norwegian funding was secured for the EDD pilot project in 2017, with the use of dogs from NPA's Global Dog Centre in Sarajevo. One of the advantages of using EDDs is that dogs detect explosives, not metal, which can help speed up the technical survey process. NPA's technical survey pilot project team is comprised of a supervisor, a team leader, two dog handlers and their EDDs, three manual searchers (for clearance capacity and for manual technical survey of area not appropriate for EDDs, e.g. areas of thick vegetation), a medic, and a driver. As part of the pilot project, non-technical survey will also be conducted as standard, prior to technical survey and deployment of the EDDs.[135]

The EDDs received accreditation in April 2018, and were deployed on the first technical survey task at the end of April.[136] The pilot project will start with four tasks. Two are from a group of tasks previously surveyed by MAG non-technical survey and recommended for cancellation, but which LMAC deemed needed further investigation to rule out the possibility of contamination. The other two are from Dangerous Area tasks that do not contain mine hazards, identified during prior Rapid Response call-outs. These four tasks will be inspected by QC teams to evaluate the performance of the EDDs.[137] For Dangerous Areas, technical survey will start from the UTM/coordinate position of where the device was found and will cover a minimum of 30% of total area (i.e. typically 3,000m^2 of the total 10,000m^2), as required by NMAS. If no evidence of contamination is found during the technical survey the remainder of the task area will be cancelled. If CMR evidence is found during the technical survey, the Dangerous Area will be confirmed as a CHA and will be handed over to LMAC for full clearance in due course and in accordance with LMAC's prioritisation system.[138]

The pilot project was expected to continue throughout 2018, focusing predominantly on technical survey of Dangerous Area tasks. The technical survey methodology was planned to be refined and defined, and the process and associated results analysed, at the end of the year.[139]

Clearance in 2017

Lebanon reported clearing just over 1.41km^2 of CMR-contaminated land in 2017, across 43 areas, destroying in the process 5,525 submunitions (see Table 2).[140] This includes 619 submunitions destroyed during rapid response / EOD spot tasks in 2017.[141]

Table 2: Clearance of CMR-contaminated area in 2017[142]

Operator	Areas cleared	Area cleared (m^2)	Submunitions destroyed
DCA	Not specified	285,270	1,087
MAG	Not specified	414,950	393
NPA	Not specified	297,360	2,997
POD	Not specified	223,916	385
LAMINDA	Not specified	192,350	144
LAF	Rapid response call-outs	0	519
Totals	**43**	**1,413,846**	**5,525**

Manual clearance is the primary method of clearing CMR in Lebanon, but machines are sometimes deployed to make access lanes and prepare the ground.[143]

MAG reported clearing a slightly higher output than recorded by LMAC, of 459,391m^2 of CMR contamination, in the districts of Nabataea, Jezzine and West Bekaa, during which 392 submunitions (one less than the 393 reported for MAG by LMAC), and 120 other items of UXO were destroyed, including Rapid Response call-outs.[144]

NPA reported clearing a slightly higher output than recorded by LMAC, of 314,275m^2 of land, during which it destroyed 3,007 submunitions (ten more than the 2,997 reported for NPA by LMAC), and 5 other items of UXO.[145] NPA reported that its tasks in 2017 were far more heavily contaminated by CMR than the previous year, as a result of better planning between NPA and RMAC.[146]

In addition, NPA received one Rapid Response spot task from RMAC, in Maarake Village in South Lebanon Province, during which one BLU63b submunition was destroyed and reported to RMAC.[147]

Of the CMR clearance tasks undertaken in 2017, MAG reported that all its tasks contained CMR contamination and NPA reported one BAC task in which no evidence of CMR were found. NPA cleared 9,600m^2 of the task and requested to RMAC that the task should be suspended and the remaining 400m^2 removed from the database as release by other means.[148] Had a system for formal non-technical and technical survey been in place and permitted, prior to clearance, deployment of clearance teams to this task might have been avoided.

Deminer safety

In 2017, a MAG employee suffered minor injuries to a finger, during partial demolition of an M77 submunition during vegetation cutting drills.[149] NPA had two accidents in 2017, both of which involved NPA searchers being injured by M77 submunitions.[150]

ARTICLE 4 COMPLIANCE

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. At the Seventh Meeting of States Parties in September 2017, Lebanon confirmed that it will not meet its Article 4 deadline based on existing capacity, and that around 65 BAC teams would be needed annually in order for Lebanon to meet its 2021 deadline.[151]

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.[152] However, meeting this target was contingent on maintaining the number of BAC teams needed.[153] The first review of the 2011–20 strategy in early 2014 confirmed that with existing capacity it would not be possible to finish CMR clearance before 2020 at the earliest.[154]

The second mid-term review, conducted in 2016, and finally released in March 2018, confirmed that progress against the strategy has fallen well behind schedule, and that significant increased capacity would be required to bridge the gap. LMAC calculated that based on empirical data using the old CMR clearance depths and fade-out requirements, 33,000m^2 task sizes on average, and 22 BAC teams, it would take 9.3 years to clear the remaining identified CBU areas. According to LMAC, in order to finish CMR clearance in three years by the 2021 deadline, 66 teams would be needed, at a total cost of US$75.5 million.[155] Similarly, Lebanon's most recent CCM Article 7 report (for 2017), said a total of around 65 BAC teams would be needed annually in order for Lebanon to meet its 2021 deadline.[156]

However, these calculations do not take into the account the potential operational efficiencies through implementation of the decreased CMR clearance depth to 15cm, or the reclassification of the high and low threat areas within the 50m fade-out, finalised in early 2018 and specified in the revised NMAS. Nor do they take into account the decision to record new dangerous areas as 10,000m^2, instead of the 33,000m^2, and the potential impact that technical survey, which is being piloted in 2018 with the use of EDDs, may have on rates of progress.[157] LMAC also noted that a more accurate picture of land release predictions would be available at the end of 2018, once data from survey and clearance operations, including the technical survey pilot project, is available.[158]

Clearance operators similarly expect the adoption of more efficient land release operations in 2018, as enshrined in the revised NMAS, to result in significant cost savings, efficiency gains, and more effective and timely land release operations. LMAC itself also highlights the need for more non-technical and technical survey teams to help cancel or reduce areas. If the technical survey pilot project with EDDs proves successful and is subsequently expanded, including to other modes of technical survey, this could have a very positive impact on Lebanon's implementation on its Article 4 obligations.[159] This warrants further attention from LMAC as well as other mine action stakeholders in Lebanon, including the potential for trialling and implementing manual or mechanical technical survey, in addition to the use of EDDs. The absence of land release through survey in 2017, points to the huge potential to enhance efficiency of operations and make swifter progress towards meeting Lebanon's Article 4 obligations.

With the exception of 2016, annual clearance of CMR-contaminated land has decreased successively since 2012, as illustrated in Table 3. In total, less than 10km^2 of CMR contamination has been cleared in the last five years.

Table 3: Five-year summary of CMR clearance[160]

Year	Area cleared (km²)
2017	1.41
2016	*1.90
2015	1.69
2014	2.10
2013	2.47
Total	**9.57**

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

Lebanon claimed in its latest Article 7 report that the main challenges in the implementation of Article 4 were discovery of previously unreported contaminated areas; the impact of working in increasingly difficult terrain, which slows down clearance operations; and securing funding for additional teams.[161]

As in the previous year, Lebanon reported contributing US$9 million annually in 2017 towards mine action in Lebanon (including both CMR and mine-related work), to support costs associated with the running of LMAC (facilities and staff); and the Lebanese Armed Forces Engineering Regiment companies to cover Rapid Response call-outs; risk education, and emergency assistance and hospitalisation for victims.[162]

However, in early 2018, the Lebanese government announced that it would increase its contribution to CMR clearance, and that 50 billion Lebanese Pounds (approximately US$33 million) would be allocated over five years. This contribution was approved by the Lebanese parliament on 19 October 2017. This is intended to help towards meeting Lebanon's Article 4 obligations and is expected to lead to increased clearance capacity.[163]

Lack of international funding continues to pose a challenge to CMR operations, and 2017 saw a decrease in BAC capacity.[164] There is also a concern that funding in some cases risks being diverted from BAC towards other objectives, such as mine clearance on the Blue Line, or survey and clearance in the north-eastern border with Syria.[165]

In 2017, Lebanon received almost US$7 million in international funding for BAC, risk education, victim assistance, and capacity building, with funding for BAC from the EU, the Norwegian Ministry of Foreign Affairs, the United States; the Netherlands; and UNCOR (Trust Foundation).[166]

LMAC expected international funding and assistance for CMR clearance in Lebanon to remain approximately the same in 2018,[167] but hoped that positive developments, including the increased BAC funding allocation by the Lebanese government; interest expressed by donors at the Mine Action Forum meeting in January 2018; enhancements to required CMR clearance depth and fade-out requirements, as released in the new NMAS; and the piloting of technical survey with EDD, would all encourage additional donor support to CMR operations.[168]

During the January 2018 workshop, it was agreed that international donors should strive for more clarity, transparency, and information sharing on how mine action funds are being spent in Lebanon, where potential funding gaps exist, and how funding can be better coordinated. It was also agreed that clearer cost calculations (both anticipated and actual) for survey and clearance operations should be established by LMAC, to help with analysis and work planning.[169]

LMAC recognises the value of enhanced cooperation, communication, sharing of information, and establishment of partnerships, and plans to embrace this throughout the implementation of the remainder of its National Mine Action Strategy.[170] At present, EU funding for UNDP support to LMAC is due to end by 2019, which would leave a funding gap for this support between 2019 and 2021.[171]

1 Email from Brig.-Gen. Ziad Nasr, Director, LMAC, 27 April 2018; and CCM Article 7 Report (for 2017), Form F.

2 CCM Article 7 Report (for 2016), Form F; and email from Brig.-Gen. Ziad Nasr, LMAC, 22 June 2017.

3 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.

4 CCM Article 7 Report (for 2017), Form F.

5 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

6 Interview with Brig.-Gen. Elie Nassif (then) Director, and Brig.-Gen. Fakih, then Head of Operations, LMAC, Beirut, 18 April 2016.

7 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

8 Email from Brig.-Gen. Ziad Nasr, 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.

9 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

10 Ibid.; and email from LMAC Operations Department, 28 June 2018.

11 Ibid.

12 Email from LMAC Operations Department, 18 July 2018; and CCM Article 7 Report (for 2017), Form F.

13 Landmine Action, "Foreseeable Harm: the use and impact of cluster munitions in Lebanon: 2006", 2006.

14 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

15 Landmine Action, "Foreseeable Harm: the use and impact of cluster munitions in Lebanon: 2006", 2006; interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016; and CCM Article 7 Report (for 2016) Form F.

16 CCM Article 7 Report (for 2017), Form F.

17 CCM Article 7 Report (for 2013) Form F; and Statement of Lebanon, CCM Fourth Meeting of States Parties, Lusaka, September 2013.

18 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

19 CCM Article 7 Report (for 2015), Form F; interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 May 2016; and email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.

20 Interview with Bekim Shala, then Programme Manager, MAG, Nabatiyeh, 14 April 2016.

21 Email from Eva Veble, then Lebanon Programme Manager, NPA, 8 July 2016.

22 Email from Brig.-Gen. Ziad Nasr, LMAC, 22 June 2017.

23 Human Rights Watch, "Flooding South Lebanon. Israel's use of cluster munitions in Lebanon in July and August 2006", 16 February 2008.

24 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016; and presentation by Brig.-Gen. Fakih, LMAC, Beirut, 16 November 2016.

25 MAG, "Cluster Munition Contamination in Lebanon using survey data", September 2014.

26 Email from Bekim Shala, MAG, 14 June 2016.

27 Ibid. Of the 96 tasks, 3 were recommended for cancellation due to their proximity to others, with a recommendation that multiple tasks be merged in the contamination database. One additional task was recommended for cancellation because of duplication in database coordinates. The remaining 347 tasks surveyed by MAG were recommended for clearance.

28 Email from Bekim Shala, MAG, 14 June 2016.

29 Statement of Lebanon, CCM Fifth Meeting of States Parties, San José, 2–5 September 2014.

30 Email from Brig.-Gen. Elie Nassif, LMAC, 17 June 2015.

31 Ibid.

32 Interviews with Oussama Merhi, then UNDP Mine Action Advisor for LMAC, in Geneva, 26 June 2015; and with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016; and email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016.

33 Emails from Dave Wiley, MAG, 14 June 2018; Craig McDiarmid, NPA, 15 June 2018; and LMAC Operations Department, 3 July 2018.

34 Interview with Oussama Merhi, UNDP, in Geneva, 26 June 2015; and CCM Article 7 Report (for 2015), Form F.

35 Interview with Oussama Merhi, UNDP, in Geneva, 26 June 2015.

36 Presentation by Brig.-Gen. Fakih, LMAC, Beirut, 16 November 2016.

37 Email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.

38 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

39 Ibid.

40 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

41 MAG, "Cluster Munition Contamination in Lebanon using survey data", September 2014, p. 4.

42 Ibid.

43 Statement of Lebanon, CCM Fifth Meeting of States Parties, San José, September 2014.

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45 Email from Craig McDiarmid, NPA, 8 June 2016.

46 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

47 Email from LMAC Operations Department, 3 July 2018.

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49 CCM Article 7 Report (for 2017), Form F.

50 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014, pp. 4–5.

51 LMAC, "2012 Annual Report Lebanon Mine Action Centre", March 2013.

52 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011, p. 4.

53 Email from Brig.-Gen. Ziad Nasr, LMAC, 22 June 2017.

54 Interview with Col. Pierre Bou Maroun, Director, RMAC, Nabatiyeh, 16 November 2016.

55 UNDP, "Mine Action in Lebanon: A Review of the Lebanon Mine Action Programme and UNDP Support to mine action in Lebanon", Final Report, September 2011, p. 9.

56 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, 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".

57 Interview with Lt.-Col. Henry Edde, then Director, RMAC, Nabatiyeh, 12 April 2016; and Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 18 May 2016; and LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

58 Email from Anna-Lena Schluchter, containing data from Rana Elias, Focal point for Lebanon, GICHD, 21 June 2017.

59 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

60 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and LMAC, "2017 Annual Report Lebanon Mine Action Centre", undated.

61 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

62 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; CCM Article 7 Report (for 2017), Form I; and Statement of Lebanon on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.

63 CCM Article 7 Report (for 2017), Form I.

64 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

65 Expert workshop under the framework of supporting Lebanon in meeting its CCM Article 4 obligations, attended by Lucy Pinches, Project Manager and Senior Researcher, Mine Action Review, Beirut, 17 November 2016.

66 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

67 Telephone interview with Craig McDiarmid, NPA, 15 June 2018.

68 Expert workshop on cluster munition and landmine survey and clearance in Lebanon, Beirut, 17 January 2018.

69 Ibid.

70 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011, p. 4.

71 Response to Cluster Munition Monitor questionnaire by Brig.-Gen. Imad Odiemi, LMAC, 2 May 2014.

72 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.

73 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.

74 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

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77 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

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84 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018.

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 Ibid.

87 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.

88 Expert workshop on cluster munition and landmine survey and clearance in Lebanon, Beirut, 17 January 2018.

89 "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018".

90 Email from Dave Wiley, MAG, 15 June 2018.

91 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

92 Emails from Craig McDiarmid, NPA, 30 March 2017 and 17 April 2018.

93 Emails from Dave Wiley, MAG, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018.

94 Emails from Bekim Shala, MAG, 21 June 2016, and Craig McDiarmid, NPA, 30 March 2017.

95 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016.

96 Telephone interview with Craig McDiarmid, NPA, 15 June 2018.

97 "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018".

98 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.

99 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

100 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016.

101 Interview with Bekim Shala, MAG, Nabatiyeh, 14 April 2016.

102 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 May 2016.

103 Email from Brig.-Gen. Elie Nassif, LMAC, 5 July 2016.

104 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

105 Ibid.; email from LMAC Operations Department, 28 June 2018; and "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018".

106 "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018".

107 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

108 Ibid.

109 CCM Article 7 Report (for 2017), Form F.

110 Email from LMAC Operations Department, 28 June 2018.

111 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

112 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.

113 Email from LMAC Operations Department, 28 June 2018.

114 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and LMAC Operations Department, 28 June 2018.

115 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.

116 Emails from Bekim Shala, MAG, 3 April 2016; and Dave Willey, MAG, 25 April 2017 and 27 April 2018.

117 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018.

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119 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

120 LAMINDA website, accessed 31 May 2017, at: http://www.laminda.org/our-partner.

121 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

122 Ibid.

123 LAMINDA website, accessed 31 May 2017, at: http://www.laminda.org/our-partner.

124 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

125 Statements of Lebanon, CCM First Meeting of States Parties, Vientiane, September 2010; CCM Fourth Meeting of States Parties, Lusaka, September 2013; CCM Fifth Meeting of States Parties, San José, September 2014; First CCM Review Conference, Dubrovnik, 7–11 September 2015; Mine Action Support Group meeting, 18 October 2013; CCM intersessional meetings, 9 April 2014; and CCM Article 7 Report (for 2013), Form F.

126 Statement of Lebanon on clearance, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.

127 Telephone interview with Craig McDiarmid, NPA, 15 June 2018.

128 Email from Dave Wiley, MAG, 14 June 2018.

129 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and CCM Article 7 Report (for 2017), Form F.

130 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.

131 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and CCM Article 7 Report (for 2017), Form F.

132 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017.

133 CCM Article 7 Report (for 2015), Form F; and email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016.

134 Emails from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018, and LMAC Operations Department, 18 July 2018.

135 Email from Craig McDiarmid, NPA, 17 April 2018; and telephone interview, 15 June 2018.

136 Email from Craig McDiarmid, NPA, 15 June 2018.

137 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

138 Email from Craig McDiarmid, NPA, 17 April 2018

139 Telephone interview with Craig McDiarmid, NPA, 15 June 2018.

140 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and CCM Article 7 Report (for 2017), Form F.

141 Email from Maj. Charbel Njeim, Head of Operations, LMAC, 24 May 2018.

142 CCM Article 7 Report (for 2017), Form F. DCA, LAMINDA, and POD did not provide data to Mine Action Review so the accuracy or quality of their clearance outputs is unclear.

143 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017; and CCM Article 7 Report (for 2016), Form F. The clearance table in Lebanon's CCM Article 7 Report, totalling just over 2km^2, is the sum of 1.9km^2 of clearance and 1km^2 of re-clearance. Email from Dave Willey, MAG, 25 April 2017.

144 Email from Dave Wiley, MAG, 27 April 2018.

145 Email from Craig McDiarmid, NPA, 17 April 2018.

146 Ibid.

147 Ibid.

148 Ibid.; and email from Dave Wiley, MAG, 27 April 2018.

149 Email from Dave Wiley, MAG, 27 April 2018.

150 Email from Craig McDiarmid, NPA, 17 April 2018.

151 Statement of Lebanon on clearance, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017.

152 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.

153 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011.

154 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.

155 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

156 CCM Article 7 Report (for 2017), Form F; and email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

157 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

158 Ibid.

159 Ibid.; and emails from Craig McDiarmid, NPA, 17 April 2018; and Dave Wiley, MAG, 27 April 2018.

160 See Cluster Munition Monitor and Mine Action Review reports on clearance in Lebanon covering 2013–17.

161 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

162 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and CCM Article 7 Report (for 2017), Form I; and LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

163 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

164 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

165 Expert workshop under the framework of supporting Lebanon in meeting its CCM Article 4 obligations, Beirut, 17 November 2016.

166 CCM Article 7 Report (for 2017), Form I.

167 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

168 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018.

169 Expert workshop on cluster munition and landmine survey and clearance in Lebanon, Beirut, 17 January 2018.

170 LMAC, "Lebanon Mine Action Strategy. Second Milestone Review 2014–2016", March 2018.

171 "Mine Action Forum: Action Points 1st Quarter Progress Report, March 2018".

MONTENEGRO

ARTICLE 4 DEADLINE: 1 AUGUST 2020
(UNCLEAR WHETHER ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	7	7
Target date for completion of cluster munition clearance	3	2
Targeted clearance	5	5
Efficient clearance	6	6
National funding of programme	4	4
Timely clearance	3	3
Land-release system in place	6	6
National mine action standards	5	5
Reporting on progress	5	5
Improving performance	3	3
PERFORMANCE SCORE: POOR	**4.7**	**4.6**

PERFORMANCE COMMENTARY

Montenegro did not make progress in 2017 towards releasing the relatively small amount of area still contaminated with cluster munition remnants (CMR). However, in May 2018 Norwegian funding for the necessary land release efforts was secured, with CMR survey and clearance to be undertaken by Norwegian People's Aid (NPA), in partnership with the national authorities.

RECOMMENDATIONS FOR ACTION

- → Montenegro should ensure that CMR survey and clearance operations to be conducted by NPA, in collaboration with the Ministry of Interior of Montenegro and Directorate for Emergency Situations, and with secured funding from the Norwegian government, begin as soon as possible.
- → Montenegro should develop a completion plan to ensure that non-technical survey of the small number of remaining areas not yet surveyed is undertaken swiftly, in addition to technical survey and clearance of all remaining CMR-contaminated area by its August 2020 CCM Article 4 deadline.

CONTAMINATION

Montenegro has estimated that just below 1.72km^2 of land contains CMR, which remains the same level as in the previous year.[1] Areas suspected or confirmed to contain CMR are located in two municipalities (Rožaje and Plav) and one urban municipality (Golubovic).[2] The contamination was identified by NPA in its 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.[3]

Two suspected areas of CMR contamination in Plav municipality, namely at Bogajice and Murino, have still to be surveyed. NPA was prevented by snow from doing so during its 2013–13 survey.[4] Montenegro has pledged to investigate the villages in Plav suspected to be contaminated with CMR.[5]

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.[6] North Atlantic Treaty Organization (NATO) air strikes in Montenegro between March and June 1999 included the use of 22 cluster munitions of four different types: AGM-154A JSOW guided missiles, BL755s, CBU-87/Bs, and Mk-20 Rockeyes. These scattered a total of some 4,000 submunitions of four different types: BLU-97A/B, BL755, MK-1, and Mk118.[7] In addition, there is CMR contamination in Rožaje, which is the result of the dumping of cluster munitions by the Yugoslav army.[8]

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.[9] Following Montenegro's independence, CMR removal was conducted by the Ministry of Internal Affairs in response to notifications from the public.[10]

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 378,000m^2 was cleared with the destruction of 16 Mk-1 submunitions.[11]

Montenegro's initial CCM Article 7 transparency report had claimed that, as at 27 January 2011, "there are no contaminated areas in Montenegro."[12] 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.[13] 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.[14] This led to the 2012–13 NPA survey described above.[15]

CMR contamination in Montenegro is said to impede the safe use of land for agriculture, harvesting of forest produce, and use of wood by the timber industry.[16]

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.[17] 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.[18]

Programme Management

The Directorate for Emergency Situations, established in 2006 by the Ministry of Internal Affairs, is responsible for mine action in Montenegro, performing the role of a national mine action centre.[19] 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.[20]

Strategic Planning

RCUD and NPA signed a Memorandum of Understanding in December 2012 under which NPA agreed to fund and implement a two-phase project – the "Cluster Munition Convention Completion Initiative for Montenegro" – involving 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.[21] 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,[22] was not secured. In May 2018,

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.

Legislation and Standards

Montenegro has requested international assistance to meet the demands of the International Mine Action Standards (IMAS), as well as for capacity building (training, equipment, vehicles) and ERW clearance.[23]

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.[24]

Quality Management

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 employees of the Directorate for Emergency Situations 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 for Emergency Situations successfully completed the NPA training.[25] The Directorate for Emergency Management, under the Ministry of Interior, will be responsible for external quality monitoring and issuing of QC certificates in operations on CMR-contaminated area.[26]

Information Management

The information management system with respect to CMR-related operations in Montengro, will be agreed between the Directorate for Emergency Situations and NPA.[27]

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 explosive remnants contamination in Montenegro.[28] Due to lack of funding, responsibility for explosive ordnance disposal (EOD) has remained with the police.[29]

International clearance operator, NPA, was expecting to begin CMR survey and clearance operations in 2018, with the aim of helping Montenegro meet its CCM Article 4 deadline as soon as possible. NPA plans to deploy one team, comprising six clearance personnel, in addition to a medic, team leader, quality assistance (QA) officer, site manager, operations manager and programme manager.[30]

LAND RELEASE

No planned land release operations took place in 2017.[31]

Survey in 2017

No CMR survey took place in 2017.[32]

A small amount of previously unreported non-technical survey was conducted in 2015 on an area of approximately 10,000m^2 around the airport, during which one submunition and one item of UXO were destroyed.[33] Prior to this, no survey had taken place since NPA's non-technical survey was completed in April 2013.[34]

Clearance in 2017

No planned CMR clearance took place in either 2017,[35] or in the three previous years, though in 2014, 6,500m^2 of land was cleared after two unspecified items of UXO were found in Golubovci during construction work;[36] and as noted above in 2015, 10,000m^2 of land was released after one submunition and one other item of UXO were found during survey at Golubovci airport.[37] No submunitions were destroyed during UXO clearance or EOD spot tasks in Montenegro in 2017.[38]

Previously, in 2013, NPA, in cooperation with RCUD, had prepared 10 technical survey and clearance projects covering 834,630m^2 to be undertaken during the second phase of the "Cluster Munition Convention Completion Initiative for Montenegro" in 2014, and one additional project for underwater clearance covering 24,150m^2.[39] As noted above, however, lack of funding has meant the work has not yet begun.

ARTICLE 4 COMPLIANCE

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.

In March 2018, Montenegro reported that, "In cooperation with Norwegian People's Aid Montenegro has collected certain funds for the clearing programmes". At the same time, it also reported that if funding is provided all areas are to be cleared by the end of 2019.[40] Funding for the remaining CMR survey and clearance was secured in May 2018, from the Government of Norway, to be conducted by NPA. If CMR survey and clearance operations commence swiftly and without undue delay, Montenegro may still be in a position to complete clearance of the remaining CMR-contaminated area by its CCM deadline.

While the Montenegrin authorities and NPA plan to complete clearance by August 2020,[41] there is no margin for unforeseen delays.

With the earlier funding provided by the Norwegian Ministry of Foreign Affairs, the non-technical survey completed in April 2013 resulted in an almost complete baseline of remaining CMR contamination in Montenegro. In April 2013, Montenegro said it planned to complete clearance of all contaminated areas in 2014 if the funds were provided.[42] In early 2014, Montenegro indicated that clearance would be complete by the end of 2016, subject to funding.[43] In June 2015, RCUD reported that if sufficient funding was secured in 2015, CMR clearance in Montenegro would be completed by the end of 2017.[44] NPA and RCUD jointly applied for a Norwegian Ministry of Foreign Affairs fund for 2015, through a bilateral agreement between Norway and Montenegro, but the Government of Montenegro did not prioritise the CMR clearance project.[45]

Except for destruction of a very small number of submunitions discovered during construction work and project-based survey, there has been no planned clearance of CMR in Montenegro whatsoever in the last five years (see Table 1). This does not comply with Montenegro's obligations under the CCM.

Table 1: Five-year summary of CMR clearance [46]

Year	Area cleared (km²)
2017	0
2016	0
2015	0
2014	0
2013	0
Total	**0**

It is a positive development that funding has been secured for completion of CMR clearance in Montenegro. Now, in order to comply with its international legal obligations and so as to be able to meet its Article 4 deadline of August 2020, land release operations must commence as soon as possible.

1 CCM Article 7 Report (for 2017), Form F; and email from Milovan Joksimović, Head of the Department for UXO, Directorate for Emergency Situations, Ministry of Internal Affairs, 28 March 2018.
2 CCM Article 7 Report (for 2017), Form F; email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018; and interview, Podgorica, 15 May 2017.
3 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 26.
4 Ibid.; and interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017; and email, 28 March 2018.
5 CCM Article 7 Report (for 2017), Form G.
6 Interview with Veselin Mijajlovic, RCUD, Bijela, 14 March 2007.
7 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 21.
8 Interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017.
9 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 22.
10 Ibid., p. 21.
11 Ibid., p. 23.
12 CCM Article 7 Report (for 1 August 2010 to 27 January 2011), Form F.
13 Telephone interviews with Veselin Mijajlovic, RCUD, 19 and 25 July 2011.
14 Statement of Montenegro, CCM intersessional meetings (Clearance and Risk Reduction Session), Geneva, 17 April 2012.
15 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 26.
16 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
17 Interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017.
18 NATO, "NATO tests Science for Peace and Security projects in Montenegro", 4 November 2016, at: http://www.nato.int/cps/en/natohq/news_137325.htm; and email from Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 28 March 2018.
19 CCM Article 7 Report (for 2016); and interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017.
20 Email from Veselin Mijajlovic, RCUD, 29 July 2012; and Sluzbeni list RCG (Official Gazette of Montenegro), No. 66, pp. 28–32.
21 NPA, "Cluster Munition Remnants in Montenegro", July 2013, p. 9.
22 Ibid., p. 6.
23 Letter from the Permanent Mission of Montenegro to the UN and other international organisations Geneva, "Information from the Ministry of Interior of Montenegro – in context of support for the Mine Action Center", reference CCM/4-1, May 2017.
24 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
25 Email from Goran Šehić, Deputy Programme Manager, NPA Bosnia and Herzegovina, 3 July 2018.
26 Ibid.; and email from Milovan Joksimović, Directorate for Emergency Situations, 4 July 2018.
27 Email from Milovan Joksimović, Directorate for Emergency Situations, 4 July 2018.
28 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
29 Ibid.
30 Email from Jonas Zachrisson, Programme Manager, NPA Bosnia and Herzegovina, 21 June 2018.
31 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
32 Ibid.
33 Interview with Milovan Joksimović, Directorate for Emergency Situations, Podgorica, 15 May 2017; and CCM Article 7 Report (for 2015), Form F.
34 Emails from Darvin Lisica, Programme Manager, Bosnia and Herzegovina, NPA, 3 March 2015; and Veselin Mijajlovic, RCUD, 13 May 2016.
35 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
36 CCM Article 7 Report (for 2014), Form F.
37 Ibid.
38 Email from Milovan Joksimović, Directorate for Emergency Situations, 28 March 2018.
39 Response to Cluster Munition Monitor questionnaire by Amela Balik, NPA, 3 March 2014.
40 CCM Article 7 Report (for 2017), Form F.
41 Emails from Jonas Zachrisson, NPA Bosnia and Herzegovina, 21 June 2018; and Milovan Joksimović, Directorate for Emergency Situations, 4 July 2018.
42 CCM Article 7 Report (for 30 April 2012 to 31 March 2013), Form F.
43 CCM Article 7 Report (for 2013), Form F.
44 Email from Veselin Mijajlovic, RCUD, 16 June 2015.
45 Email from Darvin Lisica, NPA, 1 April 2016.
46 See Mine Action Review and Cluster Munition Monitor reports on Serbia covering 2013–16.

SOMALIA

ARTICLE 4 DEADLINE: 1 MARCH 2026
(TOO SOON TO ASSESS LIKELIHOOD OF COMPLIANCE)

PROGRAMME PERFORMANCE	2017	2016
Problem understood	3	3
Target date for completion of cluster munition clearance	3	3
Targeted clearance	4	4
Efficient clearance	5	5
National funding of programme	3	3
Timely clearance	4	4
Land-release system in place	6	6
National mine action standards	5	5
Reporting on progress	3	4
Improving performance	6	5
PERFORMANCE SCORE: POOR	4.2	4.2

PERFORMANCE COMMENTARY

In 2017, mine action management in Somalia continued to be divided into two geographical regions: in the five federal states of south-central Somalia under the Somali Explosives Management Agency (SEMA), and in the self-declared region of Somaliland under the Somaliland Mine Action Centre (SMAC).

Somalia has made little progress so far 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 2017. There continues to be a need for much greater support for SEMA and greater priority on the implementation of mine action operations.

A significant step forward, however, occurred at the end of 2017 with the elaboration of a new national mine action strategic plan for 2017–20. It did not, though, specifically address CMR clearance.

In addition, after many years of significant challenges, including difficult working relations with the authorities in the mine action sector, operators reported an improvement during the year, including better coordination between SEMA, its regional offices, and operators. The HALO Trust in south-central Somalia has been able to deploy survey and clearance teams despite persistently high levels of insecurity. For the first time, survey and risk education teams were able to be deployed in all five of south-central Somalia's federal states, by Norwegian People's Aid (NPA), in partnership with national mine action organisations.

RECOMMENDATIONS FOR ACTION

- Somalia should ensure the timely survey and clearance of CMR in accordance with its CCM obligations, alongside efforts to address wider explosive remnants of war (ERW) contamination.
- Somalia should elaborate a resourced plan to fulfil its Article 4 survey and clearance obligations.
- Somalia should commit more resources for SEMA and mine action operations.
- Greater efforts should be made to clarify SEMA's status within the Federal Government of Somalia (FGS).
- 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, with the provision of additional training and resources for its management. Data on mine action should be reported and recorded according to International Mine Action Standards (IMAS) terminology.
- The FGS and Somali Minister of Internal Security should formally endorse Somalia's new National Mine Action Strategic Plan 2017–2020.
- Somalia's National Technical Standards and Guidelines (NTSGs) should be revised to ensure their relevance for Somalia and present best practices for tackling the nature of the mine and CMR threat in Somalia.
- Somalia should develop a resource mobilisation strategy and initiate dialogue with development partners on long-term support for mine action, including to address CMR.

CONTAMINATION

The extent of CMR contamination in Somalia is unknown. In 2013, dozens of PTAB-2.5M submunitions and several AO-1SCh 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]

According to the United Nations Mine Action Service (UNMAS), eight reports were submitted in September 2015 from Rabdhure, in Bakool region of South West state, showing empty RBK-250-275 cluster bomb containers, which can contain both AO-1Sch and PTAB-2.5M submunitions.[4] Three additional 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.[5] UNMAS reported that in 2017 it was shown two photos of the body of a BL-755 submunition being used in what it assessed to be an improvised explosive device (IED) in Kismayo, Lower Juba region.[6]

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.[7] The Soviet Union supplied both Ethiopia and Somalia with weapons during the conflict. PTAB-2.5 and AO-1Sch submunitions were produced by the Soviet Union on a large scale.[8]

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.[9] 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 BL-755 type, which it used in the manufacture of improvised explosive devices (IEDs), seized in a weapons cache in March 2016.[10]

A UN Monitoring Group raised an investigation into whether Kenyan forces had used cluster munitions but was unable to conclude if the KDF had dropped the BL-755 munitions during airstrikes in Gedo in January 2016. It noted, however, that there were no reports of BL-755 submunitions discovered among legacy UXO contamination in Somalia.[11] The Government of Kenya denied using cluster munitions in the January air campaign, calling the UN Monitoring Group's report "at best, a fabricated, wild and sensationalist allegation".[12]

While the extent of CMR contamination along the Somali border with Ethiopia is not known, in 2014, Somalia claimed it posed an ongoing threat to the lives of nomadic people and their animals.[13]

Other Explosive Remnants of War and Landmines

Somalia is heavily contaminated with ERW other than CMR, 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 continued to affect civilians in south-central Somalia.[14]

As at mid-2018, no recent national baseline of mine and ERW contamination had been established, primarily due to a lack of national capacity and a lack of access to many al-Shabaab-controlled territories.[15] In a significant achievement in 2017, survey teams were for the first time to be deployed within all states of Somalia, adding to a better understanding of overall contamination. However, operators reported that the number of survey teams was limited and their movements at times hindered by insecurity. As such, state-wide surveys were expected to continue in 2018–19, provided funding can be secured.[16]

PROGRAMME MANAGEMENT

Mine action management in Somalia is 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 SMAC.[17] 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.[18] Under each of the five members is an independent consortium of national non-governmental organisations (NGOs), which implement 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.[19] SEMA's goal was to assume full responsibility for all explosive hazard coordination, regulation, and management by December 2015.[20] However, SEMA's legislative framework was not approved by the Federal Parliament in 2016 as expected, and was further stalled by elections held in February 2017 which resulted in a period of government paralysis.[21] Due to this lack of parliamentary approval, SEMA has not received funding from the FGS or UNMAS since the expiry of its grant in 2015.[22]

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).[23] It runs the only police explosive ordnance disposal, (EOD) team in Puntland, which is responsible for collecting and destroying explosive ordnance. In 2015, it requested assistance to increase its capacity and deploy three EOD teams in Bosaso, Galkayo, and Garowe.[24]

Somaliland

In 1997, UNDP assisted the government of Somaliland to establish SMAC, which is responsible for coordinating and managing demining in Somaliland.[25] Officially, SMAC is under the authority of the Vice-President of Somaliland, who heads the interministerial Mine Action Steering Committee.[26]

Strategic Planning

In late 2017, a National Mine Action Strategic Plan for 2017–2020 was developed with input from SEMA, UNMAS, international operators, national NGO consortia, and international institutions. The process was supported by NPA with funding from the United Kingdom Department for International Development (DFID).[27] As at June 2018, the draft strategic plan was under final review by all stakeholders prior to being submitted to the Somali Minister of Internal Security for endorsement.[28]

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, regrettably, does not contain specific provisions on survey and clearance of CMR. The strategy's five strategic 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 mine/ERW contamination 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 2017, the recently elected Somali Government approved The Somalia National Development Plan 2017–2019, outlining priorities for recovery and development. Mine and ERW contamination is recognised as a hindrance to socio-economic development and a security concern for sustainable development initiatives, and identifies mine and ERW clearance as a crucial part of stabilisation efforts in the national development process.[29]

In 2015, Somalia's Ministry of Internal Security and SEMA developed a national strategy document, the "Badbaado Plan for Multi-Year Explosive Hazard Management", in coordination with Federal State members, the UN Assistance Mission in Somalia (UNSOM), and UNMAS. An updated second "phase" of the five-year plan was officially launched in Geneva in February 2018. The new National Mine Action Strategic Plan notes that the Badbaado plan "remains extant and identifies a range of locations and tasks consistent with the goals and objectives" of the strategic plan.[30]

Somaliland's latest strategic mine action plan expired in 2014. In May 2018, The HALO Trust reported that it was working with SMAC and other stakeholders to develop a strategy with the hope of completion and implementation in 2019.[31]

Legislation and Standards

There is no national mine action legislation in Somalia. UNMAS developed NTSGs for Somalia in 2012–13.[32] The NTSGs do not include specific guidance for CMR survey or clearance and SEMA stated in June 2016 that it did not have the capacity to revise the existing NTSGs to include provisions specific to CMR.[33] The NTSGs are 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.[34] No revisions occurred in 2017, but a review was planned for the first half of 2018 with engagement from all stakeholders in-country.[35]

Mine action standards remained in place in Somaliland and no changes were reported in 2017.[36]

Quality Management

Operators reported that no external quality assurance/quality control (QA/QC) was carried out in 2017 due to limited capacity and resources for SEMA. Internal QA/QC procedures were said to be carried out by operators on a daily basis.[37] In June 2017, SEMA confirmed that clearance projects had been initiated without a strong QA/quality control (QC) process in place and called for further capacity building of SEMA before the awarding of contracts.[38]

HALO reported that in Somaliland, SMAC continued to conduct formal handovers of completed areas in 2017 with support from HALO. A large backlog of cleared areas awaiting formal handover remained, however.[39]

Information Management

In 2017, ownership of the national IMSMA database was fully transferred from UNMAS to SEMA, with support and capacity building from NPA.[40] 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.[41]

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.[42] According to the Plan, a specific national mine action standard on information management will be developed.[43]

In Somaliland, The HALO Trust reported continuing regular checks of its information management system to ensure accuracy of reporting and stated that it transfers all data to SMAC, which then inputs it into its IMSMA database.[44]

Operators

DDG began operations in the country in 1999 with mine and ERW clearance in Somaliland and has since undertaken programmes in Mogadishu, Puntland, and Somaliland.[45] In 2017, it focused operations on EOD and risk education in Sool and Gurieel regions of Somaliland and south-central Somalia. By the end of 2017, DDG was deploying a single four-strong EOD team and nine two-person risk education teams.[46] 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. Operations continued in south-central Somalia in 2017, but no CMR-related operations were carried out during the year.[47] The HALO Trust reported employing an average of approximately 175 staff, but in the last quarter of 2017 it had to scale back four manual mine clearance teams as a result of a local security issue.[48]

In Somaliland, The HALO Trust employed 424 demining and operational personnel and deployed three mechanical assets.[49] It focused additional attention to the survey and re-survey of former military camp minefields along the Ethiopian border.[50]

In 2017, NPA decided to expand its operations. In February, training of one manual clearance team and two survey teams was finalised and NPA began survey and clearance in Toghdeer and Sool, in the disputed areas between Puntland and Somaliland. The two survey teams were merged to form a demining team at the end of 2017, making a total of two demining teams with 12 deminers.[51]

In May, NPA began training five survey teams to be deployed across all five states in south-central Somalia. Each team consisted of two NPA deminers and three additional members from local consortia NGOs. The survey teams, which also carried out risk education activities, became operational in September, making it the first time mine action survey teams were deployed in all states in Somalia.[52] In 2017, under a DFID-funded partnership project, NPA continued to provide capacity development for SEMA on managing the IMSMA database, conducting non-technical and technical survey, and trainings for SEMA management staff.[53]

UNMAS contracted Ukroboronservice to carry out mine action activities in 2017 with a capacity of four eight-person multi-task teams to conduct ERW clearance, 56 community liaison officers to deliver risk education and liaison activities, and two 18-person manual demining teams. Operations began in December 2017.[54]

LAND RELEASE

Survey in 2017

No overview of areas suspected to contain CMR exists in south-central Somalia, and in 2017, no national CMR survey had been conducted, mainly due to the security situation.[55]

The last reported CMR found by operators 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.[56] NPA, which deployed five survey and MRE teams to each of south-central Somalia's five federal states in 2017, did not report encountering any CMR in its operations.[57]

In Somaliland, no coordinated survey or national re-survey effort occurred in 2017; however The HALO Trust, as well as NPA, continued to deploy survey teams across Somaliland to more accurately assess the remaining mine and ERW contamination. No CMR were reportedly identified.[58]

Clearance in 2017

No CMR clearance occurred in south-central Somalia in 2017, as in the previous year.[59] No formal land release occurred in Puntland in 2017.[60]

The HALO Trust carried out one battle area clearance (BAC) task in 2017 in the Galguduud region, near Dhuusamareeb, clearing an area of 91,430m^2 and destroying 881 items of UXO and 246 rounds of small arms ammunition.[61] In Somaliland, it carried out one BAC task in the Sool region, near Adhicadeeye, clearing just over 9.7km^2 and destroying 27 items of UXO and 10 rounds of ammunition.[62]

NPA discontinued BAC operations at the end of 2016, and did not encounter any CMR in its survey and mine clearance operations in 2017.[63]

UNMAS reported that Ukroboronservice teams destroyed 530 items of abandoned and/or unexploded ordnance.[64]

Deminer Safety

In August 2017, three HALO Trust staff members from its community outreach team (COT) were abducted by Al-Shabaab. The team had been conducting work near Fer-fer when al-Shabaab took control of the town. The three COT members were abducted and the team leader was shot. The team leader survived and made a full recovery. After several weeks of negotiations between the families of the abducted staff and al-Shabaab, all three employees were released.[65]

ARTICLE 4 COMPLIANCE

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 is on track to meet its Article 4 deadline although in June 2016, SEMA had claimed to be optimistic that with adequate resources, Somalia would meet the deadline in time.[66] It highlighted the need for international assistance; greater transparency on bilaterally funded projects; better coordination and information sharing between operators, SEMA, and its Federal State member offices; and ensuring sufficient capacity to conduct independent QA/QC activities as key areas of concern.[67]

Somalia's new National Mine Action Strategic Plan stipulates the submission of annual transparency reports for the CCM, along with the Anti-Personnel Mine Ban Convention (APMBC). It had not, however, submitted any CCM Article 7 transparency reports as at June 2018, despite the initial report being due on 31 August 2016.

SEMA did not receive any government funding for its staff salary costs or to carry out any mine action activities again in 2017.[68] SEMA's capacity to manage the reporting and coordination requirements of a national mine action centre did, though, improve in 2017, with additional capacity development support from NPA.

Table 1: Five-year summary of CMR clearance[69]

Year	Area cleared (km^2)
2017	0
2016	0
2015	0
2014	0
2013	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 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 Mohammad Sediq Rashid, UNMAS, 8 June 2017.

5 Ibid.

6 Emails from Ghirmay Kiros, ETM Operations Officer, UNMAS, 27 June 2018 and 29 June 2018.

7 Email from Mohamed Abdulkadir Ahmed, SNMAA, 17 April 2013.

8 Ibid.

9 "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.

10 Ibid.

11 It reported that, according to the Landmine and Cluster Munition Monitor, Kenya was not known to have ever used, produced, or stockpiled cluster munitions. It noted, however, that the F-5 aircraft used by the KDF in Somalia can be modified to deliver BL-755 munitions.

12 "Letter dated 7 October 2016 from the Chair of the Security Council Committee pursuant to resolutions 751 (1992) and 1907 (2009), pp. 171–73.

13 Statement of Somalia, CCM Fifth Meeting of States Parties, San José, 2–5 September 2014.

14 UNMAS, "UN-suggested Explosive Hazard Management Strategic Framework 2015–2019", undated, pp. 6 and 12.

15 Email from Chris Pym, Programme Manager, HALO Trust, 14 May 2018.

16 Email from Claus Nielsen, Programme Manager, NPA, 22 March 2018.

17 Email from Mohamed Abdulkadir Ahmed, SEMA, 14 October 2016.

18 Ibid.

19 Interview with Mohamed Abdulkadir Ahmed, SEMA, in Geneva, 9 April 2014; and email from Kjell Ivar Breili, UNMAS, 12 July 2015.

20 Response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.

21 Emails from Mohamed Abdulkadir Ahmed, SEMA, 14 June 2016; and Hilde Jørgensen, NPA, 3 May 2017.

22 Emails from Terje Eldøen, NPA, 22 October 2016; and Mohamed Abdulkadir Ahmed, SEMA, 14 October 2016.

23 UNMAS, "UN-suggested Explosive Hazard Management Strategic Framework 2015–2019", p. 9.

24 Response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.

25 SMAC, "Annual Report 2011", Hargeisa, January 2012, p. 2.

26 Ibid.

27 "Somalia National Mine Action Strategic Plan", Draft Version, February 2018, p. 3. SEMA previously developed a separate national mine action policy, which as at May 2017, had received one reading in the Somali Parliament but had yet to be ratified. The document only existed in Somali and no translations were available, nor had any versions been disseminated to national or international mine action operators. Operators raised concerns that the policy was drafted with little to no input from international mine action stakeholders or the international donor community. Its status as at June 2018 was unclear, however, greater attention and focus was being given to the new National Mine Action Strategic Plan. Emails from Claus Nielsen, NPA, 18 June 2018; Tom Griffiths, HALO Trust, 31 May 2017; and Hilde Jørgensen, NPA, 3 May 2017.

28 Email from Claus Nielsen, NPA, 18 June 2018.

29 Federal Government of Somalia, "Somalia National Development Plan Towards Recovery, Democracy, and Prosperity 2017-2019", p. 21, at: http://mopic.gov.so/wp-content/uploads/2016/11/SOMALIA-NATIONAL-DEVELOPMENT-PLAN-2017-2019.pdf.

30 "Somalia National Mine Action Strategic Plan", Draft Version, November 2017.

31 Email from Chris Pym, HALO Trust, 14 May 2018.

32 Email from Terje Eldøen, Programme Manager, NPA, 5 June 2016; and response to questionnaire by Mohamed Abdulkadir Ahmed, SEMA, 19 June 2015.

33 Ibid.; and email from Terje Eldøen, NPA, 5 June 2016.

34 Email from Tom Griffiths, HALO Trust, 19 May 2017.

35 Email from Claus Nielsen, NPA, 22 March 2018.

36 Email from Chris Pym, HALO Trust, 14 May 2018.

37 Emails from Chris Pym, HALO Trust, 14 May 2018; Bill Marsden, MAG, 27 April 2018; and Claus Nielsen, NPA, 22 March 2018.

38 Email from Mohamed Abdulkadir Ahmed, SEMA, 1 June 2017.

39 Emails from Chris Pym, HALO Trust, 14 May 2018.

40 Email from Claus Nielsen, NPA, 22 March 2018.

41 Ibid.

42 "Somalia National Mine Action Strategic Plan", Draft Version, February 2018, p. 5.

43 "Somalia National Mine Action Strategic Plan", Draft Version, February 2018.

44 Email from Chris Pym, HALO Trust, 14 May 2018.

45 In 2007, DDG initiated a mine action programme in southern Somalia (in Mogadishu) and in Puntland. DDG's mine action programme in Somaliland ceased mine clearance in 2006. DDG, "South-Central Somalia and Puntland", undated, but accessed 30 April 2014.

46 Email from Roger Fasth, Global Operations Manager, DDG, 26 June 2018.

47 Emails from Tom Griffiths, HALO Trust, 19 May 2017; and Chris Pym, HALO Trust, 14 May 2018.

48 Email from Chris Pym, HALO Trust, 14 May 2018.

49 Ibid.

50 Ibid.

51 Email from Claus Nielsen, NPA, 22 March 2018.

52 Ibid.

53 Email from Anna Roughley, DfID Project Co-ordinator, NPA, 23 May 2017.

54 Emails from Ghirmay Kiros, UNMAS, 20 and 24 June 2018.

55 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".

56 Email from Tom Griffiths, HALO Trust, 19 May 2017.

57 Email from Claus Nielsen, NPA, 13 June 2018.

58 Emails from Chris Pym, HALO Trust, 14 May 2018; and Claus Nielsen, NPA, 22 March 2018.

59 Emails from Chris Pym, HALO Trust, 14 May 2018; Bill Marsden, MAG, 27 April 2018; and Claus Nielsen, NPA, 22 March 2018.

60 Email from Bill Marsden, MAG, 13 June 2018.

61 Email from Chris Pym, HALO Trust, 14 May 2018.

62 Ibid.

63 Email from Claus Nielsen, NPA, 13 June 2018.

64 Emails from Ghirmay Kiros, UNMAS, 20 and 24 June 2018.

65 Email from Chris Pym, HALO Trust, 14 May 2018.

66 Email from Mohamed Abdulkadir Ahmed, SEMA, 14 June 2016.

67 Ibid.

68 Emails from Chris Pym, HALO Trust, 14 May 2018; Bill Marsden, MAG, 27 April 2018; and Claus Nielsen, NPA, 22 March 2018.

69 See Cluster Munition Monitor and Mine Action Review reports on clearance in Somalia covering 2013–16.

UNITED KINGDOM (FALKLAND ISLANDS)

ARTICLE 4 DEADLINE: 1 NOVEMBER 2020
(UNCLEAR WHETHER ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE	2017	2016
Problem understood	5	6
Target date for completion of cluster munition clearance	5	3
Targeted clearance	6	6
Efficient clearance	3	3
National funding of programme	8	7
Timely clearance	4	3
Land-release system in place	8	8
National mine action standards	9	9
Reporting on progress	5	5
Improving performance	6	5
PERFORMANCE SCORE: AVERAGE	**5.9**	**5.5**

PERFORMANCE COMMENTARY

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 anti-personnel mine survey and clearance operations. Since October 2009, it has destroyed a total of 21 submunitions and one cluster munition container.

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, it 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 163,460m^2, will remain as at 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 bombing data, it is unclear whether these eight mined areas could potentially contain CMR as well as anti-personnel mines.

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 suspected hazardous areas (SHAs) in 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 as at the end of the current phase of demining in March 2020 might also contain CMR.
- → Based on the analysis of bombing data, the United Kingdom should present detailed plans and timelines for survey and, where contamination is found, clearance, in accordance with its Convention on Cluster Munitions (CCM) Article 4 obligations.

CONTAMINATION

CMR may remain on the Falkland Islands[2] 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 CMR and other unexploded ordnance (UXO). 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 in the Falkland 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, the United Kingdom 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] No further CMR were encountered either during clearance operations in September 2015 to March 2016 in Stanley Area 2 and Stanley Area 3,[10] or during survey and clearance operations in November 2016 to March 2018.[11] In June 2017, however, the main body of a BL755 cluster munition container was found in "minefield GG08", during BAC in the Goose Green region. No submunitions were found though and GG08 has now been declared cleared of all explosive ordnance.[12]

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. No civilians are believed to have been killed or injured by CMR on the islands.[13]

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 2010, mine clearance and BAC in the Falkland Islands have been conducted in the following phases. Phase 1 took place from October 2009 to June 2010; Phase 2 from January to March 2012; Phase 3 from January to March 2013; Phase 4(a) from January 2015 to May 2015; Phase 4(b) from September 2015 to March 2016; and Phase 5(a) from November 2016 to March 2018. Phase 5(b) commenced in April 2018 and is expected to conclude at the end of March 2020.[14]

Mine clearance operations in the Falkland Islands during Phases 1, 3, and 4(a) and (b), and 5(a), resulted in the destruction of 21 submunitions and 1 cluster munition container.[15] Of the 21 submunitions destroyed, two were discovered during the Phase 1 mine clearance operations and the other 19 were found during Phase 4(a). No submunitions were encountered in subsequent survey or clearance operations, but the body of a BL755 cluster munition container was discovered in June 2017, during Phase 5(a).[16]

BAC operations conducted during Phases 2, 3, 4(b), and 5(a) resulted in 7.85km^2 of SHA being cleared, with the destruction of 87 items of UXO and no submunitions. This comprised 3.49km^2 cleared in Phase 2, with 85 UXO items destroyed; 0.18km^2 in Phase 3 with no UXO destroyed; 1.32km^2 in Phase 4(b), with 2 UXO items destroyed;[17] and 2.86km^2 in Phase 5(a), with no UXO destroyed.[18]

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 (currently Battle Area Clearance, Training, Equipment and Consultancy International (BACTEC)) and the Demining Project Office (currently Fenix Insight), are invited "where appropriate".[19]

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 that may be of concern or interest to the committee, and includes explanation of the land release process, including when land has been released for public use.[20]

Strategic Planning

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 Phase 5 (a) and (b) (2016–20), which covers the clearance of 79 mined areas measuring an estimated total of just under 10.86km^2 (4.91km^2 in Phase 5a and 5.95km^2 in Phase 5b).[21]

Phase 5(a) commenced in November 2016 and concluded in March 2018.[22] Following conclusion of Phase 5(a), the United Kingdom has a more accurate picture of the remaining mine clearance challenge, which has helped inform its strategic planning and its draft Article 5 extension request, which was submitted on 29 March 2018 for consideration by states parties to the APMBC.[23]

The current stage of demining, Phase 5(b), which began in April 2018, is due to conclude by the end of March 2020.[24] At the end of Phase 5(b), it is expected that only eight mined areas will remain, covering an estimated 163,460m^2, and located in the environmentally sensitive beach and sand dune area known as Yorke Bay.[25] 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.[26]

There is no reference to suspected CMR-contaminated areas in either the United Kingdom's CCM Article 7 transparency report for 2017, or in its draft 2018 APMBC Article 5 deadline extension request. It is unclear whether analysis of UK 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.

Legislation and Standards

Survey and clearance operations on the Falkland Islands are reported to meet or exceed International Mine Action Standards (IMAS), by adapting IMAS to meet the specifics of the situation on the Falkland Islands.[27]

Quality Management

The Land Release Contractor (BACTEC, at present) in the Falklands undertakes its own internal Quality Assurance (QA) and Quality Control (QC), and Demining Project Office (Fenix Insight, at present) monitors this and is also able to conduct its own external QA and QC.[28]

Information Management

The information management system for demining operations in the Falklands is not known.

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. Based on a balance of merit and value for money, the same organisation, 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.[29] Capacity for Phase 5 operations was increased from previous phases, with a total of 108 personnel: 84 demining staff (7 teams of 12 (eight deminers, one supervisor, one team leader, a medic, and a driver per team); 7 technical staff (surveyors, mechanics, and excavator operators); 13 support staff, and 4 management staff. Mechanical equipment includes one anti-tank mine machine, three anti-personnel mine machines, and two armoured excavators, in addition to the required transportation equipment.[30]

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. Based on merit, Fenix Insight has been awarded responsibility for the Demining Project Office for all five stages of demining so far.[31]

LAND RELEASE

No submunitions were found in 2017, but, as noted above, an empty BL755 cluster munition container was discovered in June 2017.[32]

Survey and Clearance in 2017

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.[33] 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.[34]

ARTICLE 4 COMPLIANCE

Under Article 4 of the Convention on Cluster Munitions (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. It is unclear whether the United Kingdom is on track to meet this deadline.

The United Kingdom does not consider itself to have an obligation under Article 4 of the CCM, and considers any remaining CMR, if found to exist, to be "residual".[35] It also claims to have addressed the humanitarian and developmental effects of CMR on the Falkland Islands.[36] 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 by conducting survey and clearance in mined areas in which cluster munitions are known or suspected to have been used. Accordingly, an assertion that the remaining threat from CMR is only residual is purely speculative.

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 APMBC Article 5 obligations. If the United Kingdom proceeds according to the workplan laid out in its 2018 draft Article 5 deadline extension request, only eight mined areas in Yorke Bay, totalling an estimated 163,460m^2, 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.

Technical survey of Yorke Bay will be carried out in the latter stages of Phase 5(b), and only then can the clearance be planned and costed. Depending on the survey results, there may not be time to complete clearance by the end of Phase 5 (31 March 2020 – the end of the UK financial year). In addition, it is unlikely that the current pre-allocated funds will be sufficient to complete clearance and new funding cannot be requested until the costs are known. Once an accurate estimate is acquired through the results of technical survey in Phase 5(b), the FCO and the Ministry of Defence will seek funding to complete the work.[37] The United Kingdom has committed to providing updated information on progress and next steps at subsequent future meetings of States Parties to the Convention.[38] Under APMBC Article 5, the United Kingdom is requesting an extended deadline of March 2024 to complete release of the remaining mined area.[39]

1 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 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 Email from an official in the Arms Export Policy Department of the FCO, 4 May 2016.

11 Interview with an official in the Arms Export Policy Department of the FCO, London, 19 April 2018.

12 Emails from an official in the Arms Export Policy Department of the FCO, 22 and 23 June 2017.

13 Statement of UK, APMBC intersessional meetings (Standing Committee on Mine Action), Geneva, 27 May 2009.

14 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018.

15 Ibid., p. 6.

16 Interview with an official in the Arms Export Policy Department of the FCO, London, 19 April 2018.

17 Email from an official in the Arms Export Policy Department of the FCO, 14 July 2016; and Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018.

18 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018, Annex A.

19 Ibid., p. 8.

20 Ibid., p. 9.

21 Ibid., pp. 7 and 14; and email from an official in the Arms Export Policy Department, FCO, 26 June 2018.

22 Ibid., p. 3.

23 Email from an official in the Arms Export Policy Department, FCO, 11 October 2017.

24 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018, p. 7.

25 Ibid., pp. 7 and 14.

26 Ibid., p. 14.

27 Email from an official in the Arms Export Policy Department, FCO, 26 June 2018.

28 Ibid.

29 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018, p. 9.

30 Email from an official in the Arms Export Policy Department of the FCO, 28 July 2017.

31 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018, p. 9.

32 Emails from an official in the Arms Export Policy Department of the FCO, 22 and 23 June 2017; and interview with an official in the Arms Export Policy Department of the FCO, London, 19 April 2018.

33 Email from an official in the Arms Export Policy Department of the FCO, 2 June 2017.

34 Emails from an official in the Arms Export Policy Department of the FCO, 22 and 23 June 2017; and interview with an official in the Arms Export Policy Department of the FCO, London, 19 April 2018.

35 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.

36 Email from an official in the Arms Export Policy Department of the FCO, 21 June 2016.

37 Second APMBC Article 5 deadline Extension Request (draft), dated 29 March 2018, p. 14.

38 Ibid.

39 Second Article 5 deadline Extension Request (draft), dated 29 March 2018.

SIGNATORY STATES

RECOMMENDATIONS FOR ACTION

- → Angola should confirm as soon as possible whether it believes that cluster munition remnants (CMR) remain to be cleared.
- → Angola should ratify the Convention on Cluster Munitions (CCM) as a priority.

CONTAMINATION

The extent to which Angola is affected by CMR remains unclear. There is no confirmed contamination, but there may remain abandoned cluster munitions or unexploded submunitions. 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. In 2011, The HALO Trust and the National Institute for Demining (Instituto Nacional de Desminagem, INAD) affirmed that unexploded submunitions remained in Cuando Cubango province.[1]

None of the three international mine action operators working in Angola – The HALO Trust, Mines Advisory Group (MAG), and Norwegian People's Aid (NPA) – reported encountering any CMR in operations in 2017 or the first half of 2018.[2]

The last recorded finding of CMR was in August 2016, when The HALO Trust found two Alpha submunitions in Cunene province, which were reported by local residents to a HALO Trust survey team during re-survey operations.[3] 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.[4]

The HALO Trust informed Mine Action Review that this was an isolated case and noted that it had seen very little evidence of cluster munition strikes in Angola. In addition, the majority of bomblets the organisation had destroyed were aging items from military stockpiles, which the military had identified and requested the organisation to destroy.[5]

According to reports from NGO operators in the national mine action database, CMR ceased to be found in significant numbers after 2008, with the exception of The HALO Trust reporting finding and destroying 12 submunitions in 2012 and encountering the two above-mentioned submunitions in 2016. As at May 2018, the other clearance operators had not found CMR in more than ten years.[6]

More typical of CMR destruction is 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 May 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]

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).

PROGRAMME MANAGEMENT

Angola's national mine action programme is managed by two mine action structures. The National Intersectoral Commission for Demining and Humanitarian Assistance (Comissão Nacional Intersectorial de Desminagem e Assistência Humanitária, 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 INAD, which is responsible, under the auspices of MASFAMU, for demining operations and training.

Operators

Three international non-governmental organisations (NGOs) conduct demining for humanitarian purposes in Angola: The HALO Trust, MAG, and NPA.[9] A number of national commercial companies, accredited by CNIDAH and mostly employed by the state or other private companies, also operate in Angola.

LAND RELEASE

No land containing CMR contamination was reported to have been released by clearance or survey in 2017.

The HALO Trust reported in May 2018 that it had not been able to deploy any capacity to address the area around the Alpha bomblets identified during the re-survey of Cunene province in August 2016 due to a lack of funding.[10] It had, however, used funding from the United States Department of State to respond to 131 explosive ordnance disposal call-outs across six other provinces during the year.[11]

Survey in 2017

There was no reported CMR survey in 2017.

Clearance in 2017

There was no reported CMR clearance in 2017.

ARTICLE 4 COMPLIANCE

As at May 2018, Angola was a signatory, but not a state party, to the CCM. In addition to its obligations as a treaty signatory, Angola has obligations under international human rights law to clear any CMR as soon as possible.

1 Interviews with Jose Antonio, Site Manager, Cuando Cubango, HALO Trust; and with Coxe Sucama, Director, INAD, in Menongue, 24 June 2011.

2 Emails from Gerhard Zank, Programme Manager, HALO Trust, 17 May 2018; Jeanette Dijkstra, Country Director, MAG, 24 April 2018; and Joaquim da Costa, Acting Country Director, NPA, 10 May 2018.

3 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://weaponsystems.net/weaponsystem/HH12%20-%20CB470.html.

4 Email from Gerhard Zank, HALO Trust, 3 May 2017.

5 Ibid.

6 Prior to this, as of 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, 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.

7 Response to questionnaire by Gerhard Zank, HALO Trust, 19 March 2013.

8 Email from Gerhard Zank, HALO Trust, 17 May 2018.

9 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: https://laminesinafrica.wordpress.com/2016/02/26/angola-avante-onwards-angola/.

10 Emails from Gerhard Zank, HALO Trust, 17 May 2018 and 3 May 2017. After finding the two Alpha bomblets in August 2016, The HALO Trust was planning to carry out limited battle area clearance around the reported area until fade-out. They were intending to perform this work, subject to funding, in July or August 2017, during Angola's dry season when items can be more easily seen.

11 Email from Gerhard Zank, HALO Trust, 17 May 2018.

DEMOCRATIC REPUBLIC OF CONGO

(CLEARANCE BELIEVED COMPLETED IN 2017 BUT CONTAMINATION REMAINS)

PROGRAMME PERFORMANCE	2017	2016
Problem understood	9	9
Target date for completion of cluster munition clearance	6	7
Targeted clearance	8	8
Efficient clearance	7	7
National funding of programme	2	3
Timely clearance	5	5
Land-release system in place	7	7
National mine action standards	5	6
Reporting on progress	1	2
Improving performance	6	6
PERFORMANCE SCORE: AVERAGE	5.6	6.0

PERFORMANCE COMMENTARY

The last known recorded area containing cluster munition remnants (CMR) in the Democratic Republic of Congo (DR Congo), covering 3,900m^2, was cleared in May 2017. Subsequently, however, four submunitions, believed by the United Nations Mine Action Service (UNMAS) to be part of a wider cluster munition strike, were identified in South Kivu province. UNMAS stated that the area would be reported to the national mine action authority, the Congolese Mine Action Centre (Centre Congolais de Lutte Antimines, CCLAM), as a confirmed hazardous area (CHA) containing CMR.

Throughout 2017, the DR Congo'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 mine and explosive remnants of war (ERW) contamination from the national database remained questionable.

RECOMMENDATIONS FOR ACTION

- The DR Congo should survey and clear the remaining cluster munition contaminated area and then assess whether it has eliminated the threat from CMR on its territory.
- The DR Congo should ratify the Convention on Cluster Munitions (CCM) as a matter of priority.
- 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.
- Resources should be provided by the Government of the DR Congo and international donors to support the CCLAM to enable it to carry out essential functions autonomously, without relying on financial support from mine action operators.
- Regular coordination meetings should be held with the national authorities, the United Nations, and mine action operators to share information and improve implementation of mine action.
- Donors and international stakeholders should seek to complete mine and ERW clearance in the face of the humanitarian crises in the DR Congo.

CONTAMINATION

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.[1] One suspected hazardous area (SHA) with an 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 3,900m^2, on 12 May 2017, with the destruction of a total of 241 submunitions.[2] The DR Congo had identified these two areas in a national survey conducted in 2013.[3]

Subsequently, however, UNMAS reported that four PM-1 submunitions were found in a previously unrecorded hazardous area in Shabunda, South Kivu province. It reported that evidence from eye-witnesses and past cluster munition contamination encountered in DR Congo indicated that it was a cluster munition strike from the 1980s.[4] UNMAS stated that the area would be reported to the CCLAM as a CHA. Despite this identification, 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 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 funding to conduct clearance of the area following completion of technical survey.[6]

In August 2017, Mines Advisory Group (MAG) reported finding a single submunition in Manono, Tanganyika province, which was treated as a spot task and destroyed by a demining team. MAG stated that it did not intend to do any CMR survey and did not expect to find any other submunitions in its area of operations.[7]

The DR Congo's new National Mine Action Strategy for 2018–19, 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".[8] The Strategy includes among its objectives completion of survey of mine and CMR contamination in the Aru and Dungu territories, as yet inaccessible due to security concerns, by mid-2018.[9]

Other Explosive Remnants of War and Landmines

DR Congo 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 DR Congo for further information). Successive conflicts have also left the country with significant quantities of abandoned explosive ordnance.[10]

According to UNMAS, as at October 2017, 71% of all known SHAs in the DR Congo had been released. UNMAS stated that with existing mine action capacity and the maintenance of sufficient funding, the DR Congo could complete clearance of all contamination in the remaining provinces of Equateur, Tshuapa, Tshopo, Ituri, North-Kivu, Tanganyika, Maniema, South and North Ubangi, and Bas-Uele, before its extended Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline of 1 January 2021.[11]

Despite the positive prognosis for completing clearance prior to 2021, in 2018, explosive ordnance continued to pose a significant risk to civilians in DR Congo, increased by the recent resurgence in armed conflict which has resulted in new ERW contamination, particularly in the eastern and central regions. UNMAS reported that a number of SHAs remained in geographically challenging areas where large numbers of internally displaced persons (IDPs) and refugees were seeking shelter. Children continued to make up nearly four fifths of total reported victims of ERW. In 2002–18, UNMAS reported that a total of 2,643 victims of mines and ERW had been recorded in DR Congo.[12]

PROGRAMME MANAGEMENT

CCLAM was established in 2012 with support from the UN Mine Action Coordination Centre (UNMACC) and UNMAS.[13] 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.[14]

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.[15] UNMACC was part of the UN Stabilization Mission in the DR Congo (MONUSCO) peacekeeping mission. UN Security Council Resolution 1925 mandated UNMACC to strengthen national mine action capacities and support reconstruction through road and infrastructure clearance.[16]

In March 2013, UN Security Council Resolution 2098 called for demining activities to be transferred to the UN Country Team and the Congolese authorities.[17] As a consequence, UNMAS operated two separate projects after splitting its activities between, on the one hand, support for the Government of DR Congo and its in-country team, and, on the other, its activities in support of MONUSCO.[18] In accordance with Security Council Resolution 2147 of March 2014, demining is no longer included in MONUSCO's mandate.[19] In 2017–18, UNMAS was assisting MONUSCO operations and mitigating the threat from ERW through EOD operations and risk education.[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 2017. 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. Little, if any, improvement was seen during the year.[21]

Strategic Planning

DR Congo's 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.[22] It failed to meet these goals.

In 2017, under CCLAM's coordination, with support from the Geneva International Centre for Humanitarian Demining (GICHD), UNMAS, and the Government of Japan, a new National Mine Action Strategy for 2018–19 was developed in a series of workshops in collaboration with mine action operators.[23] The strategy focuses on fulfilling the country's APMBC Article 5 obligations by 2020, one year ahead of its 2021 deadline.[24]

The new strategy contains the following three strategic objectives: 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, the integration of mine action into national development and poverty reduction strategies, and the mobilisation of adequate resources.[25]

The strategy does not contain specific provisions on or timeframes for the completion of clearance of CMR.[26]

Legislation and Standards

In April 2017, UNMAS reported it would provide technical support to CCLAM to complete the revision of DR Congo's outdated National Technical Standards and Guidelines (NTSGs) for mine action.[27] Revised draft NTSGs had been developed as of mid-2016, but were still under review as at March 2018.[28] The draft version does not contain CMR-specific provisions.[29]

Quality Management

HI, MAG, and NPA reported that internal quality assurance (QA)/quality control (QC) systems were in place in 2017. [30] In 2017, CCLAM controlled external QA/QC after the handover of responsibility for quality management from UNMAS in 2016.[31] Operators reported that CCLAM carried out QA/QC on all operations and tasks in 2017; however, they stated that CCLAM staff did not have adequate material and financial resources to plan and carry out autonomous inspection visits during the year. Operators reported having to cover some of CCLAM's costs to allow them to carry out monitoring operations in the field.[32]

Information Management

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 2017, 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 2017.[33]

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 the year. 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. The situation even appeared to deteriorate in 2017.[34] CCLAM did not provide information in response to Mine Action Review's requests for data again in 2018.

Operators

Five international operators are accredited for mine action in DR Congo: DanChurchAid (DCA), Humanity and Inclusion (HI, formerly Handicap International), MAG, Mechem, and NPA, along with a national demining organisation, AFRILAM.[35] NPA was the only operator to conduct area clearance of CMR in 2017.

In January–April 2017, NPA deployed five technical survey teams with a total of 22 demining personnel. From April, the project configuration changed to include both demining and the provision of risk education and the number of technical survey teams was reduced to three 15-person teams and two four-person risk education teams. It focused on completing clearance of SHAs in Bolomba and Ikela territories in Equateur and Tshuapa provinces, respectively.[36]

In 2017, MAG deployed two multi-task teams (MTT) and two community liaison teams in North and South Ubangi provinces and two MTT and one community liaison team in Tanganyika province with a total of 26 demining personnel and 15 liaison community personnel. It carried out community liaison, EOD spot tasks, battle area clearance (BAC), and other clearance activities.[37]

AFRILAM deployed three teams with a total of twenty deminers and two community liaison officers in 2017. AFRILAM and HI carried out demining and EOD spot tasks during the year; however, as funding for 2018 was unable to be secured, AFRILAM and HI's operations ceased on 31 December 2017. It did not report encountering any CMR in 2017.[38]

LAND RELEASE

In 2017, a total of 3,900m^2 of CMR contamination was cleared, and a total of 242 submunitions destroyed.[39] This compares to the total of 37,903m^2 released though clearance and technical survey in 2016, with the destruction of 46 submunitions.[40]

Survey in 2017

As reported above, in 2017, NPA cancelled one of the two areas of CMR contamination remaining to be addressed in Bolomba, Equateur province.[41]

Clearance in 2017

NPA completed clearance of the last remaining area of CMR contamination identified in Bolomba, Equateur province on 12 May 2017. [42] It cleared a total of 3,900m^2, 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 the loose submunitions, however, and not the container itself. It also destroyed an additional two submunitions in EOD spot tasks.[43] It did not expect that more CMR would be found in Equateur province.[44]

In August 2017, MAG reported discovering one submunition in Manono, Tanganyika province, which was found and destroyed by a demining team as an EOD spot task. The submunition was a type MK2 submunition, similar to the UK-manufactured BL755 MK1 submunitions previously found and cleared by operators in Tanganyika province.[45]

ARTICLE 4 COMPLIANCE

As at June 2018, DR Congo 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.

DR Congo's National Mine Action Strategy for 2018–19 sets 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.[46]

As reported above, clearance of the last known and recorded area of CMR contamination was believed to have been completed in 2017; subsequently, however, an additional cluster munition contaminated area was identified in South Kivu province.[47] In May 2017, 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.[48] In June 2018, NPA reported it had not been asked to carry out any such survey.[49]

In 2018, MAG, HI, NPA, and UNMAS reiterated concerns over an on-going decline in funding for mine action operations to address the larger problem of mines and ERW in DR Congo. They reported that with the deteriorating political climate in the country, donors were reluctant to support mine action activities and prioritised funding to address other higher-impact humanitarian crises such as cholera and yellow fever outbreaks, flooding, and increasing displacement of populations.[50]

CCLAM is not known to have received financial resources for mine action from the Government of DR Congo in 2017.[51] It claimed to be heavily underfunded and thus unable to cover the costs of its obligatory QA/QC visits. In 2018, operators reported that the CCLAM was entirely dependent on external financial support and lacked resources to carry out fundamental means of operations, particularly to deploy sufficiently trained quality management personnel and information management staff, necessitating support from operators.[52] NPA reported that a donor mapping exercise was conducted in 2017 while HI said a mine action resource mobilisation strategy was planned to be developed and approved by the government by the middle of 2018.[53]

Table 1: Five-year summary of CMR clearance[54]

Year	Area cleared (km^2)
2017	*0
2016	0
2015	0
2014	0
2013	0
Total	**0**

* As recorded above, a total of 3,900m^2 of CMR-contaminated area was cleared in 2017.

1 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.

2 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 the loose submunitions and not the container itself. Two additional submunitions were found and destroyed as explosive ordnance disposal (EOD) spot tasks.

3 Response to questionnaire by Colin Williams, UNMAS, 19 May 2015; and Voluntary CCM Article 7 Report (for 2012 and 2013), Form F.

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 Emails from Gerard Kerrien, Country Director, MAG, 28 February and 4 June 2018.

8 "Stratégie Nationale de Lutte Antimines en République Démocratique du Congo 2018–2019", CCLAM, November 2017, p. 8. Translation by Mine Action Review.

9 Ibid., pp. 18–19.

10 UNMAS, "Democratic Republic of the Congo (DRC), Support to UN Country Team and the Government", updated January 2015, at: http://www.mineaction.org/programmes/drc.

11 UNMAS, "2018 Portfolio of Mine Action Projects, DRC", at: http://www.mineaction.org/sites/default/files/print/country_portfolio7490-951-81488.pdf.

12 Ibid.

13 Response to Cluster Munition Monitor questionnaire by Michelle Healy, UNMACC, 29 April 2013.

14 UNMAS, "About UNMAS Support of One UN and the GODRC", March 2016, at: http://www.mineaction.org/print/programmes/drc.

15 UNMAS, "DRC, Overview", updated August 2013.

16 UN Security Council Resolution 1925, 28 May 2010.

17 UN Security Council Resolution 2098, 28 March 2013.

18 UNMAS, "DRC: Support to UN Country Team and the Government".

19 UN Security Council Resolution 2147, 28 March 2014; and UNMAS, "DRC Overview", updated April 2014, at: http://www.mineaction.org/programmes/drc.

20 UNMAS, "Support to one UN and the GO of DRC", March 2018, at: http://www.mineaction.org/programmes/drc.

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 DR Congo, "Plan Stratégique National de Lutte Antimines en République Démocratique du Congo, 2012–2016" ("National Mine Action Strategic Plan in DRC, 2012–2016"), Kinshasa, November 2011, p. 28.

23 "Stratégie Nationale de Lutte Antimines en République Démocratique du Congo 2018–2019", CCLAM, November 2017.

24 Ibid.

25 Ibid., p. 5.

26 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.

27 Email from Pehr Lodhammar, UNMAS, 5 April 2017.

28 Email from Jean-Denis Larsen, NPA, 5 March 2018.

29 Responses to questionnaire by Pehr Lodhammar, NPA, 18 May 2015; Julia Wittig, Programme Officer, MAG, 29 May 2015; and Johan Strydom, Project Manager DR Congo, Mechem, 13 May 2015.

30 Response to questionnaire by Gerard Kerrien, MAG, 8 May 2017; and email from Jean-Denis Larsen, NPA, 19 May 2017.

31 Ibid.

32 Emails from Jean-Denis Larsen, NPA, 5 March 2018; and Bill Marsden, MAG, 11 May 2018; and Guillaume Zerr, HI, 24 May 2018.

33 Ibid.

34 Email from Jean-Denis Larsen, NPA, 18 April 2017.

35 Email from Julien Kempeneers, Deputy Desk Officer, Mine Action Department, HI, 14 April 2016.

36 Email from Jean-Denis Larsen, NPA, 5 March 2018.

37 Each MTT was composed of one Technical Field Manager, a team leader, five deminers, a medic, and two drivers. The community liaison teams consisted of a community liaison manager, four community liaison officers, a medic and two drivers. Each team had two vehicles for deployment. Email from Bill Marsden, MAG, 11 May 2018.

38 Email from Guillaume Zerr, HI, 24 May 2018.

39 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.

40 Response to questionnaire by Gerard Kerrien, MAG, 8 May 2017; and email from Jean-Denis Larsen, NPA, 23 May 2017.

41 Emails from Jean-Denis Larsen, NPA, 19 May 2017; and Matthieu Kayisa Ntumba, NPA, 18 and 20 June 2017.

42 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.

43 Email from Jean-Denis Larsen, NPA, 5 March 2018.

44 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.

45 Emails from Gerard Kerrien, 28 February 2018 and 4 June 2018.

46 "Stratégie Nationale de Lutte Antimines en République Démocratique du Congo 2018–2019", CCLAM, 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.

47 Email from Steven Harrop, UNMAS, 8 June 2018.

48 Email from Jean-Denis Larsen, NPA, 23 May 2017.

49 Email from Matthieu Kayisa Ntumba, NPA, 14 June 2018.

50 Emails from Jean-Denis Larsen, NPA, 5 March 2018; Bill Marsden, MAG, 11 May 2018; and Guillaume Zerr, HI, 24 May 2018; and Pehr Lodhammar, UNMAS, 5 April 2017.

51 Emails from Jean-Denis Larsen, NPA, 5 March 2018.

52 Email from Bill Marsden, MAG, 11 May 2018.

53 Emails from Jean-Denis Larsen, NPA, 5 March 2018; and Guillaume Zerr, HI, 24 May 2018.

54 See Cluster Munition Monitor and Mine Action Review reports on clearance in DR Congo covering 2013–16.

STATES NOT PARTY

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	4	4
Target date for completion of cluster munition clearance	3	3
Targeted clearance	6	6
Efficient clearance	5	5
National funding of programme	8	8
Timely clearance	5	5
Land-release system in place	6	6
National mine action standards	5	5
Reporting on progress	4	4
Improving performance	4	4
PERFORMANCE SCORE: AVERAGE	**5.0**	**5.0**

PERFORMANCE COMMENTARY

No land containing cluster munition contamination was reported to have been released by clearance or survey in territory under government control in 2017. The Azerbaijan National Agency for Mine Action (ANAMA) is focused on the clearance of landmines and other explosive remnants of war (ERW).

RECOMMENDATION FOR ACTION

→ Azerbaijan should accede to, and abide by, the Convention on Cluster Munitions (CCM) as a matter of priority.

CONTAMINATION

The precise extent of contamination from cluster munition remnants (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]

On 1 April 2016, intense fighting broke out in Nagorno-Karabakh along the front line pitting Armenian and Nagorno-Karabakh forces against those of Azerbaijan. While ground fighting was confined to areas close to the Line of Contact (LOC), artillery fire penetrated more than 10km into Nagorno-Karabakh, and included the use of cluster munitions, which resulted in 2.4km^2 of new CMR contamination in Nagorno-Karabakh.[2] No CMR contamination has been reported on the Azerbaijan-controlled side of the LOC. A ceasefire was agreed on 5 April 2016 (see the separate Mine Action Review *Clearing Cluster Munition Remnants* report on Nagorno-Karabakh for further information).

In 1988, a decision by the parliament of the Nagorno-Karabakh Autonomous Province to secede from Azerbaijan and join Armenia led to hostilities between Armenia and Azerbaijan from 1988 to 1994. Large quantities of cluster munitions were dropped from the air during the conflict. Armenia continues to occupy around one fifth of Azerbaijani territory.

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 CMR have been identified in and around Nagorno-Karabakh.[4] In 2006 and 2007, remnants were found in and around warehouses at a former Soviet ammunition storage area located at Saloglu in Agstafa district, where clearance was completed in July 2011.[5]

Other Explosive Remnants of War and Landmines

Other areas are confirmed or suspected to contain ERW: both unexploded ordnance (UXO) and abandoned explosive ordnance (AXO). These include former military testing areas, including the former Soviet firing and training ranges at Jeyranchel in the Agstafa region and in Kirdagh; and a former shooting range in Ganja.[6] On 27 August 2017, an explosion occurred at the Khizi ammunition depot and, as at December 2017, 114 items of UXO had been found during emergency clearance of the surrounding area.[7]

Azerbaijan is also contaminated with landmines, which were reported to contaminate almost 70km^2 as at the end of 2015 (see Mine Action Review's *Clearing the Mines* report on Azerbaijan for further information).[8]

PROGRAMME MANAGEMENT

A 1998 presidential decree established ANAMA, which reports to the Deputy Prime Minister as head of the State Commission for Reconstruction and Rehabilitation.[9] In April 1999, ANAMA established the Azerbaijan Mine Action Programme, a joint project of the Government of Azerbaijan and the United Nations Development Programme (UNDP).[10] A joint working group, established in December 1999 and consisting of representatives from various ministries, provides regular guidance to ANAMA.[11]

ANAMA 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).[12] No commercial company is active in mine action in Azerbaijan.

ANAMA manages the mine action programme via its headquarters based in Baku, a regional office in Fizuli, a regional training centre in Goygol, and three operational centres, located in Aghjabedi, Agstafa, and Terter.[13]

UNDP provides support to ANAMA, and will continue to do so until 2019, as part of a project to support the institutional capacity of ANAMA for mine/UXO clearance, risk education, victim assistance, international networking, and support to other mine-affected countries.[14]

Strategic Planning

ANAMA is integrated into the State Social and Economic Development programme. The current mine action strategy is for 2013–18.[15] A new strategic plan is currently in development. 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.[16]

ANAMA's long-term strategy is to clear the occupied territories as and when it is possible to do so.[17]

Legislation and Standards

As at May 2018, Azerbaijan was still in the process of adopting a national mine action law, with draft legislation under review by the Cabinet of Ministers.[18] Once adopted, it will regulate mine action in Azerbaijan, governing issues such as licensing, accreditation, quality assurance (QA), and tender procedures.[19]

Azerbaijan also has its own National Mine Action Standards (NMAS), which were adopted in 2001 and subsequently revised in 2003, 2004, and 2010.[20]

Quality Management

ANAMA established a National Training Quality Assurance Team in 2004. In 2011, this transitioned into ANAMA's training, survey, and QA division (TSQAD), which is responsible for training and QA. The TSQAD also conducts quality control (QC).[21]

In 2017, 95 QA monitoring visits were undertaken.[22] In addition, external QC inspections were conducted at 38 sites in 2017, with more than 2.9km^2 of land physically checked.[23]

Information Management

ANAMA uses an old version of the Information Management System for Mine Action (IMSMA) database.[24]

Operators

At the end of 2017, ANAMA employed 632 operational and administrative staff and had 49 mine detection dogs (MDDs) and 6 demining machines.[25] Included in this capacity are two national demining non-governmental organisations, IEPF and Dayag, which are contracted for mine clearance. Together, the two organisations employ 156 operational and administrative staff.[26] ANAMA also has an MDD breeding and training centre, which was built in 2011.[27]

LAND RELEASE

Survey in 2017

No CMR survey took place in territory under government control in 2017.[28]

Clearance in 2017

No CMR clearance took place in territory under government control in 2017.[29]

Battle Area Clearance in 2017

In January 2017, ANAMA began the third 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. The third phase was projected to finish in June 2018 and would result in release of nearly 22km^2 of land contaminated with UXO.[30] In addition, ANAMA continued to implement the Ganja UXO clearance project.[31]

As at August 2017, the majority of ANAMA's battle area clearance teams were deployed to clear the results of the explosion at the Khizi ammunition storage area.[32]

During ERW clearance in 2017, ANAMA cleared 62 sites, totalling 33.3km^2, during which it destroyed 25,102 items of ERW as well as 5 anti-personnel mines and 60 anti-vehicle mines; IEPF cleared 15 sites, totalling 27.4km^2, during which it destroyed 2,616 items of ERW; and RA cleared 20 sites, totalling 24.5km^2, during which it destroyed 7,332 items of ERW as well as 2 anti-personnel mines and 4 anti-vehicle mines.[33]

Progress in 2018

In 2018, the majority of ANAMA's clearance assets have been deployed for emergency clearance of the Khizi ammunition depot explosion, clearance of the Jeyranchel shooting range in the Agstafa region, and the clearance of the Jojuq Marjanli village following liberation from Armenian occupation.[34]

ARTICLE 4 COMPLIANCE

Azerbaijan is neither a state party nor a signatory 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.

Currently, 90% of mine action in Azerbaijan is nationally funded.[35] ANAMA's long-term strategy is to be ready to start clearance of the occupied territories as and when this is possible.[36]

1 Email from Sabina Sarkarova, Public Relations Officer, ANAMA, 21 May 2018.

2 Email from Andrew Moore, Caucasus and Balkans Desk Officer, HALO Trust, 26 May 2016; The HALO Trust, "HALO Trust begins emergency clearance in Karabakh", 19 April 2016, at: https://www.halotrust.org/media-centre/news/halo-begins-emergency-clearance-in-karabakh/; and email from Amasia Zargarian, Programme Support Officer, HALO Trust, 4 May 2018.

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, "Saloglu Project", undated, at: www.anama.gov.az.

6 ANAMA, "Azerbaijan National Agency for Mine Action 2018", p. 17.

7 Ibid.; and "ANAMA conducts demining operations in Khizi district", News.Az, 5 December 2017, at: https://news.az/articles/society/127332.

8 Email from Tural Mammadov, Operations Officer, ANAMA, 19 October 2016.

9 Geneva International Centre for Humanitarian Demining (GICHD), "Transitioning Mine Action Programmes to National Ownership: Azerbaijan", March 2012, Executive Summary.

10 ANAMA, "Azerbaijan National Agency for Mine Action 2018", p. 12.

11 Ibid.

12 Ibid.

13 Ibid.

14 UNDP, "UNDP Mine Action Programme: Azerbaijan", April 2016.

15 Email from Parviz Gidayev, Planning & Development Manager, ANAMA, 20 May 2015; and ANAMA, "Azerbaijan National Agency for Mine Action 2017", p. 10.

16 Email from Sabina Sarkarova, ANAMA 2 May 2018.

17 ANAMA, "Azerbaijan National Agency for Mine Action 2014", p. 5; and GICHD, "Transitioning Mine Action Programmes to National Ownership: Azerbaijan", March 2012, Executive Summary.

18 Email from Sabina Sarkarova, ANAMA, 2 May 2018.

19 Email from Parviz Gidayev, ANAMA, 20 May 2015; and ANAMA, "Azerbaijan National Agency for Mine Action 2014".

20 Email from Tural Mammadov, ANAMA, 19 October 2016.

21 ANAMA, "Azerbaijan National Agency for Mine Action 2016", pp. 28 and 30.

22 ANAMA, "Azerbaijan National Agency for Mine Action 2018", p. 24.

23 Ibid., p. 25.

24 Ibid., p. 32.

25 Ibid., p. 12.

26 Ibid., p. 13.

27 Ibid., p. 14.

28 Email from Sabina Sarkarova, ANAMA, 21 May 2018.

29 Ibid.

30 ANAMA, "Azerbaijan National Agency for Mine Action 2018", p. 9.

31 Ibid., p. 17.

32 Email from Samir Poladov, Operations Manager, ANAMA, 4 June 2018.

33 ANAMA, "Azerbaijan National Agency for Mine Action 2018", p. 18.

34 Email from Sabina Sarkarova, ANAMA, 2 May 2018.

35 G. Ahmadov, "Advocating Mine Action to Government of Azerbaijan", Geneva, 19 February 2016, at: http://www.mineaction.org/sites/default/files/documents/Gazanfar%20Ahmadov%20Azerbaijan.pdf.

36 ANAMA, "Azerbaijan National Agency for Mine Action 2014"; and GICHD, "Transitioning Mine Action Programmes to National Ownership: Azerbaijan", March 2012, Executive Summary.

CAMBODIA

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	5	5
Target date for completion of cluster munition clearance	5	5
Targeted clearance	6	6
Efficient clearance	5	5
National funding of programme	3	3
Timely clearance	6	6
Land-release system in place	6	6
National mine action standards	5	4
Reporting on progress	5	5
Improving performance	6	5
PERFORMANCE SCORE: AVERAGE	**5.2**	**5.0**

PERFORMANCE COMMENTARY

Cambodia continues to hold back from joining the Convention on Cluster Munitions (CCM) but a management shake-up at the end of 2017 has re-energised the Cambodian Mine Action and Victim Assistance Authority (CMAA) and increased confidence that sector management is now proactively addressing issues relating to cluster munitions on their merits. The National Mine Action Strategy, which takes effect from 2018, includes goals and guidelines for cluster munition remnant (CMR) survey and clearance and the CMAA accepted the cluster munition remnant survey (CMRS) methodology was accepted in principle as the national standard.

RECOMMENDATIONS FOR ACTION

- Cambodia should accede to the CCM as a matter of priority.
- Cambodia should revise its reporting of survey and clearance of CMR-affected areas to provide a more accurate measure of contamination and the progress of clearance.
- Cambodia should establish a dedicated Technical Working Group (TWG) on cluster munition survey and clearance to complement existing TWGs focused on mine clearance.

CONTAMINATION

Cambodia has extensive CMR contamination but the full extent is not known. Contamination resulted from intensive bombing by the United States (US) 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.[1]

Cambodia has sharply raised its estimate of CMR contamination in recent years, as a result of focusing more attention on the issue and implementing the national Baseline Survey (BLS), but it presents widely varying assessments of the extent of the problem. Cambodia estimates total CMR contamination in 18 provinces at 624km^2, but has not explained the basis for this figure.[2] Its National Mine Action Strategy says known CMR contamination covers 645km^2 and believes the figure will rise as a result of future survey.[3]

As at April 2018, the 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 457km^2. This is an increase of one quarter from its estimate of 365km^2 a year earlier. Two provinces, Kratie and Stung Treng, accounted for more than half of the CMR total.[4]

Table 1: Explosive Remnants of War Survey of Eight Eastern Provinces BLS in 2009–17[5]

Province	CMR-contaminated area (m^2)	Area with other UXO (m^2)	Total ERW-contaminated area (m^2)
Kampong Cham	46,378,266	9,799,903	56,178,169
Kratie	106,032,171	26,315,540	132,347,711
Mondolkiri	18,702,666	10,375,597	29,078,263
Prey Veng	31,758,044	45,094,918	76,852,962
Rattanakiri	44,093,931	1,369,256	45,463,187
Stung Treng	131,731,346	29,633,740	161,365,086
Svay Rieng	46,447,704	37,174,806	83,622,510
Tboung Khmum	31,863,776	18,557,027	50,420,803
Totals	**457,007,904**	**178,320,787**	**635,328,691**

However, the survey is not considered a reliable measure of CMR contamination. The BLS employed a landmine survey methodology, resulting in exaggerated and inaccurate polygons, raising the likelihood that CMR contamination estimates will undergo significant revision as operators apply more accurate survey methods. Operators report that polygons are found to contain no CMR and also find significant contamination outside BLS polygons. Operators have worked in Rattanakiri province for four years but were still identifying additional CMR hazardous areas in 2017 in areas not identified by the BLS as contaminated. Meanwhile CMAA reporting forms are formatted to record mine clearance and do not readily capture the results of CMR survey.[6]

Much of Cambodia's CMR contamination lies in areas that are heavily forested and sparsely populated, limiting the community information available on affected areas. CMAA data identifies six submunition casualties since the start of 2013, one of which was a fatality, but did not record any CMR incidents in 2016 and only one in 2017. However, demand for land and the large numbers of people moving into the northern provinces, raise the threat of increased casualties in the future, while also generating more evidence of the scale of contamination.[7]

Other Explosive Remnants of War and Landmines

Cambodia estimated in 2017 that it had around 379km^2 of explosive remnants of war (ERW) contamination apart from CMR[8] and more than 960km^2 of mined area. Cambodia estimates it has a total of 635km^2 of contamination and more than 960km^2 of mined area. Landmines are concentrated in, though not limited to, west and north-west Cambodia. ERW, including air-dropped bombs and ground artillery, is heaviest in the eastern provinces (see Mine Action Review's *Clearing the Mines* report on Cambodia for further information).[9]

PROGRAMME MANAGEMENT

The CMAA, set up in September 2000, regulates and coordinates all activities relating to survey and clearance of ERW, including CMR, responsibilities previously assigned to the Cambodian Mine Action Centre (CMAC).[10] 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.[11]

Prime Minister Hun Sen is the CMAA President and Senior Minister Ly Thuch its First Vice-President overseeing the authority. In 2017, CMAA management underwent significant change for the second successive year. First Vice-President Serei Kosal, appointed in 2016, was moved out of the CMAA. Former CMAA Secretary-General, Prum Sophakmonkol, who was moved to the Ministry of Foreign Affairs in 2016, was reappointed to that position with effect from the start of January 2018 bringing extensive experience and knowledge of mine action to planning and operations. Stakeholders welcomed the changes as positive for the CMAA, which is moving forward by adopting best practice and promoting efficiency.

Strategic Planning

Cambodia does not have a CMR-specific strategic plan but the National Mine Action Strategy (NMAS), prepared in 2017 and formally adopted at a national conference in May 2018, included targets for tackling CMR contamination as the second of its eight goals. It called for "release of prioritised cluster munitions contaminated areas by 2025" and specified two CMR-related objectives:[12]

- 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 NMAS and Cambodia's latest Anti-Personnel Mine Ban Convention (APMBC) Article 7 report for 2017 include a "Land Release and Funding Projection", which foresees release of 499km^2 (80% of the estimated 624km^2 CMR contamination) by 2025, with average annual release of 62km^2.[13]

The NMAS' goals and objectives are set out in greater detail in a three-year implementation plan for 2018–20.[14] A ten-point agenda drawn up by the CMAA includes setting up a technical working group on cluster munitions clearance.

Quality Management

The CMAA is responsible for external quality management of CMR clearance.

Information Management

The CMAA manages a database that upgraded to operating Information Management System for Mine Action (IMSMA) New Generation in 2014 that receives regular operational progress reports from operators but in 2017 information management remained a major challenge.

Operators

National operator CMAC and international operators MAG and NPA all conducted CMR clearance in 2017.

LAND RELEASE

CMAA reported that a total of 26.5km^2 of CMR-affected land was released in 2017 and, unusually, indicated that nearly 90% of this (23.5km^2) was released through clearance and only 2.7km^2 as a result of survey.[15] Official data differed significantly from results recorded by operators and is likely to undergo revision. Weaknesses in the official data also limit its effectiveness in measuring progress in addressing CMR contamination (see Clearance section below).

Survey in 2017

The CMAA approved the CMRS methodology in principle in 2017, but as at June 2018 had not yet formally adopted it as the national standard. The CMAA planned to continue with the BLS to provide a consistent assessment of ERW contamination across the country. The survey, which started in 2009, had completed 124 districts by 2017 and CMAA planned to complete BLS in 36 remaining districts by 2020. It said how quickly the survey progressed depended on funding. In the meantime, CMAA recognised the limitations of BLS methodology in measuring CMR contamination and planned to modify survey procedures.[16] The CMAA Three-year Implementation Plan calls for meetings with stakeholders to develop CMR survey and land release standards and prioritisation guidelines, building up survey team CMRS capacity and implementing CMRS.[17]

In 2017, CMRS was applied only by NPA, which worked in Rattanakiri province with three CMRS teams focused on defining the extent of the problem. It prioritised areas for survey on the basis of government development plans, bombing and accident data, and the evidence identified in spot tasks. Under CMAA procedures, it was previously obliged to conduct CMRS/technical survey on the basis of large suspected hazardous areas generated by the BLS that often bore little relation to CMR contamination. The CMAA agreed in 2017 that NPA should conduct evidence-based non-technical survey, allowing identification of smaller SHAs defining contaminated areas more precisely. As a result, NPA more than doubled the hazardous area it confirmed in 2017 (see Table 2), while the area it reduced was less than one-third of the area reduced in 2016.[18]

Table 2: NPA CMR Survey

Year	Area surveyed (m^2)	CHAs identified	Area confirmed (m^2)	Area reduced from BLS (m^2)
2017[19]	5,493,700	23	4,493,700	844,224
2016	4,687,000	22	1,840,521	2,846,979
2015	4,796,761	20	1,459,261	3,337,500

MAG deployed four teams in Rattanakiri for survey and/or clearance in 2017, cancelling 0.07km^2 and confirming two hazards affecting 0.4km^2. MAG incorporates data relating to spot tasks in a system of evidence-point polygon mapping to help define CHAs and worked with the CMAA to integrate this approach into the national database.[20]

CMAC had not provided results for its operations in 2017, as at June 2018. CMAA data, though, showed CMAC as releasing 0.53km^2 in 2017, significantly less than the amount CMAC had reported for 2016. The United States awarded an NPA-CMAC partnership a $2 million contract for survey and clearance in the north-east starting in March 2018 and due to run for one-year under which NPA provides oversight of survey conducted by CMAC teams which are required to conduct CMRS.

Clearance in 2017

CMAA data indicates operators cleared a total of 23.5km^2 of CMR-contaminated area in 2017, 5% more than the previous year, though this figure includes clearance conducted on BLS polygons and as a result appears to exaggerate some results while failing to capture others. BLS polygons produced by non-technical survey based on landmine survey methodology are recognised as ineffective in accurately capturing CMR contamination.

Official data suggests CMAC teams cleared 6,000m^2 for every submunition destroyed, compared with under 600m^2 for every submunition cleared by NPA (see Table 3). No data had been received from CMAC itself by the time this report went to print.[21]

At the same time, official data only reports clearance of BLS polygons and therefore under-represents land release by failing to capture operators' clearance of CMR contamination outside BLS polygons. MAG reported releasing 2.1km^2 through clearance in 2017, 22% more than the previous years, and destroying 1,301 submunitions and 164 items of UXO. It attributed the increase to deployment of Scorpion advanced detection systems provided by the US Humanitarian Demining Research and Development Programme. MAG expected to expand its clearance capacity in 2018, enabling it to extend its explosive ordnance disposal (EOD) spot/roving response into Stung Treng and Mondolkiri provinces in the north-east while also continuing survey and clearance in Rattanakiri.[22]

NPA, though focused primarily on survey, also reported a significant rise in productivity, clearing 0.94km^2 in 2017, more than double the amount of land it cleared in 2016 and close to double the clearance reported for NPA by the CMAA. NPA also reported destroying 856, submunitions, fewer than the number recorded by the CMAA, and 36 items of UXO. NPA attributed the acceleration to its use of explosive detection dogs as the main detection tool, avoiding electronic detector signals generated by scrap metal and laterite.[23]

Table 3: Clearance of CMR-contaminated areas in 2017[24]

Operator	Areas cleared	Area cleared (m²)	Submunitions destroyed	Other UXO destroyed
CMAC	138	21,914,789	3,624	1,702
MAG	3	1,037,068	1,301	164
NPA	5	549,748	940	3
Totals	**146**	**23,501,605**	**5,865**	**1,869**

The extent of roving clearance in 2017 is unclear in the absence of information from CMAC, the largest mine action organisation, but among two other operators active in dealing with CMR it continued at about the same level as in 2016 in terms of submunitions destroyed despite a dip in the number of tasks MAG conducted. MAG reported roughly half the items it destroyed in roving operations are found outside BLS polygons.[25]

Table 4: Spot/Roving Clearance and Explosive Ordnance Disposal in 2017[26]

Operator	Roving tasks	Submunitions destroyed	UXO destroyed
CMAC	N/R	N/R	N/R
MAG	1,801	2,483	5,475
NPA	25	19	19
Totals	**1,826**	**2,502**	**5,494**

N/R = Not reported

ARTICLE 4 COMPLIANCE

Cambodia is not a state party or signatory to the CCM. Nonetheless, Cambodia has obligations under international human rights law to protect life, which require that cluster munition remnants be cleared as soon as possible.

Cambodia has made accession to the CCM by 2020 Goal 3 of its latest National Mine Action Strategy. The strategy calls for "building consensus among national stakeholders to ensure that Cambodia becomes a State Party to CCM."[27] Officials continue to cite the refusal of Thailand, a state possessing cluster munitions, to sign the CCM as an obstacle to Cambodia joining the convention.[28]

1 South East Asia Air Sortie Database, cited in D. McCracken, "National Explosive Remnants of War Study, Cambodia", NPA in collaboration with CMAA, Phnom Penh, March 2006, p. 15; Human Rights Watch, "Cluster Munitions in the Asia-Pacific Region", April 2008; and Handicap International (HI), Fatal Footprint: The Global Human Impact of Cluster Munitions, HI, Brussels, November 2006, p. 11.

2 Anti-Personnel Mine Ban Convention (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 Ibid.

6 Interviews with Aksel Steen-Nilsen, Country Director, NPA, Phnom Penh, 1 May 2017 and 24 April 2018; and with Greg Crowther, Regional Director, South and South East Asia, MAG, in Phnom Penh, 1 May 2017 and 26 April 2018.

7 Casualty data received by email from Nguon Monoketya, Deputy Director, Socio-Economic Planning and Database Management Department, CMAA, 17 February 2017.

8 CMAA, National Mine Action Strategy 2018–2025, p. 10.

9 Email from CMAA, 22 May 2018. The NMAS puts mine contamination at 946km².

10 CMAC is the leading national demining operator, but does not exercise the wider responsibilities associated with the term "centre." Set up in 1992, CMAC was assigned the role of coordinator in the mid-1990s. It surrendered this function in a restructuring of mine action in 2000 that separated the roles of regulator and implementing agency and led to the creation of the CMAA.

11 Geneva International Centre for Humanitarian Demining (GICHD), "A Study of the Development of National Mine Action Legislation", November 2004, pp. 64–66.

12 CMAA, National Mine Action Strategy 2018-2025, pp.11-12.

13 Ibid., Annex B; and APMBC Article 7 Report (for 2017), Annex B.

14 CMAA, "Three-Year Implementation Plan 2018–2020", undated but 2018; interview with Prum Sophakmonkol, Secretary General, CMAA, Phnom Penh, 24 April 2018.

15 Email from CMAA, 22 May 2018.

16 Interview with Prum Sophakmonkol, CMAA, 24 April 2018.

17 CMAA, "Three-year Implementation Plan 2018–2020", undated but 2018, pp. 4–5.

18 Emails from Aksel Steen-Nilsen, NPA, 2 April and 30 May 2018; and interview in Phnom Penh, 24 April 2018.

19 Email from Aksel Steen-Nilsen, NPA, 10 June 2018.

20 Emails from Greg Crowther, MAG, 11 May and 12 June 2018.

21 Data provided by NPA and MAG indicated clearance of approximately 1,920m² and 1,600m² per submunition respectively.

22 Interview with Greg Crowther, MAG, 28 April 2018; and email, 11 May and 12 June 2018.

23 Emails from Aksel Steen-Nilsen, NPA, 2 April and 10 June 2018.

24 Email from the CMAA. Data does not disaggregate items destroyed in the course of clearance and survey.

25 Interview with Greg Crowther, MAG, 28 April 2018.

26 Emails from Greg Crowther, MAG, 11 May 2018; and from Aksel Steen-Nilsen, NPA, 2 April and 10 June 2018.

27 CMAA, National Mine Action Strategy 2018–2025, p. 13.

28 Interview with Prum Sophakmonkol, CMAA, 24 April 2018.

PERFORMANCE COMMENTARY

It was determined by survey and clearance in 2017 that submunitions found by the local community in the Shida Kartli region in 2016 were residual contamination. With the possible exception of South Ossetia, which is inaccessible to the Georgian authorities due to Russian occupation, it is believed that Georgia may now be clear of cluster munition remnants (CMR).

RECOMMENDATION FOR ACTION

→ Georgia should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.

CONTAMINATION

Following clearance of a CMR-contaminated area in 2014, Georgia, including Abkhazia, was believed to be free of CMR contamination, 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.

In 2016, however, Georgia reported the discovery of two submunitions, which were destroyed by the State Security Agency, as part of explosive ordnance disposal (EOD) call-outs in the Shida Kartli region.[1] In April and July 2016, local communities in this region of Georgia reported finding several submunitions since clearance was completed.[2]

During 2017, The HALO Trust conducted non-technical and technical survey in the Shida Kartli region to investigate each of the call-outs.[3] During survey, a total of three submunitions were found, which were identified as residual contamination and destroyed.[4] Two of the submunitions were found in the village of Kvemo Khviti. After investigation, it was determined that they had been moved from the nearby village of Zemo Nikozi, which was affected by CMR contamination in 2008.[5] The third submunition, an AO-2.5, was uncovered by a villager in Variani while he was cultivating his field.[6] Norwegian People's Aid (NPA) had conducted subsurface clearance of this area and upon further investigation by The HALO Trust it was found that the submunition was below the effective clearance depth achieved by its detectors.[7]

Prior to those recently identified submunitions, the last CMR was discovered and cleared in 2014, during HALO Trust operations along the Administrative Boundary Line (ABL), also in the Shida Kartli region.[8] Furthermore, Georgia has reported that its National Mine Action Authority has not been able to conduct quality assurance (QA)/quality control (QC) in Abkhazia and Tskhinvali (in South Ossetia), and that a conclusion as to whether these regions are indeed free of CMR depends on the quality of earlier clearance.[9]

CMR 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 December 2009, The HALO Trust cleared some 37km^2 in Georgian-controlled territory of submunitions and other explosive remnants of war (ERW).[10] In May 2010, NPA completed clearance of its tasked areas.[11]

The HALO Trust believes that the August 2008 conflict was likely to have resulted in some CMR in South Ossetia, but it has no way of determining the level of possible contamination, or what, if any, clearance may have been conducted.[12]

Other Explosive Remnants of War and Landmines

Georgia remains contaminated by other unexploded ordnance (UXO) and anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Georgia for further information). Following the 2008 conflict with Russia, there was evidence of a problem with UXO in South Ossetia, although its extent remains unclear. In addition, UXO contamination in Georgia persists in former firing ranges.[13]

PROGRAMME MANAGEMENT

In 2008, a Memorandum of Understanding was signed between the Georgian Ministry of Defence and international NGO Information Management and Mine Action Programs (iMMAP) to establish the Explosive Remnants of War Coordination Center (ERWCC).[14] On 30 December 2010, the Ministry of Defence issued a decree instructing that mine action be included as part of the State Military Scientific Technical Center – known as "DELTA" – an entity within the ministry. The agreement with iMMAP ended on 31 March 2012 and the ERWCC took ownership of the mine action programme.[15] In 2013, ERWCC became the Humanitarian Demining Division (HDD) under DELTA.[16]

The primary task of the ERWCC/HDD is to coordinate mine action in Georgia, including QA/QC, and to facilitate the creation and implementation of Georgian National Mine Action Standards, in accordance with the International Mine Action Standards (IMAS).[17]

Strategic Planning

In respect of the gender mainstreaming in mine action policy, the HALO Trust had two fully female deminer teams conducting BAC on an ex-military firing range near the village of Udabno in Kakheti region in 2017.[18]

Legislation and Standards

Georgian National Mine Action Standards and National Technical Standards and Guidelines (NTSG) have been drafted in accordance with IMAS. Georgia does not currently have a timeframe for the establishment of these standards.[19] Once finalised, the NTSG will be translated and sent to Parliament for approval.[20]

Quality Management

Under the control of DELTA, the HDD now conducts QA/QC. iMMAP has also conducted training on QA/QC for the Quality Management section of the ERWCC, the Joint Staff of the Georgian Armed Forces, and DELTA. The HDD QA/QC team provided support to The HALO Trust during the 2017 survey of the 36 villages in the Shida Kartli and Imereti regions, which are adjacent to the ABL with the Tskhinvali region.[21]

Operators

The HALO Trust conducts BAC and mine clearance in Georgia.[22] In 2017, The HALO Trust conducted CMR survey (both technical and non-technical) and clearance in the Shida Kartli region using two manual teams and one mechanical team.[23]

At the request of the Government of Georgia, the NATO Partnership for Peace (PfP) Trust Fund has supported Georgia in addressing its ERW problem from the August 2008 conflict. In 2010, a NATO Trust Fund project planned to provide support to establish long-term local capacity for the ERWCC in clearance and victim assistance.[24] As part of the project, 66 members of the Georgian Army Engineers Brigade were trained in demining, battle area clearance (BAC), and EOD.[25] Since March 2015, these engineers have been conducting EOD of ERW at the former ammunition storage facility at Skra.[26] In August 2017, this project was successfully completed.[27]

LAND RELEASE

Survey in 2017

In 2017, The HALO Trust reduced 0.8km^2 by technical survey in the Shida Kartli region.[28] During the survey, three submunitions were destroyed as spot tasks by the Georgian State Security Service EOD Team.[29]

Clearance in 2017

In 2017, The HALO Trust cleared 877m^2 in the Shida Kartli region.[30] During clearance no submunitions were found but five items of other UXO were destroyed.[31]

Progress in 2018

The survey of the Shida Kartli region revealed that several areas were contaminated with other types of ERW, such as hand grenades and signal mines.[32] There are plans to conduct clearance of this contamination in the villages of Dvani and Dzevera.[33] Clearance is also planned in the village of Chonto where 24 aircraft bombs were found by a survey team in August 2017.[34] The HALO Trust will also undertake one EOD task in the Samegrelo Zemo-Svaneti region to remove an unexploded aircraft bomb, believed to be from a 2008 aircraft attack on the village of Anaklia.[35]

ARTICLE 4 COMPLIANCE

Georgia is neither a state party nor a signatory 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.

It is believed that, with the possible exception of South Ossetia, Georgia is now free from CMR contamination following the investigation of contamination in the Shida Kartli region. Georgia has reported that, in the areas outside of its control, it cannot confirm whether or not earlier clearance in these areas was conducted to international humanitarian standards, and with the required QA/QC.[36]

1 Email from Oleg Gochashvili, Head of Division, DELTA, 20 June 2017.
2 Ibid.
3 Email from Oleg Gochashvili, DELTA, 25 April 2018; and Irakli Chitanava, Programme Manager, HALO Trust, 25 May 2018.
4 Ibid.
5 Ibid.
6 Ibid.
7 Ibid.
8 Email from Andrew Moore, HALO Trust 9 July, 2015.
9 Email from Oleg Gochashvili, DELTA, 3 April 2017.
10 Explosive Remnants of War Coordination Centre, "Explosive Remnants of War Coordination Centre (ERWCC) in Facts and Figures", November 2009, p. 17.
11 Email from Jonathon "Gus" Guthrie, Programme Manager, NPA, 27 May 2010.
12 Email from Andrew Moore, HALO Trust, 11 March 2016.
13 Email from Andrew Moore, HALO Trust, 23 June 2015; and interview with Oleg Gochashvili, DELTA, in Geneva, 19 February 2016.
14 iMMAP, "Establishing the New Georgian Explosive Remnants of War Coordination Centre (ERWCC)", Press release, 25 February 2009; and E. M. Hasanov and P. Nevalainen, "Mine-action Challenges and Responses in Georgia", Journal of ERW and Mine Action, Issue 15.3, Fall 2011.
15 Ibid.; Decree #897 issued by the Minister of Defense, 30 December 2010; and email from Oleg Gochashvili, DELTA, 20 June 2016.
16 CCW Protocol V Article 10 Report (for 21 March 2017 to 31 March 2018), Form A.
17 Email from Oleg Gochashvili, DELTA, 6 July 2015.
18 Email from Oleg Gochashvili, DELTA, 25 April 2018.
19 Ibid.
20 Interview with Oleg Gochashvili, DELTA, in Geneva, 19 February 2016; and email, 3 April 2017.
21 Email from Oleg Gochashvili, DELTA, 25 April 2018.
22 Email from Irakli Chitanava, HALO Trust, 2 May 2017.
23 Emails from Oleg Gochashvili, DELTA, 25 April 2018; and Irakli Chitanava, HALO Trust, 25 May 2018.
24 NATO, "NATO/PfP Trust Fund Project in Georgia", January 2012; and emails from Oleg Gochashvili, DELTA, 6 July 2015 and 20 June 2016.
25 Estonia Convention on Certain Conventional Weapons (CCW) Protocol V Article 10 Report (for 11 February to 31 December 2010); NATO/PfP Trust Fund Project in Georgia Fact Sheet, January 2012; and email from Oleg Gochashvili, Head of Division, DELTA, 6 July 2015.
26 Interview with Oleg Gochashvili, DELTA, in Geneva, 19 February 2016; and email, 3 April 2017.
27 CCW Protocol V Article 10 Report (for 21 March 2017 to 31 March 2018), Form F.
28 Email from Oleg Gochashvili, DELTA, 25 April 2018.
29 Ibid.
30 Ibid.
31 Ibid.
32 Email from Oleg Gochashvili, DELTA, 25 April 2018; and Irakli Chitanava, HALO Trust, 25 May 2018.
33 Ibid.
34 Ibid.
35 Ibid.
36 Email from Oleg Gochashvili, DELTA, 3 April 2017.

IRAN

RECOMMENDATIONS FOR ACTION

- Iran should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Iran should report publicly on the extent and location of cluster munition remnants (CMR) and prepare a plan for their clearance and destruction.

CONTAMINATION

The extent of CMR contamination in Iran is not known. Some contamination is believed to remain from the Iran-Iraq war 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.[1]

PROGRAMME MANAGEMENT

The Iran Mine Action Centre (IRMAC) was established in 2005 and made responsible for planning, data, managing survey, and procurement. It also sets standards, provides training for clearance operators, concludes contracts with demining operators (military or private), 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.

IRMAC is also responsible for overseeing victim assistance and risk education but has partly delegated these roles to entities such as the Social Welfare Organisation and the Iranian Red Crescent Society.[2]

LAND RELEASE

No data was available on any CMR survey or clearance in 2017, as was the case in the previous year.

ARTICLE 4 COMPLIANCE

Iran is not a state party to the CCM and therefore does not have a specific clearance deadline under Article 4. Nonetheless, Iran has obligations under international human rights law to clear CMR as soon as possible.

1 Interview with Air Force Colonel (ret.) Ali Alizadeh, Tehran, 8 February 2014.

2 IRMAC PowerPoint Presentation, Tehran, 9 February 2014; and IRMAC, "Presentation of IRMAC", at: http://www.irmac.ir/sites/default/files/.

RECOMMENDATIONS FOR ACTION

- Libya's Government of National Accord should ensure that forces loyal to it do not use cluster munitions.
- Libya should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- 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 conduct a baseline survey to identify the extent of cluster munition remnant (CMR) contamination, at the earliest opportunity possible and as soon the security situation permits.
- Libya should initiate survey and clearance of CMR-contaminated area as soon as possible.
- Libya should develop national capacity to conduct CMR survey and clearance, with the support of international actors.

CONTAMINATION

Contamination in Libya is the consequence of armed conflict in 2011 and renewed conflict since 2014 but the extent of the CMR hazard is unknown. In 2011, armed forces used at least three types of cluster munition, including the Chinese dual-purpose Type 84, which also functions as an anti-vehicle mine, and the Spanish MAT-120, which holds 21 submunitions. In 2012, Mines Advisory Group (MAG) reported tackling Russian PTAB cluster bombs,[1] while international media reported the presence of a fourth type of cluster munition that has remained unidentified.[2] 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.

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 but 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 and 2017. 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 2016 and 2017.[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]

The impact of CMR contamination is unknown, but according to the United Nations Support Mission in Libya (UNSMIL), the presence of landmines, improvised explosive devices (IEDs), and other unexploded ordnance (UXO) poses a persistent threat to the Libyan population. It also hinders the safe return of internally displaced people and restricting access for humanitarian workers.[6]

Other Explosive Remnants of War and Landmines

Libya is also contaminated by other UXO and by anti-personnel mines (see Mine Action Review's *Clearing the Mines* report on Libya for further information). According to the United Nations Mine Action Service (UNMAS), ongoing conflict has resulted in significant explosive remnants of war (ERW) contamination in numerous cities across Libya, impacting on public infrastructure such as schools, universities, and hospitals. Vast amounts of unsecured weapons and ammunition contaminate Libya. In addition, the ERW threat is exacerbated by the mines and ERW left from previous conflicts.[7]

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. Through early 2017, however, it continued to face opposition from two rival governments and a host of militia forces.

The Libyan Mine Action Centre (LibMAC) was mandated by the Minister of Defense to coordinate mine action in December 2011.[8] As at March 2017, 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 Benghazi[9] and Misrata.[10] In April 2016, a regional Operations Manager was appointed for the east.[11] In July 2016, LibMAC also established a small office in Misrata.[12] 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).[13]

Strategic Planning

There is no national mine action strategy for Libya.

LibMAC do, however, prioritise survey and clearance operations and are responsible for issuing task orders. Prioritisation is, in part, informed by data collected and reported to LibMAC by operators such as Danish Demining Group (DDG), during non-technical survey or to explosive ordnance disposal (EOD), and by reports from the local community.[14]

Legislation and Standards

There is no national mine action legislation in Libya, but National Mine Action Standards (NMAS), in Arabic and English, have been elaborated with the support of the Geneva International Centre for Humanitarian Demining (GICHD) and UNMAS, and were approved by the Government of National Accord in August 2017. Libya's NMAS are available on the LibMAC website.[15]

As at April 2018, HI was reviewing and updating its standing operating procedures (SOPs) for Libya following the release of the new NMAS, which are aligned with International Mine Action Standards (IMAS).[16] DDG was also in the final stages of updating its SOPs, as at June 2018.[17]

Quality Management

UNMAS provides remote training and assistance to LibMAC in quality management (QM), from Tunis.[18]

Information Management

LibMAC receives technical support for the Information Management System for Mine Action (IMSMA) from the GICHD and UNMAS.

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 Defense.[19] The NSA is mandated to conduct EOD in civilian areas.[20] 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.

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.[21] 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 UNSMIL.[22]

Since 2015, UNMAS has trained more than 70 NSA 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.[23]

DanChurchAid (DCA) is operational in Libya, clearing ERW, and providing risk education, psychosocial support, armed violence reduction, and training of national authorities. Now in its seventh year of working in Libya, DCA reportedly has offices in Tripoli, Misrata and Benghazi.[24]

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.[25]

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 has one non-technical survey team and one EOD team, which it manages remotely. Security issues in the south continue to disrupt mine action operations and prevent continuous operations. In Tripoli, DDG works through its implementing partner, National NGO Free Fields Foundation (3F).

3F operates under DDG's accreditation and SOPs, and has an operational capacity of 37 people, comprising three EOD teams and one non-technical survey team.[26]

HI's mine action programme in 2017 continued to be remotely managed from Tunis.[27] In 2017, HI had three Risk Education teams, but no survey or clearance capacity in Libya. HI hoped to be able to deploy a roving survey and EOD capacity in 2018, in the Sirte and Misrata regions, in addition to Risk Education. [28]

HI trained two local partners in non-technical survey in 2016: Peace Organization from Zintan, and World Without War (3W) from Misrata. Both organisations received accreditation for non-technical survey from LibMAC after the training. Following the training, Peace Organization conducted non-technical survey under remote management by HI from Tunis.[29] Another of HI's implementing partners, AMACC, conducted non-technical survey in one CMR-suspected area in 2017.[30]

A number of other Libyan civil society organisations are also reported to carry out mine action operations, but they are not accredited by LibMAC.

Military engineers reportedly lack mine detectors and are working with basic tools. According to a military source quoted in Reuters, 50 have been killed and 60 wounded, over an unspecified time period.[31]

LAND RELEASE

There were no reports of planned CMR clearance during 2017 although a number of operators engaged in EOD operations. No CMR-contaminated area was reported to have been released by survey in 2017 either, although AMACC confirmed an area as CMR-contaminated through survey.

Survey in 2017

In 2017, HI's implementing partner, AMACC, reported undertaking non-technical survey of one suspected hazardous area (SHA) in the Kikla area, south-west of Tripoli, during which 50,400m^2 was confirmed as CMR-contaminated.[32]

Clearance in 2017

There was no reported planned clearance of CMR-contaminated area in 2017.

CMR were reportedly destroyed during EOD spot tasks in 2017, but information on the number of submunitions destroyed has not been reported by LibMAC.[33]

ARTICLE 4 COMPLIANCE

Libya 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.

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 IED disposal capacity in Libya; the vast geographical area; and the shortfall in governmental and international support.[34] Security conditions continued to pose a challenge to mine action in Libya, and as at June 2018, non-governmental organisations were frequently forced to suspend operations in the south-west due to poor security.[35]

In his February 2018 report on the work of UNSMIL, the UN Secretary-General stated that explosive ordnance "continue to pose a significant, indiscriminate threat to the civilian population" and urged "Member States to expand their funding to activities in priority areas through the provision of training and equipment."[36]

1 Email from Nina Seecharan, Desk Officer for Iraq, Lebanon and Libya, MAG, 5 March 2012.

2 C. J. Chivers, "Name the Cluster Bomb, an Update", New York Times, 2 February 2012.

3 Human Rights Watch, "Libya: Evidence of new cluster bomb use", 15 March 2015, at: http://www.hrw.org/news/2015/03/14/libya-evidence-new-clusterbomb-use.

4 Cluster Munition Monitor, "Libya: Cluster Munition Ban Policy", last updated 2 August 2017, at: http://www.the-monitor.org/en-gb/reports/2016/libya/cluster-munition-ban-policy.aspx.

5 Ibid.

6 "Lives and Limbs Shattered by Libya Mines", Asharq Al-Awsat, 5 April 2018.

7 UNMAS, "Libya: Humanitarian Mine Action", Last updated February 2016, at: http://www.mineaction.org/programmes/libya.

8 LibMAC website, accessed 25 June 2018, at: http://www.lmac.gov.ly/EN/about.html.

9 Email from Jakob Donatz, Associate Programme Officer, UNMAS, 21 June 2018.

10 Email from Roman Turšič, Head of Implementation Office Libya/Afghanistan, ITF, 26 February 2017.

11 Skype interview with Ezzedine Ata Alia, Administration Manager, LibMAC, 20 March 2017.

12 Interview with Col. Turjoman, Director, LibMAC, in Geneva, 10 January 2017.

13 Email from Roman Turšič, Head of Implementation Office Libya/Afghanistan, ITF, 26 February 2017.

14 Telephone interview with Darren Devlin, Programme Manager Libya, DDG, 20 June 2018; and email, 4 July 2018.

15 Libyan Mine Action Centre (LibMAC) website, accessed 25 June 2018, at http://www.lmac.gov.ly/; and Report of the Secretary-General on the United Nations Support Mission in Libya, UN Doc. S/2018/140, 12 February 2018, p.12.; and UNMAS, "Programmes: Libya", March 2018, at: http://www.mineaction.org/programmes/libya.

16 Email from Catherine Smith, Head of Mission, HI, 30 April 2018.

17 Telephone interview with Darren Devlin, DDG, 20 June 2018.

18 UNMAS, "Programmes: Libya", March 2018, at: http://www.mineaction.org/programmes/.

19 Interview with Col. Turjoman, LibMAC, in Geneva, 10 January 2017.

20 Email from Diek Engelbrecht, UNMAS Libya, 20 July 2013.

21 UNMAS, "Programmes: Libya", March 2018, at: http://www.mineaction.org/programmes/libya; 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.

22 Email from Jakob Donatz, UNMAS, 21 June 2018.

23 UNMAS, "Programmes: Libya", June 2018, at: http://www.mineaction.org/programmes/libya.

24 DCA website, accessed 18 June 2018, at: https://www.danchurchaid.org/where-we-work/libya.

25 Telephone interview with Darren Devlin, DDG, 20 June 2018; and email, 4 July 2018.

26 Ibid.

27 Email from Catherine Smith, HI, 30 April 2018.

28 Ibid.

29 Email from Catherine Smith, HI, 22 February 2017.

30 Email from Catherine Smith, HI, 30 April 2018.

31 "Mine still claim legs and lives in Libya's Benghazi, months after war ceased", *Reuters* , 21 January 2018.

32 Email from Catherine Smith, HI, 30 April 2018.

33 Email from Jakob Donatz, UNMAS, 21 June 2018.

34 PowerPoint presentation by Mohammad Turjoman, LibMAC, at the National Programme Director's Meeting, Geneva, 8 February 2017.

35 Telephone interview with Darren Devlin, DDG, 20 June 2018.

36 Report of the Secretary-General on the United Nations Support Mission in Libya, UN doc. S/2018/140, 12 February 2018, p. 16.

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	5	5
Target date for completion of cluster munition clearance	4	4
Targeted clearance	4	4
Efficient clearance	4	4
National funding of programme	4	4
Timely clearance	4	4
Land-release system in place	4	4
National mine action standards	4	4
Reporting on progress	5	5
Improving performance	4	4
PERFORMANCE SCORE: POOR	**4.2**	**4.2**

PERFORMANCE COMMENTARY

In 2017, Serbia cleared a small amount of area contaminated by cluster munition remnants (CMR), but continued to be hindered by a lack of international funding. Furthermore, the Serbian Mine Action Centre (SMAC) reports that, for the time being, any funding which is secured will be used to prioritise survey and clearance of anti-personnel mines, to contribute towards meeting its obligation under the Anti-Personnel Mine Ban Convention (APMBC). A re-assessment by the SMAC of the potential for increased use of technical survey is needed to improve land release efficiency and may help Serbia attract greater international support.

RECOMMENDATIONS FOR ACTION

- Serbia should identify funding, including from national sources, and elaborate an action plan for clearance of CMR and then clear all remaining contamination as soon as possible.
- Serbia should consider using its armed forces to conduct clearance of CMR as well as unexploded ordnance (UXO) and other explosive remnants of war (ERW), which they already clear.
- The SMAC should reconsider its decision to prioritise full clearance over technical survey, in areas where technical survey would be far more efficient in defining the actual hazardous area.
- Serbia should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.

CONTAMINATION

At the end of 2017, Serbia had five areas confirmed to contain CMR covering almost 0.64km^2, while a further nine areas over almost 1.9km^2 are suspected to contain CMR (see Table 1).[1] This compares to reported contamination as at the end of 2016 of 10 confirmed hazardous areas (CHAs) over a total of 0.83km^2, and 13 areas suspected hazardous areas (SHAs) over 2.0km^2.[2]

Table 1: CMR contamination by municipality (as at end 2017 and unchanged as at March 2018)[3]

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	1	190,359	0	0
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		**6**	**829,106**	**8**	**1,669,433**

CMR contamination results from North Atlantic Treaty Organization (NATO) air strikes in 1999. According to Serbia, NATO cluster munitions struck 16 municipalities: Brus, Bujanovac, Cacak, Gadžin Han, Knic, Kraljevo, Kuršumlija, Leposavic, Niš city-Crveni Krst, Niš city-Medijana, Preševo, Raška, Sjenica, Sopot, Stara Pazova, and Vladimirci.[4] In late 2014, a suspected area was newly identified in Tutin, a municipality not previously thought to be contaminated by CMR.[5]

Contamination in Serbia has a socio-economic impact as well as posing a humanitarian threat, impeding safe access to forest products, cattle, and mushroom picking. These represent main sources of income in some of the most underdeveloped municipalities, including Bujanovac, Sjenica, and Tutin. In addition, CMR-contamination impacts transport infrastructure, as well as the development of tourism.[6]

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).[7]

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).[8] The NMAA is responsible for developing standard operating procedures (SOPs); accrediting demining operators; and supervising the work of SMAC.[9]

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 SHAs. It also has a mandate to plan demining projects, conduct quality control (QC) and monitor operations, ensure implementation of international standards, license demining organisations, and conduct risk education.[10]

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 accrediting demining operators.[11]

A new director of SMAC was appointed by the Serbian government in the autumn of 2015,[12] and as at 2018, SMAC had a total of eight staff.[13] SMAC reported that, in 2016, restructuring resulted in a greater proportion of operational posts.[14]

Strategic Planning

The Government of Serbia adopts SMAC's workplan, as well as the Annual Report on its work.[15]

Legislation and Standards

According to SMAC, survey and clearance operations in Serbia are conducted in accordance with the International Mine Action Standards (IMAS).[16]

National mine action standards (NMAS) were said to be in the final phase of development as at September 2015.[17] 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.[18] However, this process has been hindered due to lack of capacity,[19] and as at April 2018, the development of the NMAS was still "in progress".[20]

Under new directorship, SMAC has reassessed its land release methodology to prioritise full clearance over technical survey of hazardous areas.[21] 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.[22]

SMAC's position on its preferred land release methodology remained the same as at April 2018. However, SMAC is prepared 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.[23] While no CMR survey took place in 2017, the reduction of mined area through technical survey in the municipality of Bujanovac in 2017[24] could indicate SMAC's greater willingness to adopt more efficient land release practices.

Quality Management

SMAC and its partner organisations undertake quality assurance (QA) and QC of clearance operations in mine- and ERW-affected areas.[25] Previously, on every clearance project, SMAC QC and QA officers were said to sample between 5% and 11% of the total project area, depending on project complexity and size.[26] However, due to limited SMAC quality management capacity, as at April 2018, the total project area to be sampled by SMAC had been reduced to 3%.[27]

Information Management

SMAC does not use the Information Management System for Mine Action (IMSMA) at present, but in 2015 had been discussing for some time the possibility of the system's future installation with the Geneva International Centre for Humanitarian Demining (GICHD).[28] There had been no further developments as at April 2018.[29]

Operators

SMAC does not itself carry out clearance or employ deminers but does conduct survey of areas suspected to contain mines, CMR, or other ERW. Demining is conducted by commercial companies and non-governmental organisations (NGOs), which are selected through public tender procedures executed by ITF Enhancing Human Security (ITF), through international donations.[30]

The Ministry of Interior issues accreditation valid for a period of 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.[31]

In 2017, a total of 30 deminers from the demining company Saturnia D.O.O. Belgrade, were deployed for CMR clearance in Serbia.[32] SMAC expected survey and clearance capacity to increase in 2018, pending approval of additional funding.[33]

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.[34]

LAND RELEASE

In 2017, a total of almost 0.18km² of CMR-contaminated area was released by clearance. No CMR-contaminated area was released by survey.[35]

Survey in 2017

No area of CMR was reported to have been released by survey in 2017.[36] This represents a decrease compared to 2016, when 0.9km² was reduced by technical survey.[37]

However, following new findings in Bujanovac municipality, SMAC conducted non-technical survey which resulted in an increase in the total size of SHA by 9,154m².[38]

In 2017, however, SMAC did report that it used data obtained from unmanned aerial vehicles during its process to develop CMR clearance and technical survey projects.[39]

Clearance in 2017

In 2017, one area totalling 177,120m² was cleared by contractors in the municipality of Sjenica (see Table 2).[40] This represents a decrease in output over 2016, when 247,032m² was cleared.[41]

Table 2: Clearance of CMR-contaminated areas in 2017[42]

Municipality	Operator	Areas cleared	Area cleared (m²)	Submunitions destroyed	Other UXO destroyed
Sjenica	Saturnia D.O.O. Belgrade	5 CHAs (in one micro-location/village)	177,120	76	1
Total		**5**	**177,120**	**76**	**1**

SMAC reported that while it had prepared several CMR clearance projects, these could not be implemented due to lack of funding in 2017.[43]

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 2017.[44]

Deminer Safety

One deminer was injured in 2017 during the CMR clearance project in the municipality of Sjenica, when a BLU 97 A/B submunition exploded during excavation. The deminer, who was reported to be following SOPs and was wearing personal protective equipment, sprained his right ankle and was scratched above the right eye.[45]

ARTICLE 4 COMPLIANCE

Serbia is not a state party to the CCM and therefore does not have a specific clearance deadline under Article 4 of the Convention. Nonetheless, Serbia has obligations under international human rights law to clear CMR as soon as possible.

In 2010–13, significant progress was made in clearing CMR-contaminated areas, but since then progress has stalled. Less than 4km² in total has been cleared in the last five years (see Table 3).

Table 3: Five-year summary of CMR clearance[46]

Year	Area cleared (km²)
2017	0.18
2016	0.25
2015	0.18
2014	0.29
2013	2.40
Total	**3.30**

SMAC is 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 QA and QC of demining.[47] Around €150,000 per year is allocated to the work of SMAC from the national state budget.[48] In addition, the UXO disposal work of the Sector for Emergency Situations of the Ministry of Interior is also state funded.[49]

In 2017, SMAC received $200,000 of United States Department of State funding, through ITF, for a clearance project in the municipality of Sjenica. As at April 2018, however, SMAC had not secured any additional funding for the next demining period.[50]

Since 2015, Serbia has also been allocating national funds for survey and clearance, with roughly €100,000 allocated per year.[51] In 2017, the €100,000 allocated from the national budget for technical survey in the municipality of Bujanovac, was matched by US$283,330 of US Department of State funding through ITF.[52] However, the national funding allocated in 2017 was allocated entirely for mine-related operations, rather than CMR, as part of Serbia's efforts to comply with its obligations under Article 5 of the APMBC.[53]

In 2018, the Serbian Government allocated double the amount of funds for demining operations, and it continues to seek international funding.[54] However, for the time being, and due to funding restraints, SMAC will continue to prioritise its national funding towards mine survey and clearance, rather than CMR.

In the draft of its latest APMBC Article 5 deadline extension request, dated 31 March 2018, Serbia includes a workplan for completion of CMR and UXO clearance by 2023, at a predicted total cost of €20 million, but CMR are not disaggregated from other ERW.[55] Progress in CMR clearance is 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.[56]

1 Email from Slađana Košutić, Planning and International Cooperation Advisor, SMAC, 12 April 2018; and Second APMBC Article 5 Extension Request (draft), received 31 March 2018, p. 24.

2 Email from Slađana Košutić, SMAC, 6 April 2017.

3 Emails from Slađana Košutić, SMAC, 12 April and 5 July 2018; and Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018, p. 24. Baseline contamination as at the end of 2017, compared to the end of 2016, does not reconcile, taking into account land release during 2017. This is because contamination in Sjenica municipality as at the end of 2016 incorrectly contained five SHAs totalling 342,241m^2 which were included by error, as SMAC has confirmed to Mine Action Review.

4 Statement of Serbia, APMBC intersessional meetings (Standing Committee on Mine Clearance), Geneva, 21 June 2011; interview with Petar Mihajlović, Director, and Slađana Košutic, SMAC, Belgrade, 25 March 2011; and SMAC, "About us", accessed 3 June 2016, at: http://www.czrs.gov.rs/eng/o-nama.php.

5 Email from Branislav Jovanović, SMAC, 4 May 2015.

6 Email from Slađana Košutić, SMAC, 12 April 2018.

7 "Mine situation", SMAC, accessed 5 May 2018, at: http://www.czrs.gov.rs/eng/minska-situacija.php; email from Slađana Košutić, SMAC, 12 April 2018; and Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018.

8 Official Gazette of the Republic of Serbia, No. 70/13.

9 Emails from Darvin Lisica, Regional Programme Manager, Norwegian People's Aid (NPA), 6 May and 12 June 2016.

10 "Law of Alterations and Supplementations of the Law of Ministries", Official Gazette, 84/04, August 2004; interview with Petar Mihajlović and Slađana Košutić, SMAC, Belgrade, 26 April 2010; and second APMBC Article 5 Extension Request (draft), received 31 March 2018, p. 17.

11 Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018, p. 17.

12 Interview with Jovica Simonović, SMAC, in Geneva, 18 February 2016.

13 Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018, p. 16.

14 Email from Slađana Košutić, SMAC, 6 April 2017; and interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017.

15 Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018, p. 16.

16 "Mine Situation, April 2018", SMAC, accessed 12 April 2018, at: http://www.czrs.gov.rs/eng/minska-situacija.php.

17 Interview with Branislav Jovanović, SMAC, in Dubrovnik, 10 September 2015.

18 Email from Slađana Košutić, SMAC, 6 April 2017.

19 Interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017.

20 Email from Slađana Košutić, SMAC, 12 April 2018.

21 Interview with Jovica Simonović, SMAC, in Geneva, 18 February 2016.

22 Ibid.

23 Interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017; and email from Slađana Košutić, SMAC, 12 April 2018.

24 Email from Slađana Košutić, SMAC, 12 April 2018.

25 Email from Branislav Jovanović, SMAC, 4 May 2015.

26 Ibid.

27 Email from Slađana Košutić, SMAC, 12 April 2018.

28 Email from Branislav Jovanović, SMAC, 4 May 2015.

29 Email from Slađana Košutić, SMAC, 12 April 2018.

30 Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018, p. 18.

31 Ibid., p. 17.

32 Email from Slađana Košutić, SMAC, 12 April 2018.

33 Ibid.

34 Interview with Jovica Simonović, SMAC, Belgrade, 16 May 2017.

35 Email from Slađana Košutić, SMAC, 12 April 2018.

36 Ibid.

37 Email from Slađana Košutić, SMAC, 6 April 2017.

38 Email from Slađana Košutić, SMAC, 5 July 2018.

39 Email from Slađana Košutić, SMAC, 12 April 2018.

40 Ibid.

41 Email from Slađana Košutić, SMAC, 6 April 2017.

42 Emails from Slađana Košutić, SMAC, 12 April and 5 July 2018.

43 Email from Slađana Košutić, SMAC, 12 April 2018.

44 Ibid.

45 Ibid.

46 Data from Mine Action Review and Cluster Munition Monitor reports on Serbia covering 2013–16.

47 "About us", SMAC, accessed 3 June 2016; and Second APMBC Article 5 deadline Extension Request (draft), received 31 March 2018, p. 16.

48 Ibid.

49 "Mine situation", SMAC, accessed 5 May 2018, at: http://www.czrs.gov.rs/eng/minska-situacija.php;

50 Email from Slađana Košutić, SMAC, 12 April 2018.

51 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, 31 March 2018.

52 Second APMBC Article 5 deadline Extension Request (draft), 31 March 2018, p. 16.

53 Email from Slađana Košutić, SMAC, 12 April 2018.

54 Second APMBC Article 5 Extension Request (draft), received 31 March 2018, p. 9.

55 Ibid., p. 33.

56 Email from Slađana Košutić, SMAC, 12 April 2018.

SOUTH SUDAN

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	6	6
Target date for completion of cluster munition clearance	5	5
Targeted clearance	8	8
Efficient clearance	6	6
National funding of programme	4	4
Timely clearance	5	5
Land-release system in place	7	7
National mine action standards	8	8
Reporting on progress	6	6
Improving performance	5	7
PERFORMANCE SCORE: AVERAGE	**6.0**	**6.2**

PERFORMANCE COMMENTARY

Land release of cluster munition remnant (CMR)-contaminated areas plummeted in South Sudan in 2017, from nearly 3.5km^2 in 2016 to just over 1km^2 in 2017. This was largely due to security concerns from the ongoing conflict which greatly affected all mine action operations during the year. As a result of the heightened insecurity, there was a shift away from large area clearance tasks to focus capacity on explosive ordnance disposal (EOD) spot tasks with smaller, more mobile teams, which significantly reduced the amount of area of surveyed and cleared CMR contamination.[1]

RECOMMENDATIONS FOR ACTION

- South Sudan should accede to the Convention on Cluster Munitions (CCM) in 2018 in line with the decision taken by the Council of Ministers to join the Convention announced in September 2017.
- Operator and national reporting formats should disaggregate submunitions from other unexploded ordnance (UXO). Mine action data should be recorded and reported according to International Mine Action Standards (IMAS) land release terminology, and the national database should clearly reflect cluster munition survey and clearance disaggregated from other contamination.
- 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.
- South Sudan should consider organising a resurvey of areas suspected to contain CMR with a view to more accurately determining the baseline of contamination.
- 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 include support for the capacity development of government institutions and the national mine action programme.

CONTAMINATION

At the end of 2017, South Sudan had a total of 143 areas suspected and confirmed to contain CMR, with a total size estimated at just over 4.5km^2.[2] This is a small reduction on the total of 142 areas that remained at the end of 2016 over nearly 4.6km^2.[3] Areas of CMR contamination from decades of pre-independence conflict continued to be identified in 2017, and the threat was compounded by ongoing fighting which broke out in December 2013.[4] In March 2018, the United Nations Mine Action Service (UNMAS) informed Mine Action Review that the actual size of CMR contamination is likely to be greater than recorded estimates, as in many of the strike areas multiple cluster munition canisters are found with the consequence that the overall contaminated area extends well beyond an expected standard footprint.[5]

Despite the signature of the Agreement on the Resolution of the Conflict in the Republic of South Sudan in August 2015, UNMAS reported that sporadic fighting continued across the country in 2017, which it said "continues to litter vast swathes of land, roads and buildings" with explosive ordnance.[6] Ongoing insecurity, particularly in the Greater Upper Nile region (Jong lei, Unity, and Upper Nile states), persisted in preventing access to confirm or address CMR contamination.[7]

Seven of South Sudan's former ten states have areas suspected to contain CMR (see Table 1), with Central, Eastern, and Western Equatoria remaining the most heavily contaminated.[8] Clearance of the last known remaining CMR-contaminated area in Lakes state (with a size of 525m^2) was completed in 2017.[9]

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. Many types of submunitions have been found, including Spanish-manufactured HESPIN 21, US-manufactured M42 and Mk118 (Rockeyes), Chilean-made PM-1, and Soviet-manufactured PTAB-1.5 and AO-1SCh submunitions.[10]

In 2006–16, at least 746 sites containing CMR were identified across all 10 states in South Sudan, including new contamination as a result of renewed conflict since December 2013.[11] In 2017, an additional 14 CMR-contaminated areas were identified, of which five were cleared during the year.[12] CMR have been found in residential areas, farmland, pastures, rivers and streams, on hillsides, in desert areas, in and around former military barracks, on roads, in minefields, and in ammunition storage areas.[13]

In February 2014, evidence of new CMR contamination was discovered south of Bor, in Jonglei state.[14] Evidence indicated the cluster munitions had been used in previous weeks during the conflict between opposition forces supporting South Sudan's former Vice President Riek Machar and the Sudan People's Liberation Army (SPLA) government forces, which received air support from Uganda. In September 2014, South Sudan reported that a joint government-UNMAS team had investigated the allegations and established that cluster munitions had been used, but could not determine the user.[15]

Table 1: CMR contamination by Sudanese state (as at end 2017)[16]

State	CHAs with CMR	Area (m²)	SHAs with CMR	Area (m²)
Central Equatoria	22	468,545	31	880,315
East Equatoria	25	1,867,197	41	595,611
Jonglei	2	29,760	3	10,000
Unity	1	59,000	1	40,000
Upper Nile	0	0	1	0
West Bahr El Ghazal	1	120,000	1	0
West Equatoria	9	213,772	5	249,482
Totals	**60**	**2,758,274**	**83**	**1,775,408**

CHA = Confirmed hazardous area SHA = Suspected hazardous area

CMR contamination in South Sudan continues to pose a physical threat to local populations, curtails freedom of movement, and significantly impedes development.[17] In 2017, due to the ongoing violence, internally displaced populations remained particularly vulnerable to CMR and other explosive remnants of war (ERW) as they moved across unfamiliar territory. CMR contamination continued to limit access to agricultural land and increased food insecurity, at a time when nearly six million South Sudanese were nutritionally insecure. CMR and other ERW continued to prevent the delivery of food and other vital humanitarian aid.[18]

Mines Advisory Group (MAG), reported that in its areas of operations in Central Equatoria state, CMR contamination continued to have a humanitarian as well as socio-economic impact, but clearance in and around Tindalo, Terekeka, and Yei counties during the year allowed food aid to be delivered by agencies such as the World Food Programme and released land was used for growing crops and by cattle farmers.[19]

Other Explosive Remnants of War and Landmines

South Sudan has a significant problem with mines and 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).

At the start of 2018, almost six million people in South Sudan were living with the threat of ERW, including more than 1.8 million South Sudanese internally displaced since the outbreak of fighting in 2013. According to UNMAS, surveys of internally displaced persons identified a fear of ERW as among the most significant reasons for their inability to return home.[20] UNMAS has claimed that the socio-economic cost of mines and ERW in South Sudan in terms of interrupted agricultural production, food insecurity, halted commerce, and the lack of freedom of movement is "incalculable".[21] In 2017, agricultural production in South Sudan dropped compared with the previous year, attributed in large part to the mass migration of populations and inability to access safe land to cultivate crops.[22]

In 2017, a total of 56 persons were reported as mine and ERW casualties (48 injured and 8 killed). In 2016, a total of 45 mine and ERW casualties were recorded (32 injured and 13 killed).[23]

PROGRAMME MANAGEMENT

The South Sudan Demining Authority (SSDA) – since named 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.[24]

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.[25] The NMAA takes the lead on victim assistance and risk education.[26]

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 2017. It requires substantial resources and capacity building assistance if it is to operate effectively.[27]

UN Security Council Resolution 1996 authorised UNMISS to support mine action through assessed peacekeeping funds.[28] 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.[29]

Strategic Planning

In 2017, the NMAA, with support from the Geneva International Centre for Humanitarian Demining (GICHD) and funding from Japan, developed the South Sudan National Mine Action Strategy 2018–2022. As at March 2018, it had been finalised but not yet published.[30] According to UNMAS, the strategy, which does not contain significant provisions relating to CMR contamination, has three primary objectives and related targets:[31]

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 livelihoods activities.

The strategy includes a section on gender and diversity, 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 were also incorporated in the strategy.[32]

Legislation and Standards

According to UNMAS, the National Technical Standards and Guidelines (NTSGs) for mine action in South Sudan are organic documents subject to constant review. In 2017, the medical and quality management chapters were revised.[33] The NTSGs, which contain provisions specific to CMR survey and clearance, are monitored by UNMAS and the NMAA.[34]

Quality Management

UNMAS reported that external quality assurance (QA) and quality control (QC) operations were carried out throughout 2017 on all mine action operators in South Sudan, with all teams subject to external inspections by UNMAS and the NMAA.[35]

Due to constraints on the movement of UN staff due to increasing security concerns, at the end of 2016 UNMAS contracted a private company, Janus Global Operations, to conduct external QA/QC on behalf of UNMAS in South Sudan.[36] In 2017, external QA continued to be conducted by Janus as a subcontractor to UNMAS, though QA/QC procedures were updated towards the end of the year.[37] UNMAS stated that external quality management process was adjusted to focus more on mentoring field management.[38] Operators reported improvements in the QA system in 2017 and better collaboration between Janus/UNMAS and mine action operators.[39]

Operators

Three international demining non-governmental organisations (NGOs) operated in South Sudan in 2017: DanChurchAid (DCA), Danish Demining Group (DDG), and MAG. Three commercial companies also conducted demining: G4S Ordnance Management (G4S), Mechem, and The Development Initiative (TDI). No national demining organisations were involved in clearance in 2017.[40] As noted above, Janus was engaged in quality management for UNMAS.

According to UNMAS, almost 1,000 people were working in mine action operations in South Sudan in 2017. Mine action capacity deployed included two road assessment and clearance teams with four mine detection dogs (MDDs) each; five mechanical clearance teams with integrated manual deminer support (deploying two MineWolf 240, one MineWolf 330; one Bozena, and one PT300 demining machine); 16 eight-person multi-task teams (MTTs); eight nine-person quick reaction teams; four 15-person mine action teams; and 12 explosive ordnance disposal (EOD)/survey teams.

According to UNMAS, all teams are equipped to conduct CMR clearance, but teams are primarily tasked on a geographical basis, and as such, their deployment to clear cluster munition strikes is determined by local prioritisation.[41]

UNMAS reported that conflict and ongoing insecurity in 2017 undermined the ability of all operators to conduct sustained clearance operations in many parts of the country. This restricted the deployment of mine clearance teams leading to a reconfiguration of resources to field more mobile and smaller teams. Focus shifted to the prioritisation of reactive EOD spot tasks over area clearance and re-survey of previously suspected areas thought to have overstated estimates of contamination.[42]

UNMAS assigns CMR tasks to operators. In 2017, only three operators, MAG, G4S, and TDI, carried out CMR-related tasks, in contrast to 2016, when CMR survey and clearance activities were undertaken by eight operators (DCA, DDG, MAG, Norwegian People's Aid (NPA), G4S, Mechem, Dynasafe MineTech International (DML), and TDI).

LAND RELEASE

Less than 1.1km^2 of CMR-contaminated area was released in 2017, a huge decrease from the nearly 3.5km^2 of CMR-contaminated area released in 2016.[43] This was due in large part to the shift in overall mine action activities from area clearance tasks to reactive EOD spot tasks due to security constraints.[44] In contrast, in 2016, the bulk of mine action capacity was redeployed to address CMR tasks in response to humanitarian priorities and UN-mission directed activities. [45]

Survey in 2017

The UNMAS database indicates that one CMR-contaminated SHA of just under 61,000m^2 was cancelled by survey in 2017, while 14 SHAs with a total size of 0.7km^2 were confirmed as contaminated with CMR (see Table 2).[46] This compares to 2016, when 55 SHAs of nearly 0.92km^2 of land were confirmed as contaminated with CMR.[47]

Table 2: CMR survey in 2017[48]

Operator	SHAs cancelled	Area cancelled (m^2)	SHAs confirmed	Area confirmed (m^2)
G4S	1	60,958	7	54,760
MAG	0	0	6	475,994
TDI	0	0	1	10,128
Expansion of previously recorded CHAs	0	0	0	176,268
Totals	**1**	**60,958**	**14**	**717,150**

Clearance in 2017

Just over 1km² of CMR-contaminated area was cleared in 2017, with the destruction of 629 submunitions, as shown in Table 3.[49] As noted above, this is a significant decrease from 2016, when close to 3.5km² of CMR-contaminated area was cleared, with the destruction of more than 3,000 submunitions.[50]

In addition, in 2017, five operators (DCA, DDG, MAG, G4S, and TDI) conducted battle area clearance (BAC) of just over 8.2km² and closed 1,295 spot tasks, and destroyed a total of 34,600 items of UXO.[51] This is an increase compared to an output of almost 8km² of BAC and 1,947 EOD spot tasks carried out in 2016, and the destruction of close to 20,200 items of UXO.[52]

Table 3: Clearance of CMR-contaminated areas in 2017[53]

Operator	Areas cleared	Area cleared (m²)	Submunitions destroyed	AP mines destroyed	AV mines destroyed	Other UXO destroyed
G4S	6	343,057	76	0	0	113
MAG	7	695,742	553	20	3	34
Totals	**13**	**1,038,799**	**629**	**20**	**3**	**147**

AP (mine) = Anti-personnel mine AV (mine) = Anti-vehicle mine

Deminer Safety

Mine action operators continued to face serious threats to the security of their operations and personnel due to the ongoing conflict. In 2017, there was an ambush on a demining contractor in which four personnel were seriously injured. In June 2018, UNMAS reported that an investigation into the incident found it to have been ethnically motivated. There were also several instances of criminality in which teams were robbed by armed groups during the year.[54]

ARTICLE 4 COMPLIANCE

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.

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.[55] This is reinforced in South Sudan's new National Mine Action Strategic Plan 2018–2022, which includes a specific objective that South Sudan should accede to the CCM in 2018.[56]

Due to the ongoing conflict, it is not possible to predict when South Sudan might complete clearance of CMR on its territory, nor estimate the true extent of contamination.[57] According to UNMAS, in 2018 the national mine action programme would prioritise re-survey of large SHAs which remained in the database, recorded as far back as 2003, for which there was little evidence to support the recording, in order to better define the extent of contamination. It expected that significant cancellation of previously recorded SHAs would occur as a result, with the effectiveness of the re-survey process dependant on access restrictions posed by ongoing fighting.[58]

According to UNMAS, the Government of South Sudan is only able to provide minimal funding and support to all national institutions, including the NMAA. In 2017, all mine action activities were funded by the UN or international bilateral donors.[59] UNMAS anticipated that there would be a potential reduction in funding for mine action in 2018, and a corresponding reduction in capacity and limitation on the timeliness of responses. It raised serious concerns over resource mobilisation in the face of overwhelming donor fatigue and frustration due to the ongoing conflict, which continues to exacerbate the emergency humanitarian crisis. Mine action, which is a critical enabler for humanitarian assistance, is not prioritised by donors, who are increasingly unwilling to support Government institutions until a peace agreement is implemented.[60]

MAG reported that it was concentrating operations in 2018 in Central Equatoria state with the aim of completing survey of the entire state. Reports of areas of CMR contamination would be prioritised for survey and clearance wherever possible, it said.[61]

The surge in fighting in July 2016 had a significant impact on demining activities across the country throughout 2017. The security situation dominated all land release operations in 2017, greatly impeding the ability of clearance operators to deploy personnel and move heavy equipment across the country.[62] Security incidents on the majority of road networks severely curtailed transport while increasing support costs compared with previous years. Additionally, the political and ethnic elements of the conflict created a risk for the deployment of deminers based on their ethnicity in certain areas, further restricting areas of mine action operations.[63]

1 Emails from Tim Lardner, Chief, Mine Action, United Nations Mine Action Service (UNMAS), 27 February and 1 March 2018.

2 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

3 Email from Robert Thompson, Chief of Operations, UNMAS, 19 April 2017.

4 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: http://www.mineaction.org/sites/default/files/print/country_portfolio6892-1530-44691.pdf.

5 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, however the size of the strike area is likely greater than currently recorded estimates.

6 UNMAS, "2018 Portfolio of Mine Action Projects: South Sudan", at: http://www.mineaction.org/sites/default/files/print/country_portfolio7362-951-78794.pdf.

7 Ibid.

8 Email from Robert Thompson, UNMAS, 19 April 2017.

9 Ibid.

10 Cluster Munition Monitor, "Country Profile: South Sudan: Cluster Munition Ban Policy", updated 23 August 2014. See also UNMAS, "Reported use of Cluster Munitions South Sudan February 2014", 12 February 2014; and UNMISS, "Conflict in South Sudan: A Human Rights Report", 8 May 2014, p. 26.

11 Email from Robert Thompson, UNMAS, 12 May 2014.

12 Emails from Richard Boulter, UNMAS, 6 June 2018; and Robert Thompson, UNMAS, 19 April and 7 June 2017.

13 UNMAS, "2018 Portfolio of Mine Action Projects: South Sudan"; and South Sudan, "National Mine Action Strategic Plan 2012–2016", Juba, 2012, pp. 4–6, 9.

14 UNMAS, "Reported use of Cluster Munitions South Sudan February 2014", 12 February 2014. See also UNMISS, "Conflict in South Sudan: A Human Rights Report", 8 May 2014, p. 26.

15 Statement by South Sudan, CCM Fifth Meeting of States Parties, San José, 3 September 2014.

16 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

17 Ibid.; and emails from Robert Thompson, UNMAS, 21 April 2016; and Hilde Jørgensen, Desk Officer for Horn of Africa, Norwegian People's Aid (NPA), 19 May 2016.

18 UNMAS, "2018 Portfolio of Mine Action Projects: South Sudan".

19 Email from Katie Shaw, Programme Officer, MAG, 10 May 2018.

20 UNMAS, "2018 Portfolio of Mine Action Projects: South Sudan".

21 Ibid.

22 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

23 UNMAS, "IMSMA Monthly Report", January 2018.

24 "South Sudan De-Mining Authority", undated, at: http://www.goss-online.org/.

25 South Sudan, "South Sudan National Mine Action Strategic Plan 2012–2016", Juba, 2012, p. iv.

26 Response to questionnaire by Robert Thompson, UNMAS, 24 May 2013.

27 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

28 UNMISS, "United Nations Mine Action Coordination Centre [UNMACC]", undated, at: http://unmiss.unmissions.org/Default.aspx?tabid=4313&language=en-US.

29 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

30 Ibid.

31 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018; and Richard Boulter, UNMAS, 6 June 2018.

32 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

33 Ibid.

34 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.

35 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

36 Emails from William Maina, Mine Action Operations Manager, DDG, 2 May 2017; and Bill Marsden, Regional Director East and Southern Africa, MAG, 10 May 2017.

37 Emails from Katie Shaw, MAG, 10 May 2018; and William Maina, DDG, 6 February 2018.

38 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

39 Emails from Katie Shaw, MAG, 10 May 2018; and William Maina, DDG, 6 February 2018.

40 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018. NPA and Dynasafe MineTech Limited (DML) ceased operations in South Sudan in 2016.

41 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

42 Ibid.; and email from Richard Boulter, UNMAS, 6 June 2018.

43 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018; and Robert Thompson, UNMAS, 19 April 2017 and 21 April 2016.

44 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

45 Email from Robert Thompson, UNMAS, 7 June 2017.

46 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

47 Ibid.; and email from Robert Thompson, UNMAS, 19 April 2017.

48 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

49 Ibid.; and emails from Mohammad Kabir Rahimi, UNMAS, 18 June 2018; and Katie Shaw, MAG, 18 June 2018.

50 Email from Robert Thompson, UNMAS, 19 April 2017.

51 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

52 UNMAS, "IMSMA Monthly Report", December 2016.

53 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018; Mohammad Kabir Rahimi, UNMAS, 18 June 2018; and Katie Shaw, MAG, 18 June 2018.

54 Emails from Richard Boulter, UNMAS, 6 June 2018; and Tim Lardner, UNMAS, 27 February and 1 March 2018.

55 Statement of South Sudan, CCM 7th Meeting of States Parties, Geneva, 5 September 2017.

56 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

57 Ibid.; and response to questionnaire by Robert Thompson, UNMAS, 30 March 2015.

58 Emails from Richard Boulter, UNMAS, 6 June 2018; and Tim Lardner, UNMAS, 27 February and 1 March 2018.

59 Ibid.; and UNMAS, "2018 Portfolio of Mine Action Projects: South Sudan".

60 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

61 Email from Katie Shaw, MAG, 10 May 2018.

62 Emails from Tim Lardner, UNMAS, 27 February and 1 March 2018.

63 Email from William Maina, DDG, 6 February 2018.

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	4	4
Target date for completion of cluster munition clearance	3	3
Targeted clearance	4	4
Efficient clearance	5	5
National funding of programme	5	5
Timely clearance	3	4
Land-release system in place	7	7
National mine action standards	7	7
Reporting on progress	6	5
Improving performance	7	7
PERFORMANCE SCORE: AVERAGE	**5.1**	**5.1**

PERFORMANCE COMMENTARY

As at March 2018, Sudan's National Mine Action Centre (NMAC) reported that only two areas suspected to contain cluster munition remnant (CMR) contamination remained to be addressed. The areas, with a total size of 2km^2, were in South and West Kordofan states. No CMR survey or clearance, though, took place in 2017.

RECOMMENDATIONS FOR ACTION

- Sudan should make every effort to clear the last remaining areas suspected to contain CMR as soon as possible.
- Sudan should accede to, and abide by, the Convention on Cluster Munitions (CCM) as a matter of priority.
- Sudan should re-establish conditions that allow international demining organisations to operate in Sudan.
- 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.

CONTAMINATION

The exact extent of contamination from CMR in Sudan is not fully known. There have been reports of new use of cluster munitions as recently as 2015, as well as in 2012.[1] According to the NMAC, at the start of 2018, only two areas were suspected to contain CMR contamination in Sudan, one in South Kordofan and the other in West Kordofan state, each with an estimated size of 1km^2.[2] 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.[3]

Previously, in April 2017, the African Union – United Nations Mission in Darfur (UNAMID) reported the presence of two AO-1Sch 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.[4] The Sudanese Armed Forces Engineers destroyed the items in February 2018 and no further CMR were reported or identified.[5]

Previously, the most recent estimate of contamination dated back to June 2011, when 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).[6]

Table 1: CMR-contaminated areas as 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 15,318m^2 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 2016–17.[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-1SCh submunitions.[11]

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.[12] In 2013–15, the UN published reports of evidence of previous use of cluster munitions in Darfur, the stockpiling of RBK-500 cluster munitions and AO-2.5RT submunitions by the Sudanese Air Force, and fluctuating stock levels indicative of use for operations or for training.[13]

On several occasions, the Government of Sudan has denied using cluster munitions in attacks in South Kordofan.[14] The UN Secretary-General called on the Government of Sudan "to immediately investigate the use of cluster munitions".[15] In 2016, NMAC claimed that Sudan had never used cluster munitions "in operations against rebels".[16] This is not a factually accurate statement.

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).

As at June 2018, eight of Sudan's eighteen states were contaminated with mines/explosive remnants of war (ERW), with Blue Nile and South Kordofan states the most heavily affected.[17] Mines and ERW continued to exacerbate the humanitarian crisis, where in parts of South Kordofan, chronic malnutrition surpassed emergency levels, and in Blue Nile state, more than 40% of households were severely nutritionally insecure.[18]

While limited CMR contamination has, in the past, been identified in Darfur, there is significant contamination from other ERW, which continue to pose a serious threat to civilians, UNAMID peacekeepers, and to the delivery of humanitarian aid.[19]

As at April 2018, Sudan's three eastern states had been declared free of mines and ERW, following 12 years of clearance efforts. Clearance in Gadaref state was completed in May 2016 and in Red Sea state in May 2017 while Kassala state was declared clear of mines and ERW on 4 April 2018.[20] In Darfur, two localities in West Darfur have been declared free of ERW: Forobaranga in April 2017 and Kereinik in February 2018.[21]

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.[22] 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.[23]

In 2002 through to January 2018, a total of 2,091 mine and ERW casualties were recorded in Sudan, of whom 597 were killed and the other 1,494 were injured.[24] In 2017, a total of 39 casualties were recorded in Sudan (eight killed and thirty-one injured), a significant increase on the 23 casualties in 2016 (three killed and twenty injured).[25]

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).[26] The same year, the NMAC initiated a partnership with UNMAO; the NMAA was set up; and a National Mine Action Policy Framework was developed, before being approved in 2006.[27]

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.[28]

In Darfur, under the umbrella of UNAMID, UNMAS works under the name of the Ordnance Disposal Office (ODO) in direct support of UNAMID priorities.[29] In 2017, Dynasafe MineTech Limited (DML), a commercial company, was awarded a new UN contract for the Fiscal Year 2017–18 to conduct ERW rapid-response clearance and to provide mentoring support to national Multi-Task Teams (MTTs) in Darfur.[30] Mine action in Darfur is funded through assessed peacekeeping funds for UNAMID.[31]

Strategic Planning

As at March 2018, NMAC reported that it was coordinating with the Geneva International Centre for Humanitarian Demining (GICHD) to review its national strategic mine action plan, which is set to expire in 2019.[32] The current National Mine Action Plan for 2016–19 to meet Sudan's obligations under the Anti-Personnel Mine Ban Convention (APMBC) does not specifically address CMR.[33]

Legislation and Standards

In 2015, NMAC stated that a review of the National Mine Action Standards (NMAS) was ongoing and that a new version would be published on its website after their approval.[34] In March 2018, NMAC reported that the process of reviewing the NMAS was in its final stages but had not yet been completed.[35] According to NMAC, draft standards are shared with all partners and mine action operators during their accreditation process, but do not contain a specific chapter on cluster munitions.[36]

Quality Management

NMAC reported that its quality management section conducted routine quality assurance (QA) visits to the field in 2017, including quality control and sampling.[37]

Information Management

In March 2018, NMAC informed Mine Action Review that a process of upgrading the software of its Information Management System for Mine Action (IMSMA) database to a newer version, IMSMA-NG, remained in progress, with assistance from GICHD. Significant efforts to correct errors in the database were also ongoing.[38] The database does not contain information on the disputed Abyei area.[39]

Operators

In 2017, no international non-governmental organisation (NGO) was demining in Sudan. Commercial operator DML, contracted to clear ERW in Darfur and to provide support for national MTTs, deployed two seven-strong rapid-response teams and a mentoring capacity of six persons, for a total staff of 29.[40]

Since 2015, NMAC has made repeated calls for other international NGO operators to undertake mine action in Sudan.[41] Previously, two international demining NGOs with programmes in Sudan closed down operations owing to government restrictions that impeded their operations.[42] DanChurchAid (DCA) ended its operations in 2012.[43] In June 2012, the Sudanese government's Humanitarian Aid Commission (HAC) ordered Mines Advisory Group (MAG) and six other NGOs that provided humanitarian aid to leave Gadaref, Kassala, and Red Sea states in eastern Sudan.[44] Following months of negotiations with HAC and donors, MAG ended its operations in Sudan, leaving in early 2013.[45]

National demining operators are JASMAR for Human Security, National Units for Mine Action and Development (NUMAD), and FPDO. In 2017, a total of eight manual clearance teams (MCTs), eleven MTTs, two mechanical teams, and two mine detection dog (MDD) teams were deployed for mine action operations.[46] This was a significant increase compared with 2016, when a total of five MCTs, nine MTTs, four mine action teams, one mechanical team, and two MDD teams were deployed.

LAND RELEASE

NMAC reported that no CMR-specific survey or clearance took place in 2017.[47] NMAC does not distinguish between different types of ERW in its reporting on clearance and has not reported any survey or 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 15,300m^2 were cleared with the destruction of 13 PM-1 submunitions.[48]

In 2017, a total of just under 2.85km^2 of battle area was released in Sudan, an increase from close to 1.52km^2 in 2016. Overall land release reported fell in 2017, however, to a total of just under 3.9km^2, compared to just over 6.4km^2 in 2016.[49] NMAC reported that the increase in battle area clearance (BAC) in 2017 was due to a shift in focus to clearing high-impact ERW contamination in Blue Nile state close to communities where accidents were being reported. This amounted to just over 2km^2 out of the total 2.85km^2 of battle area cleared, whereas the focus in 2016 was on clearance of mines from Sudan's three eastern states.[50]

ARTICLE 4 COMPLIANCE

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.[51]

Ongoing conflict and a lack of access to significant areas of remaining contamination, along with a lack of recent data or records of CMR contamination disaggregated from UXO, make it difficult to estimate when Sudan could complete CMR survey and clearance.

Significant progress has though, been made to address remaining mine and ERW contamination. Notably, in 2018, Kassala state was officially declared free of mines and ERW on 4 April, joining Red Sea state in 2017 and Gadaref state in 2016, to make all three of Sudan's formerly contaminated eastern states free of contamination. In March 2018, however, Sudan submitted a request for an extension of its APMBC Article 5 clearance deadline for a period of four years to 1 April 2023. The 2018 extension request does not contain any mention of remaining CMR contamination or plans for survey and clearance of these areas.

NMAC expected to receive increased funding in 2018 compared to 2017, and would expand operations in Blue Nile and South Kordofan.[52] It stated that with increased accessibility to remaining areas of contamination in Blue Nile and South Kordofan and following new survey and re-survey activities, a clearer and accurate picture of its mine action needs and capacity could then be presented and invited international NGOs and commercial companies to consider their possible external contributions to the overall national clearance efforts.[53]

1 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.

2 Email from Hatim Khamis Rahama, Technical Advisor, NMAC, 3 March 2018.

3 Email from Hatim Khamis Rahama, NMAC, 14 June 2018.

4 Email from Dandan Xu, Associate Programme Management Officer, UNMAS, 12 July 2017.

5 Email from Colin Williams, Deputy Programme Manager, Ordnance Disposal Office (ODO), UNAMID, 1 June 2018.

6 The locations are based on a review of sites in the UNMAO database by Mine Action Review.

7 Emails from Mohamed Kabir, Chief Information Officer, UNMAO, 27 June 2011; and Hatim Khamis Rahama, NMAC, 14 June 2018. NMAC reported in June 2018 that the 1km^2 area reported remaining in 2018 in West Kordofan state was discovered in May 2009 by Mechem; however, at that time West Kordofan state had not yet been divided from South Kordofan.

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 stated 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 Ibid.; and email from Ali Abd Allatif Ibrahim, NMAC, 18 May 2017.

11 V. Wiebe and T. Peachey, "Clusters of Death: The Mennonite Central Committee Cluster Bomb Report", Chapter 4, July 2000; Handicap International, Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities, May 2007, p. 55; and Cluster Munition Monitor, "Country Profile: Sudan: Cluster Munition Ban Policy", updated 23 August 2014. See also UNMAS, "Reported use of Cluster Munitions South Sudan February 2014", 12 February 2014; and UN Mission in South Sudan (UNMISS), "Conflict in South Sudan: A Human Rights Report", 8 May 2014, p. 26, at: http://unmiss.unmissions.org/Portals/unmiss/Human Rights Reports/UNMISS Conflict in South Sudan - A Human Rights Report.pdf.

12 See Cluster Munition Monitor, "Country Profile: Sudan: Cluster Munition Ban Policy", updated 23 August 2014.

13 "Report of the Panel of Experts on Sudan established pursuant to resolution 1591 (2005)", UN doc. S/2014/87, 11 February 2014, pp. 23 and 91; and "Report of the Secretary-General on the African Union-United Nations Hybrid Operation in Darfur", UN doc. S/2015/378, 26 May 2015, p. 12.

14 "Sudan denies use of cluster bombs", United Press International, 28 May 2012; and "Sudan denies using cluster bombs in South Kordofan", World Bulletin, 17 April 2015, at: http://www.worldbulletin.net/world/158004/sudan-denies-using-cluster-bombs-in-sth-kordofan.

15 UN Security Council Resolution 2228 (2015); and UN, "Prioritizing Civilian Protection, Drawdown Benchmarks, Security Council Adopts Resolution 2228 (2015) Renewing Mandate of Darfur Mission until 30 June 2016", Press release SC/11951, 29 June 2015, at: http://www.un.org/press/en/2015/sc11951.doc.htm.

16 Email from Ahmed Elser Ahmed Ali, NMAC, 8 June 2016.

17 Email from Hatim Khamis Rahama, NMAC, 14 June 2018.

18 "Sudan: First Convoy of Sudanese Refugees from Chad", AllAfrica, 26 April 2018, at: http://allafrica.com/stories/201804270528.html.

19 UNMAS, "2018 Portfolio of Mine Action Projects, Sudan", at: http://www.mineaction.org/sites/default/files/print/country_portfolio7506-951-77697.pdf

20 Ibid.; and "Sudan: First Convoy of Sudanese Refugees from Chad", AllAfrica, 26 April 2018.

21 E. Nwadike, Programme Officer, Ordnance Disposal Office, "UNAMID Ordnance Disposal Office Supports the Government of Sudan and UNAMID Stabilization Efforts in Kereinik Locality, West Darfur", at: http://www.mineaction.org/sites/default/files/documents/Story%20on%20Kereinik%20locality.pdf

22 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.

23 UNMAS, "2018 Portfolio of Mine Action Projects, Sudan".

24 NMAC, "IMSMA Monthly Report", January 2018.

25 Ibid.

26 Revised Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline Extension Request, 30 July 2013, p. 6.

27 Ibid.

28 UNMAS, "About UNMAS in Sudan (Excluding Darfur), March 2018, at: http://www.mineaction.org/programmes/sudan; and email from Javed Habibulhaq, Programme Manager, UNMAS, 13 June 2016. UNMAS reassumed its lead in UN mine action efforts in Sudan and its role in providing assistance and technical support to NMAC after a one-year handover to the UN Development Programme (UNDP) in 2014.

29 UNMAS, "2017 Portfolio of Mine Action Projects, Sudan".

30 Email from Dandan Xu, UNMAS, 12 July 2017. Previously in 2012–15, commercial operator The Development Initiative (TDI) was contracted by UNAMID to assess, survey, identify, mark, and clear contamination in all five Darfur states.

31 UNMAS, "About UNMAS in Sudan", updated January 2016, at: http://www.mineaction.org/programmes/sudan.

32 Email from Hatim Khamis Rahama, NMAC, 3 March 2018.

33 NMAC, "Updated Work Plan to Meet Anti-Personnel Mine Ban Convention Article Five Extended Deadline by April 2019", 29 April 2016, available at: https://www.apminebanconvention.org/states-parties-to-the-convention/sudan/.

34 APMBC Article 7 Report (for 2014), Form A, p. 12.

35 Email from Hatim Khamis Rahama, NMAC, 3 March 2018.

36 Emails from Ahmed Elser Ahmed Ali, NMAC, 9 May and 8 June 2016.

37 Ibid.

38 Ibid.; and Third Article 5 deadline Extension Request, March 2018, pp. 37–38.

39 Email from Javed Habibulhaq, UNDP, 11 May 2015.

40 Email from Jeffrey McMurdo, UNAMID, 14 June 2017.

41 APMBC Article 7 Report (for 2016), p. 22; NMAC, "Updated Work Plan to Meet Anti-Personnel Mine Ban Convention Article Five Extended Deadline by April 2019", 29 April 2016, at: https://www.apminebanconvention.org/states-parties-to-the-convention/sudan/; and APMBC Article 7 Report (for 2014), Form A, p. 16.

42 ICBL, "ICBL Comments on Sudan's Article 5 Extension Request", May 2013.

43 DCA, "Previous Programmes: Sudan", undated, at: http://www.danchurchaid.org/what-we-do/mine-action/previous-programmes.

44 "Sudan causes frustration among NGOs", News 24, 13 June 2012.

45 MAG, "MAG departs Sudan after six years of work to remove remnants of conflict", 7 March 2013.

46 Email from Hatim Khamis Rahama, NMAC, 3 March 2018.

47 Ibid.

48 Ibid.

49 NMAC, "IMSMA Monthly Report", January 2018.

50 Email from Hatim Khamis Rahama, NMAC, 14 June 2018.

51 Email from Ali Abd Allatif Ibrahim, NMAC, 18 May 2017.

52 Email from Hatim Khamis Rahama, NMAC, 3 March 2018.

53 Third Article 5 deadline Extension Request, March 2018, p. 20.

RECOMMENDATIONS FOR ACTION

- Syria and its allies should ensure that their armed forces do not use cluster munitions.
- Syria should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Syria should initiate survey and clearance of cluster munition remnants (CMR) as soon as possible and take other measures to protect civilians from explosive remnants of war (ERW).
- Syria should permit and facilitate access for mine action operations for a humanitarian purpose.

CONTAMINATION

Syria has widespread CMR contamination resulting from the armed conflicts continuing since 2011. Syrian government and Russian forces have used cluster munitions extensively and Islamic State has reportedly used them in a number of instances, but the extent of contamination is not known.[1] Opposition group Jabhat al-Nusra has also produced videos showing Russian-made submunitions being adapted for re-use as projectiles.[2]

In February 2017, the United Nations Commission of Inquiry on Syria reported "an alarming number of incidents involving cluster munitions", affirming that their use in densely populated areas such as eastern Aleppo "constitutes the war crime of indiscriminate attacks in a civilian populated area".[3]

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 up to 27 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), causing the deaths of 93 civilians and injuring 417 others.[4] Human rights groups have reported heavy bombardments with cluster munitions and other weapons of towns and villages in opposition-held areas of southern Dar'a governorate since March 2017.[5] Syrian Civil Defence (SCD) has reported clearing 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 on page 144).[6]

Other conflict reports point to probable areas of CMR contamination. Human Rights Watch said that as part of an offensive in northern Syria, Syrian and Russian forces carried out at least 12 attacks using cluster munitions between 19 and 30 September 2017. It reported civil defence and first responders had located CMR, mostly ShOAB-0.5 submunitions, in the towns of al-Tamanah, Jisr Al-Shughur, Maraat Harma, Qalaat al-Madiq, and Tel'adeh.[7]

Amnesty International reported further air strikes using cluster munitions in October and November 2017 as Syrian and Russian forces escalated their attacks on the rebel-held Damascus suburb of Eastern Ghouta, eventually recaptured by government forces and their allies in April 2018.[8] Human rights organisations reported heavy civilian casualties in an airstrike with cluster munitions on the village of Dablan in an Islamic State-held area of north-eastern Syria, close to the border with Iraq.[9]

Other Explosive Remnants of War and Landmines

Syria's seven-year conflict has left heavy contamination by a wide range of explosive ordnance, including landmines, improvised explosive devices (IEDs), and air-dropped and artillery ordnance (see Mine Action Review's *Clearing the Mines* report on Syria for further information). HALO Trust said it considered contamination to be so large that "the work required will be measured in decades, not years".[10]

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 supported by mine detection dog teams and Uran-6 mine detection robots. Deployments included 200 deminers sent to Aleppo governorate, 150 to Palmyra, and 175 who were due to be sent to Deir Ezzour governorate.[11] Some deminers were reportedly among troops due to return to Russia under the withdrawal announced in December 2017.[12] Russian deminers also provided training for Syrian army engineers at Hmeimim air base and at training centres established in 2017 in Aleppo and Homs. By the start of January 2018, Russian armed forces reported they had trained 900 Syrian engineers.[13]

International humanitarian and commercial operators were active mainly in north-eastern Syria in areas recaptured from Islamic State by Kurdish and US-led coalition forces, but their identities remain anonymous on the basis of security concerns. Syrian Civil Defence, supported with training and funding through Mayday Rescue, had clearance teams working in five governorates (Dar'a, Hama, Homs, Idlib, and Quneitra) and conducted a range of other activities (community liaison; risk education) in several other governorates.[14]

HALO Trust partnered with a Syrian NGO, SHAFAK, which conducted community impact survey, risk education, and victim data collection in Aleppo, Idlib, and Rural Damascus provinces in 2017. The partnership agreement with SHAFAK, based in Gaziantep, Turkey, started in mid-2016. Deteriorating security forced it to stop operating in Rural Damascus in March 2018. In mid-2017, The HALO Trust started partnering with another Syrian NGO to recruit, train, and deploy teams for non-technical survey and disposal of ERW. In mid-December 2017, these three teams deployed in Dar'a and some districts of Quneitra provinces, and were reconfigured into five teams in March 2018. The teams worked under supervision of five HALO Trust international staff working from a remotely located operations room, connected by phones and tablets. The teams photograph all items for identification and receive instruction on disposal and rendering items safe.[15]

Following on from UN Security Council Resolution 2165 (2014), which authorised cross-border humanitarian assistance into Syria, the UN regional humanitarian coordinator requested UNMAS to provide assistance for mine action in Syria. In 2015, UNMAS opened an office in Gaziantep and established a mine action sub-cluster to integrate mine action into the broader Syria humanitarian response. In September 2017, UNMAS opened an office in Beirut to coordinate support provided through offices in Gaziantep and Amman for 27 mine action organisations undertaking activities that included community-level contamination impact surveys, marking of some hazardous areas, risk education and clearance.[16] UNMAS also maintained an incident database in Amman making data on contamination available to humanitarian agencies. UNMAS discussed establishing a presence in Damascus with the Syrian government but as at February 2018, it had not received approval to conduct the assessment mission.[17]

Information Management

UNMAS maintains an incident database in Amman making data on contamination available to humanitarian agencies.[18] Since September 2017, iMMAP has provided information management services for North East Syria coordinating data received from operators on hazard locations and results of non-technical survey, clearance, and risk education.[19]

LAND RELEASE

Continuing conflict prevented a coordinated national programme of mine action in 2017 though mine action interventions gathered significant momentum, albeit at levels that varied in different regions according to the level of security.

UNMAS reported contamination impact surveys and non-technical surveys were conducted mostly in north-west and southern Syria, within Aleppo, Dar'a, Idlib, and Rural Damascus, governorates, and in Quneitra governorate, particularly in the sub-districts of Atareb, Busra Ash-Sham, Hrak, Izra', Maaret Tamsrin, and Suran.[20] International operators also conducted community impact assessments and non-technical and technical survey in the north and north east of the country.

Details of Russian military clearance are not available, but Russian media reported military deminers cleared more than 30km^2 in Syria between December 2016 and the end of February 2017.[21] Army engineers reported they cleared some 20km^2 in the course of two operations at historic Palmyra in 2016 and 2017, removing over 24,000 ERW items, but there was no indication of whether they encountered CMR.[22] Russian and Syrian army engineers were also active around Damascus and its suburbs, where opposition-held areas became the target of a major Syria-Russian offensive in early 2018.

In the areas of north and north-east Syria recaptured by Syrian Democratic Forces and the US-led coalition, humanitarian and commercial operators sharply scaled up operations, employing several hundred staff conducting community needs assessment and ERW clearance activities in al-Hassakeh, Deir Ezzour, and Raqqa governorates but submunitions represented a small proportion of items cleared.[23]

SCD conducted community impact surveys that provided a basis for clearance teams to plan and prioritise tasks. At the start of 2018, capacity included one clearance team in each of Hama, Idlib, and Quneitra governorates and two teams in Dar'a. SCD/Mayday said submunitions constituted the "vast majority" of items cleared in the course of conducting roving tasks in response to community requests. Teams conducted roving spot tasks responding to the impact of conflict. 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 UXO. In 2017 alone, SCD cleared 6,633 submunitions and marked 903 others found in circumstances that obstructed clearance.[24]

The HALO Trust and SHAFAK started operations in early December 2017, with community liaison teams surveying and compiling maps of contaminated areas in Dar'a as a basis for planning and clearance. By the end of March 2018, they had conducted 234 spot tasks in Dar'a (217) and Quneitra (17), destroying a total of 317 items (124 submunitions and 193 other UXO items).[25]

ARTICLE 4 COMPLIANCE

Syria is not a state party to the CCM and therefore does not have a specific clearance deadline under Article 4 of the Convention. Nonetheless, it has obligations under international human rights law to clear CMR as soon as possible.

1 Human Rights Watch, "Syria: Evidence of Islamic State Cluster Munition Use", 1 September 2014.

2 Kenton Fulmer, "Jabhat al-Nusra re-purposing SPBE and AO-2.5RT submunitions in Syria," Armament Research, 18 October 2015.

3 Report of the Commission of Inquiry on Syria, UN doc. A/HRC/34/64, 2 February 2017, §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, §44.

4 Syrian Network for Human Rights, "Russian forces are worse than the Syrian regime in terms of use of cluster munitions", 24 March 2017.

5 Syrians for Truth and Justice, "Cluster bombs kill and injure civilians in Daraa province", 18 July 2017.

6 Mayday Rescue, "Syria Civil Defence, Explosive Hazard Mitigation Project Overview, Nov 2015–Mar 2018", 1 March 2018.

7 Human Rights Watch, "Russia/Syria: Deadly airstrikes on trapped civilians", 31 October 2017.

8 Amnesty International, "Syria: Banned Soviet-made cluster munitions fuel humanitarian catastrophe in Eastern Ghouta", 30 November 2017.

9 "'Cluster bombs' dropped on IS-held village", BBC, 28 June 2017.

10 HALO Trust, "Survey and Explosive Hazard Removal in Dar'a and Quneitra Governorates, Southern Syria", undated but 2018, p. 1.

11 "Russia sends demining team to Syria to clear Aleppo's liberated", PressTV, 3 December 2016; "Russia sends 150 demining experts to Palmyra", Reuters, 16 March 2017; "Russian sappers arrive in Deir Ezzour", Tass, 11 September 2017.

12 "Russian sappers arrive in Syria's Deir Ezzour", Tass, 11 September 2017;

13 "Russian military boosts qualified Syrian sappers to demine war-ravaged country", Tass, 9 January 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; email from international mine action operator on the basis of anonymity, 3 May 2018.

15 Interview with Tim Porter, Regional Director for the Middle East, Trust, in Geneva, 15 February 2018; email from Adam Boyd, Programme Manager, HALO Trust Syria/Jordan and Rob Syfret, Deputy Programme Manager and Operations Manager, HALO Trust, 18 May, 13 and 21 June 2018; HALO Trust, "Survey and Explosive Hazard Removal in Dar'a and Quneitra Governorates, Southern Syria", undated but 2018.

16 Interview with Gilles Delecourt, UNMAS, Geneva, 16 February 2018; and email, 22 May 2018; UNMAS, "Programmes in Syria", updated March 2018, at http://www.mineaction.org/programmes/syria.

17 Interview with Paul Heslop, Chief of Programmes, UNMAS, in Geneva, 13 February 2018.

18 Interview with Paul Heslop, Chief of Programmes, UNMAS, in Geneva, 13 February 2018.

19 Email from Noor Zangana, Technical Adviser Syria and Iraq, iMMAP, 18 July 2018.

20 Email from Gilles Delecourt, UNMAS, 22 May 2018.

21 P. Antonopoulos, "Russian deminers continue to clear east Aleppo of explosives", The Arab Source, 28 February 2017, at: https://www.almasdarnews.com/article/russian-de-miners-continue-clear-east-aleppo-explosives/.

22 "Russian army engineers demined 24,065 explosive objects in Syria's Palmyra", Defence World.net, 6 October 2017.

23 Email from international mine action operator on condition of anonymity, 3 May 2018.

24 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.

25 Email from Adam Boyd and Rob Syfret, HALO Trust, 18 May 2018; HALO Trust, "Survey and Explosive Hazard Removal in Dar'a and Quneitra Governorates, Southern Syria", undated but 2018.

RECOMMENDATIONS FOR ACTION

- Tajikistan should accede to the Convention on Cluster Munitions (CCM) as soon as possible.
- The Tajikistan National Mine Action Centre (TNMAC) should conduct survey to clarify the extent of remaining cluster munition remnant (CMR) contamination, and ensure timely clearance and release of the contaminated area.

CONTAMINATION

TNMAC has reported that, as at the end of 2017, seven of Tajikistan's eight recorded battle areas may contain CMR, totalling an area of 877,040m^2.[1] An additional suspected area of CMR contamination was discovered in 2018 in Darvos District in the Central Region of Tajikistan. The area, of an estimated size of 138,500m^2, was confirmed as CMR-contaminated during subsequent non-technical survey by Norwegian People's Aid (NPA) in June, and has been scheduled for clearance in 2018 before the summer window for access to the Central Region closes.[2] 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, including CMR in particular.[3]

Tajikistan had previously reported that while submunitions may still be encountered in the future during other survey and clearance operations, no known CMR contamination existed in Tajikistan other than the small area of contamination discovered by NPA during non-technical survey in August 2016.[4] This area was cleared in 2017, along with a separate area of CMR contamination discovered and cleared by the Swiss Foundation for Mine Action (FSD) in 2017.[5]

Tajikistan also referenced CMR contamination in its clearance statement at the Sixteenth Meeting of States Parties to the Anti-Personnel Mine Ban Convention (APMBC) in 2017, stating, "The level of mine contamination in Tajikistan remains relatively high, mainly on Tajik-Afghan Border, where the landmines and explosive remnants of war including cluster munition remnants are still affecting the lives of the people of Tajikistan.[6]"

Cluster munitions were used during Tajikistan's civil war in the 1990s, though it is not known who dropped them. In total, since the start of the mine action programme in 2003 until the end of 2015, it is reported that approximately 750 submunitions were identified and destroyed in Tajikistan.[7]

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).

PROGRAMME MANAGEMENT

The Commission for the Implementation of International Humanitarian Law (CIIHL) acts as Tajikistan's national mine action authority, responsible for mainstreaming mine action in the government's socio-economic development policies.[8]

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,[9] though this did not happen until more than ten years afterwards. TMAC was made responsible for coordinating and monitoring all mine action activities.[10] Since then, TMAC has acted as the secretariat for the CIIHL to which it reports.[11]

On 3 January 2014, TNMAC was established by government decree to replace TMAC.[12] Prior to this, lack of legal recognition had presented problems for TMAC,[13] including, for example, its inability to open a bank account to receive and disburse funds.[14] The importance of clarifying the centre's status had been highlighted in the 2012 evaluation of UNDP support to mine action in Tajikistan.[15] Since its nationalisation, TNMAC believes its cooperation with national ministries and agencies has improved.[16]

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.[17] However, lack of funding might result in of the project folding in 2018.[18]

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 (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 a sound national mine action programme.[19] The 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 2018–23". The draft plan was developed in August and September 2017, through a joint working group, and as at early October, was with the Ministry of Defence.[20]

Strategic Planning

The previous national mine action strategic plan (NMASP) 2010–15 expired at the end of 2015.[21] A new National Strategy on Humanitarian Mine Action for 2017–20 was approved by government decree No. 91 on 25 February 2017.[22]

Legislation and Standards

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.[23] The law (number 1338), which was ratified by Tajikistan's Parliament on 23 July 2016,[24] was presented to mine action stakeholders in September 2016, during a workshop hosted by TNMAC.[25]

Tajikistan's National Mine Action Standards (TNMAS) have been revised, and were approved by decree No. 162 on 1 April 2017. The new standards have been translated into Russian and English.[26]

Quality Management

TNMAC coordinates and monitors the Quality Management (QM) process in Tajikistan, and the TNMAS are said to cover all QM requirements, both from a process and from a final product (released land) perspective.[27]

Information Management

In 2016, Tajikistan updated its mine action information management system to Information Management System for Mine Action (IMSMA) version 6.0.[28] According to TNMAC, one of the challenges it faces in information management is retention of experienced staff.[29]

Operators

In 2017, overall operational capacity for mines and ERW included two FSD manual clearance teams; five NPA multi-purpose manual teams; five Ministry of Defence Humanitarian Demining Unit (HDU) multi-purpose manual teams; and two Union of Sappers of Tajikistan (UST) non-technical survey teams.[30] Only FSD and NPA undertook CMR land release operations in 2017.

Clearance capacity in 2018 was less than the previous year, with NPA deploying one fewer multi-purpose manual clearance team due to funding constraints and, as at May 2018, no funding had been secured for FSD survey or clearance operations in Tajikistan.[31]

LAND RELEASE

In 2017, 19,568m^2 of CMR-contaminated area was released through technical survey and a further 248,581m^2 through clearance, during which a total of 164 submunitions were destroyed. An additional 109,566m^2 was cancelled by non-technical survey.[32]

Survey in 2017

NPA reduced 19,568m^2 through technical survey in 2017, during demining operations in the Darvoz District in the Central Region of Tajikistan.[33]

In addition, FSD confirmed 150,000m^2 as CMR-contaminated during survey in Rasht Valley, in the Districts of Republican Subordination region of Tajikistan, some of which was subsequently cleared (see clearance section), while the remaining 109,566m^2 of the polygon was cancelled.[34]

Clearance in 2017

In 2017, a total of 248,581m^2 was cleared of CMR in two separate tasks, during which 164 submunitions were destroyed. Of this, FSD cleared 40,434m^2 of CMR contamination in the Rasht District, during which 128 SHOAB-0.5 submunitions were destroyed,[35] and NPA cleared 208,147m^2 of CMR contamination in the Darvos District in the Central Region, during which 36 AO-2.5 submunitions and 5 other items of UXO were destroyed.[36]

NPA's clearance occurred between 3 June and 5 August 2017, undertaken by a multi-task team of eight deminers.[37] The task had previously been confirmed as CMR-contaminated in August 2016, during NPA non-technical survey, during which an AO-2.5RT submunition was found, along with other evidence of contamination, including pieces of cluster bomb containers, pieces of further AO-2.5RT submunitions, and several recognisable blast locations.[38] The onset of winter, and adverse weather conditions at high altitude, had prevented NPA from conducting clearance of this area in 2016.[39]

ARTICLE 4 COMPLIANCE

Tajikistan 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.

Previously, Tajikistan had reported that, while submunitions might still be encountered in the future during demining operations, once the small amount of previously undiscovered CMR contamination had been released in 2017, no known CMR contamination would exist in Tajikistan.[40] In April 2018, however, TNMAC reported that as at the end of 2017, seven of Tajikistan's eight battle areas may contain CMR, totalling almost 0.9km^2.[41] Survey is required to determine whether or not these areas do indeed contain CMR and/or other ERW and TNMAC's plans to release them.

1 Email from Muhabbat Ibrohimzoda, Director, TNMAC, 27 April 2018; and interview with Daler Eshonjonov, QA Officer, TNMAC and Erkin Huseinov, UNDP, Dushanbe, 29 May 2018.

2 Email from Melissa Andersson, Country Director, NPA, 4 July 2018.

3 Email from Muhabbat Ibrohimzoda, Director, TNMAC, 27 April 2018; and interview with Daler Eshonjonov, QA Officer, TNMAC, and Erkin Huseinov, UNDP, Dushanbe, 29 May 2018.

4 Interview with Muhabbat Ibrohimzoda, TNMAC, in Geneva, 10 February 2017; and email from Sasa Jelicic, NPA, 17 February 2017.

5 Email from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018.

6 Statement of Tajikistan, APMBC 16th Meeting of States Parties, Vienna, 20 December 2017.

7 Statement of Tajikistan, APMBC 14th Meeting of States Parties, Geneva, 1 December 2015.

8 APMBC Article 5 deadline Extension Request, 31 March 2009, p. 4.

9 Rebecca Roberts, "Evaluation of UNDP Support to the Tajikistan Mine Action Programme", p. 12, at: http://www.mineaction.tj/docs/plans/Evaluation of UNDP STMAP - Jan 2011.pdf.

10 Article 5 deadline Extension Request, 31 March 2009, p. 1; and TMAC, "About TMAC", 2012, accessed 10 March 2014 at: http://www.mineaction.tj/about.

11 Roberts, "Evaluation of UNDP Support to the Tajikistan Mine Action Programme", p. 12.

12 Email from Muhabbat Ibrohimzoda, TNMAC, 3 April 2015.

13 Roberts, "Evaluation of UNDP Support to the Tajikistan Mine Action Programme", pp. 12–13; and UNDP Users Guide, "Programme and Operations Policies and Procedures, at: http://www.undp.org.af/ Projects/Direct_Implementation.pdf.

14 Roberts, "Evaluation of UNDP Support to the Tajikistan Mine Action Programme", pp. 12–13.

15 Ibid., pp. 27–29.

16 Email from Muhabbat Ibrohimzoda, TNMAC, 12 May 2015.

17 TNMAC, Draft Article 5 Completion Plan 2016–20, 4 October 2016.

18 Emails from Erkin Huseinov, UNDP, 3 July 2018; and Muhabbat Ibrohimzoda, TNMAC, 5 July 2018.

19 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.

20 Email from Luka Buhin, OSCE Office in Tajikistan, 9 October 2017.

21 Interview with Muhabbat Ibrohimzoda, TNMAC, and Ahad Mahmoudov, Programme Manager, UNDP, in Geneva, 23 June 2015.

22 "National Strategy of the Republic of Tajikistan on humanitarian mine action for 2017–2020", 25 February 2017; email from Muhabbat Ibrohimzoda, TNMAC, 22 May 2017; and Statement of Tajikistan, APMBC 16th Meeting of States Parties, Vienna, 20 December 2017.

23 Email from Aubrey Sutherland-Pillai, then Country Director, NPA, 18 October 2016.

24 Emails from Muhabbat Ibrohimzoda, TNMAC, 19 August 2016 and 22 May 2017; and Statement of Tajikistan, APMBC 16th Meeting of States Parties, Vienna, 20 December 2017.

25 Email from Aubrey Sutherland-Pillai, NPA, 18 October 2016.

26 Email from Muhabbat Ibrohimzoda, TNMAC, 22 May 2017; and Statement of Tajikistan, APMBC 16th Meeting of States Parties, Vienna, 20 December 2017.

27 TNMAC, "Draft Article 5 Completion Plan 2016–20", 4 October 2016.

28 Email from Muhabbat Ibrohimzoda, TNMAC, 22 May 2017.

29 "National Strategy of the Republic of Tajikistan on humanitarian mine action for 2017–2020", Decree No. 91, p. 24, 25 February 2017.

30 Email from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018.

31 Statement of Tajikistan, APMBC 16th Meeting of States Parties, Vienna, 20 December 2017; and emails from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018; and Melissa Andersson, NPA, 5 April 2018.

32 Emails from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018; Melissa Andersson, NPA, 5 April 2018; and Chris Rennick, Operations Manager, FSD, 13 March 2018; and interview with Daler Eshonjonov, TNMAC and Erkin Huseinov, UNDP, Dushanbe, 29 May 2018.

33 Email from Melissa Andersson, NPA, 5 April 2018.

34 Email from Chris Rennick, FSD, 13 March 2018; and interview with Daler Eshonjonov, TNMAC and Erkin Huseinov, UNDP, Dushanbe, 29 May 2018.

35 Emails from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018, and Chris Rennick, FSD, 13 March 2018; and interview with Daler Eshonjonov, TNMAC and Erkin Huseinov, UNDP, Dushanbe, 29 May 2018. Of the 150,000m^2 polygon, 40,434m^2 was released by clearance, and the remainder by survey.

36 Emails from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018; and Melissa Andersson, NPA, 5 April 2018; and interview with Daler Eshonjonov, TNMAC, and Erkin Huseinov, UNDP, Dushanbe, 29 May 2018. There was a small discrepancy between the clearance data provided by TNMAC, which did not disaggregate technical survey from clearance, and NPA data which did.

37 Email from Melissa Andersson, NPA, 05 April 2018.

38 Email from Sasa Jelicic, NPA, 17 February 2017.

39 Ibid.

40 Interview with Muhabbat Ibrohimzoda, TNMAC, Geneva, 10 February 2017; and email from Sasa Jelicic, NPA, 17 February 2017.

41 Email from Muhabbat Ibrohimzoda, TNMAC, 27 April 2018.

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	4	4
Target date for completion of cluster munition clearance	3	3
Targeted clearance	5	5
Efficient clearance	5	5
National funding of programme	6	6
Timely clearance	5	5
Land-release system in place	6	6
National mine action standards	6	6
Reporting on progress	4	4
Improving performance	5	5
PERFORMANCE SCORE: POOR	**4.9**	**4.9**

PERFORMANCE COMMENTARY

The overall effectiveness and efficiency of mine action in Ukraine is being impeded by delay in the adoption of mine action legislation, which is needed to strengthen coordination among the different ministries and agencies engaged in mine action, and to facilitate strategic planning, the establishment of National Mine Action Standards and information management.

RECOMMENDATIONS FOR ACTION

- Ukraine should accede to, and abide by, the Convention on Cluster Munitions (CCM).
- Ukraine should enact mine action legislation as soon as possible and formally establish a national mine action authority and a functioning national mine action centre to support clearance of explosive ordnance.
- Ukraine should systematically collect data on contamination from mines, cluster munition remnants (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 submit a request for an extension to its Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline request as Ukraine's violation of international law under that treaty is negatively affecting progress in mine action as a whole, including with respect to CMR.
- Ukraine should consider allowing humanitarian demining organisations to use explosives to destroy ordnance as the current situation is severely hampering progress within the sector.

CONTAMINATION

The extent of contamination from CMR in Ukraine is not known. Amid the violence that erupted in Ukraine in 2014, evidence indicates that both government and anti-government forces have used cluster munitions. These have included surface-fired Smerch (Tornado) and Uragan (Hurricane) cluster munition rockets, which deliver 9N210 and 9N235 anti-personnel fragmentation submunitions.[1]

Evidence of ground-launched cluster munition use in eastern Ukraine first emerged in early July 2014, indicating that 300mm 9M55K cluster munition rockets with 9N235 submunitions had been used in Kramatorsk and Slavyansk, in the Donetsk region of eastern Ukraine.[2]

On 11 July 2014, photographs taken by the Associated Press at an insurgent base at Slavyansk showed remnants of at least eight 220mm 9M27K-series cluster munition rockets and at least three submunitions that were either of type 9N210 or type 9N235.[3] According to the Associated Press, the remnants at Slavyansk were collected and destroyed by Ukrainian government explosive ordnance disposal (EOD) teams.

In October 2014, Human Rights Watch (HRW) documented widespread use of cluster munitions in fighting between government forces and pro-Russian rebels in more than a dozen urban and rural locations in the provinces of Donetsk (central Donetsk, Starobesheve, Makiyivka, and Ilovaisk) and Luhansk (Novosvitlivka).[4]

In early 2015, the Special Monitoring Mission (SMM) in Ukraine of the Organization for Security and Co-operation in Europe (OSCE) reported finding CMR in the Artemivskyi district of Luhansk city, resulting from two attacks on 27 January. The attacks killed two civilians and injured two others.[5] The OSCE SMM also reported evidence of CMR in Komsomolske, south-east of Donetsk, resulting from an attack on 2 February,[6] and in Kramatorsk, in the north of the Donetsk region, on 10 February.[7] In addition, the *Kiev Post* reported cluster munitions had been fired on the cities of Mariupol and Kramatorsk in 2015.[8]

During a ten-day investigation in eastern Ukraine, HRW found evidence that cluster munition rockets had been used 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.[9]

Ukraine has claimed that many unexploded submunitions contaminate the Donetsk and Luhansk regions,[10] with the most intensive use of cluster munitions in and around the city of Debalcevo in Donetsk oblast.[11] In 2017, Ukraine estimated, highly improbably, that total contamination by mines and ERW (including CMR) could extend over 7,000km^2.[12] The Ukrainian Ministry of Defence accepts that this is a rough estimate.[13] It is further suggested that 15–20% of the contamination is from mines while the rest is from ERW.[14] However, Ukraine cannot reliably estimate the overall extent of CMR contamination until surveys have been completed.[15] 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.[16]

On 20 April 2018, the Resident and Humanitarian Coordinator in Ukraine reported that explosive hazard contamination in eastern Ukraine is impacting 1.9 million people, including around 200,000 children.[17] Danish Demining Group (DDG), which collects casualty data from open media sources, recorded a total of 1,432 casualties from mines, submunitions, and other ERW between June 2014 and May 2017.[18] The HALO Trust recorded 1,858 casualties due to mines and ERW between May 2014 and April 2018 (1,206 injured and 652 killed).[19] In 2017 alone, more than 235 civilians were killed or injured by mines and ERW.[20] Explosive ordnance was the leading cause of child casualties, accounting for two-thirds of all recorded deaths and injuries. Many children were left with lifelong disabilities as a result of blast and fragmentation injuries.[21]

The presence or suspicion of mines and ERW inhibits freedom of movement, posing a serious threat to people crossing the contact line at the five checkpoints where one million crossings occur each month.[22] Access to some villages near the contact line is also restricted as roads are contaminated by mines and ERW, cutting people off from essential services.[23] Civilians living along the contact line are unable to engage in agricultural activities, severely affecting their access

to food and livelihoods.[24] At the same time, they are ineligible for social assistance and still have to pay land tax, because they are deemed to own land plots with which they should be able to feed themselves.[25] Access to basic utilities such as water, electricity, and gas is frequently interrupted, and maintenance and repair of these utilities is impeded or made impossible by the presence of mines and ERW.[26] To heat homes in the winter, people go into the forest, facing significant risk from explosive ordnance as a result. This is said to have resulted in many fatalities and injuries.[27]

In addition, explosive ordnance poses a humanitarian risk to the internally displaced and returning refugees, especially in areas fought over previously and which are now away from the front line.[28]

Other Explosive Remnants of War and Landmines

Ukraine is contaminated by other ERW and 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 War[29] 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 1,500km^2.[30] These figures are the same as those put forward in April 2015.[31]

PROGRAMME MANAGEMENT

An interministerial working group was set up by the Cabinet of Ministers in February 2006. On 25 December 2009, the Cabinet of Ministers of Ukraine issued an order that tasked the Ministry of Defence (MoD), Ministry of Emergency Situations, and Ukroboronservice (a state-owned commercial company), to put forward proposals for a national body to oversee demining.[32]

On 2 September 2013, Presidential Decree No. 423 on the "Mine Action National Authority" was signed, authorising the authority's establishment.[33] Following the decree, the MoD's "Department of Environmental Safety and Mine Action" was tasked with coordinating demining nationally and serving as the secretariat to the national mine action authority in Ukraine.[34]

The Geneva International Centre for Humanitarian Demining (GICHD) has been working with the OSCE Project Co-ordinator (OSCE PCU) in Ukraine to help foster mine action institutions, including legislation.[35] A timeline for the establishment of a national mine action centre under the national mine action authority will be addressed once the mine action legislation has been adopted.[36]

While all areas of mine action in the Donetsk and Luhansk region, including humanitarian demining operations, are planned, coordinated, and controlled by the MoD,[37] 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), formerly known as the Ministry of Emergencies); the Security Services; the Ministry of Temporarily Occupied Territories and Internally Displaced Persons; the State Special Transport Services of the Ministry of Defence the National Police; and the State Border Service.[38]

The demining centre of the Ukrainian Armed Forces, in Kamyanets-Podilsky, focuses on building the military's capacity for explosive ordnance disposal (EOD), including training and testing of methods and equipment, quality assurance (QA), and provision of EOD, counter-IED [improvised explosive devices], and demining specialists.[39] Experts from the North Atlantic Treaty Organization (NATO) provide training and advice at the centre.[40] The Canadian government is helping to build Ukraine's humanitarian demining capacity in eastern Ukraine, as part of a two-year project to support the development of policies, practices, and institutions; the provision of training; the creation of a digital map showing hazards and cleared areas; and the procurement of modern equipment.[41]

All Ukrainian Armed Forces engineering units are involved in demining in eastern Ukraine and not solely EOD spot tasks. The units are also responsible for destroying all ERW and mines detected by SESU and clearance NGOs.[42]

SESU has organisational control of humanitarian demining and is generally responsible for 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 EOD teams) involved in technical and non-technical survey, demining, internal QC of SESU units, information management, and handover of land cleared by SESU to local authorities, as well as risk education.[43]

In addition, SESU has a training centre near Merefa, in the Kharkiv region, and the Special Transport Service has a centre in Chernihiv, both of which are focused largely on EOD and battle area clearance (BAC).[44] SESU has begun to build a Regional Centre for Humanitarian Demining, based in Lysychansk in Luhansk region. The new centre will deploy trained SESU deminers to affected areas in Donetsk and Luhansk that are under Ukrainian control.[45]

The Ministry of Temporarily Occupied Territories and Internally Displaced Persons was established by the Cabinet of Ministers of Ukraine in resolution 376, which was adopted on 8 June 2016. The Ministry's tasks include implementation of a set of measures aimed at reducing the social, economic, and environmental impact of explosive objects; and coordination of the implementation of mine action activities aimed at reducing harm to civilians from the use of explosive objects (including CMR and mines).[46] In 2017, the Ministry set up a mine action unit. Although it does not have any demining capacity, it has been active in risk education and information management.[47]

The OSCE has a strong presence in Ukraine, with two separate missions each having its own mandate: the SMM and the OSCE PCU. The SMM is mandated to help reduce tensions in the country and to support peace, stability, and security. As part of this role, it gathers information and reports on alleged violations of fundamental OSCE principles.[48] The OSCE PCU is mandated to plan, implement, and monitor projects that help Ukraine enhance its security, and develop its legislation, institutions, and practices in line with democratic standards.[49]

In 2016–18, the OSCE PCU, with GICHD assistance, was planning to provide policy and legal support to Ukraine, including for the establishment of a national mine action programme overseen by a national mine action authority and centre and underpinned by national standards.[50] The OSCE PCU has also been supporting, again with GICHD assistance, Ukraine's use of the Information Management System for Mine Action (IMSMA). The OSCE PCU, with the support of the donors (Canada, the European Union, United Kingdom, and United States), was planning to implement two projects to enhance the training capacities of mine action training centres by revising the training curriculum, training national instructors, and supporting the procurement of new demining equipment.[51] However, project activities that were contingent on the adoption of mine action legislation, such as the revision of the training curriculum, have been put on hold.[52] Instead the OSCE PCU has focused on training activities, such as training of IMSMA operators and national instructors, and equipment procurement.[53] The donors have agreed to an extension of the project until the end of 2018 due to the delays in the adoption of the mine action law.[54]

At the request of the Government of Ukraine, the United Nations conducted a mine action needs assessment mission on 23 January–5 February 2016. The mission's key findings were that:

- The humanitarian impact of ERW is high, with two to five accidents each week and contamination covers a huge area.[55]
- ERW clearance capacities exist in Ukraine, but they need to be re-oriented away from their current activities of responding to call-outs for World War II bombs towards survey and information management.
- The understanding of mine action needs to be addressed at all levels of government. At present, the focus is only on military mine clearance; it needs to be extended to risk education, survey, victim assistance, and information management.
- A civilian oversight and policy-making body for national mine action activities needs to be created.[56]

Strategic Planning

The Cabinet of Ministers Decree No.131 of 18 February 2009 adopted the State Programme for Demining by the Ministry of Emergency Situations for 2009–14.[57] The programme planned clearance of 15km^2 over five years with the destruction of 500,000 items of ERW, but this was not achieved.[58]

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 2017–2021. Announced by the MoD in February 2016,[59] as at May 2018 the programme was on hold pending progress with the mine action law.[60]

Ukraine has developed a plan for demining in the Donetsk and Luhansk regions, in areas it can access safely. The main goals for 2015 were demining of populated areas, security during rehabilitation of infrastructure, and clearance of UXO from agricultural areas.[61] These remained Ukraine's goals for 2016 and 2017.[62]

Legislation and Standards

As at May 2018, Ukraine was in the process of developing mine action legislation that would identify the executive bodies involved in mine action in Ukraine, "regulate" the national mine action authority, and mandate the development of a priority action plan.[63] The lack of a legal framework for mine action has the potential to deter donors from funding activities, and also has a bearing on the legal status of demining organisations in the country in terms of registration as well as application for end-user certificates for demining equipment and explosives.[64] Furthermore, without a mine action law in place no formal process for land release exists.[65]

Two draft bills were submitted to the parliament's Committee on National Security and Defence (CNSD). One of the drafts (no. 5189), dated 28 September 2016, was put forward by a Member of Parliament. The Committee recommended its rejection in April 2017.[66] The other draft (no. 5189-1), dated 12 October 2016, from the Cabinet of Ministers of Ukraine, was originally sent to the Cabinet in late 2015, endorsed in February 2016, and then submitted by the Cabinet for parliamentary approval.[67] A Cabinet reshuffle in April 2016 resulted in the Bill needing re-endorsement, after which it would be re-submitted for parliamentary approval.[68] In 2016, the draft law faced opposition in the committee stage in parliament.[69] It was sent back for improvements in April 2017.[70] Both draft bills were rejected by the CNSD on 7 June 2017.[71]

Later in 2017, the CNSD established a working group to prepare a third draft bill as the two draft bills submitted previously were not deemed satisfactory.[72] As at July 2018, the CNSD was said to be in the process of finalising this draft bill.[73]

Some of the demining operators in Ukraine have been consulted as part of the legislative process towards the establishment of mine action institutions in Ukraine.[74] The HALO Trust reported that it has actively participated in roundtables and public hearings on mine action legislation, organised by the MoD, the OSCE Project Co-coordinator, and the VR's Defence and Security Committee. During these meetings, HALO Trust supported the adoption of national legislation, and shared best practices and lessons learned from other countries.[75]

A special instruction for the identification, render-safe, and disposal of explosive items, based on the International Mine Action Standards (IMAS), was approved by the General Staff of the Ukrainian Armed Forces on 1 August 2014.[76] Development of national standards in Ukraine has taken place with support from GICHD, the OSCE PCU and the Geneva Centre for the Democratic Control of Armed Forces (DCAF).[77] On 27 January 2016, during the UN needs assessment mission, the Ukrainian MoD expressed its support for IMAS to serve as national mine action standards (NMAS).[78] In Ukraine, all national standards must be approved by the Ukrainian Scientific and Research Training Center of Standardization, Certification and Quality, which is the National Standardisation Authority in Ukraine.[79] Ukraine subsequently adopted IMAS as "trial national regulatory acts" on 1 September 2016, under National Standardization Authority Order 230 of 8 August 2016.[80] As at November 2016, Ukraine reported that it had adopted 42 international standards as national standards, with the support of GICHD, the OSCE, and UNICEF.[81]

A plan for the adoption of NMAS was formulated at a workshop organised by GICHD and OSCE PCU from 31st October to 1st November 2017.[82] In April 2018, the MoD sent a first draft of the national standards to GICHD and OSCE PCU for review.[83] A workshop organised by GICHD and OSCE PCU was held in June 2018 to discuss the draft NMAS and provide recommendations. The draft NMAS was under review as of finalising this report and the MoD was hoping it would be adopted before the end of 2018. The standards must also be approved by the National Standardisation Authority, and the process of adoption includes the sharing of national standards with key national and international stakeholders for review. The full implementation of the NMAS does, however, depend on the passing of the mine action law.[84]

Quality Management

The draft mine action law envisages the operation of a national mine action centre with a QA function.[85] In the meantime, quality management (QM) of government clearance operations is overseen by the demining centre of the Ukrainian Armed Forces.[86] Both DDG and The HALO Trust conduct internal QM. For DDG, team leaders and senior mine action personnel conduct all QM, while in The HALO Trust team leaders and supervisors conduct QC during clearance while a roving officer conducts QA.[87] HALO Trust planned to appoint an internal QA manager in 2018 who will be responsible for all internal QM.[88]

The HALO Trust is planning to deliver QM training to the future national mine action authority.[89] Janus Global Operations (JGO) carried out a two-month project for The HALO Trust in 2017, during which it trained 12 members of the demining centre of the Ukrainian Armed Forces in Kamianets-Podilsky on QM techniques, including QA of manual and mechanical demining and the use of mine detection dogs; battle area clearance; and EOD. The dozen Ukrainian military members and employees trained by JGO will now be able to perform QA for the national mine action authority/centre.[90] The HALO Trust also hosted a visit from the MoD's Demining Centre who were undergoing an accreditation process in 2018 to become the body responsible for accrediting other demining organisations and, if successful, will also conduct external QA.[91]

Information Management

In cooperation with the OSCE PCU and the GICHD, SESU has begun using IMSMA.[92] In 2015, IMSMA was piloted by the GICHD and SESU in four regions of Ukraine.[93] In November and December 2015, IMSMA training was conducted for 10 regional operators, and SESU plans to expand use to 24 regional operators, grouped into eight regional centres (Carpathian, Central, Dniprovskyi, Eastern Poliskyi, Podolsky, Tauric, Volyn, and the Operational Centre in Kiev).[94] The GICHD reported providing IMSMA training to staff from the various government ministries and agencies and international NGOs.[95] The HALO Trust has also been supporting the OSCE PCU to set up IMSMA, and in 2017 it supported the OSCE in developing technical and structural recommendations for an IMSMA system. The HALO Trust continues to work with the MoD and other mine action stakeholders to develop standardised IMSMA-compatible reporting templates.[96]

As at October 2016, three government departments in Ukraine were using IMSMA: SESU, the MoD, and the State Special Transport Services. There are two functioning 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.[97] As at July 2018, data on mine accidents, risk education, and victim assistance are not yet collected.[98] The databases are reportedly complementary, as they are separated based on region, thematic area, and operational purpose.[99] Consolidation of the SESU and MoD databases will only be possible once Ukraine has adopted mine action legislation, which will serve as the basis for the national mine action authority and mine action centre. It will be the task of the national mine action centre to consolidate the two existing databases and to create a central national IMSMA database.[100]

In June 2017, the GICHD reported it had conducted an Information Management assessment that will serve as basis to develop a roadmap for future collaboration with the SESU and MoD.[101] As at July 2018, the plan was for the IMSMA server to be installed by the end of the year.[102]

Operators

Following a presidential decree in September 2013, the MoD is the central coordinating body for demining in Ukraine. However, a number of other ministries continue to deploy units that undertake clearance and destruction of mines and ERW, including the Ministry of Internal Affairs (through SESU), the Security Service, the State Special Transport Service, and the State Border Service.[103]

A Commission on Humanitarian Demining within SESU coordinates the activities of SESU pyrotechnic teams and determines SESU's priorities.[104] In December 2015, Ukraine reported that during the ongoing conflict SESU had suffered severe losses to its buildings and vehicles.[105] Since then, DDG has secured equipment for four SESU pyrotechnic teams, which includes vehicles, detectors, and personal protective equipment (PPE). DDG trained the four teams in key aspects of demining, in addition to providing training to SESU medics.[106] Support was also being provided by the OSCE PCU[107] and by NATO.[108]

In addition to overall coordination of humanitarian demining in the Donetsk and Luhansk region, the MoD is also responsible for all areas where the military are permanently stationed as well as for the Joint Forces Operation in Donbass. The Ministry's Engineering Division conducts UXO spot clearance. The State Border Service conducts demining in areas under its control on land and in the sea. The Ministry of Defence's Special Transportation Service is responsible for demining national infrastructure (e.g. railways and roads). The Ministry of Internal Affairs has an engineering department that conducts EOD, in particular of IEDs.[109]

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.[110] Ukroboronservice, a state enterprise whose activities include arms manufacture, also has a "humanitarian demining" section.[111] As at June 2018, Ukroboronservice was conducting commercial clearance outside Ukraine.[112]

Three international demining organisations – DDG, the Swiss Foundation for Mine Action (FSD), and The HALO Trust – are operating in Ukraine.[113] DDG began risk education in late 2014 in Donbass and in February 2016 it began to conduct non-technical survey in government-controlled areas of the Donetsk and Luhansk regions. It received formal approval from the authorities to conduct survey at the beginning of April 2017.[114] DDG Ukraine currently primarily runs its operations out of offices in Severodonetsk, but also from Mariupol, and has its head office in Kiev.[115] As at May 2018, DDG was deploying two manual demining teams which are also able to conduct BAC with a plan to increase its capacity to three demining teams during the year.[116] DDG completed limited non-technical survey of conflict-affected communities in Luhansk and Donetsk oblasts during 2017.[117] Information gathered by the teams will be used to plan where clearance is most urgently needed.[118] In April 2017, DDG provided EOD training to two staff from SESU and two from the Special Transport Service.[119]

The HALO Trust launched its programme in November 2015 and began with a rapid assessment of mine and UXO contamination in Donetsk and Luhansk regions (oblasts).[120] In early 2016, The HALO Trust began conducting non-technical survey, mine clearance, and BAC in government-controlled areas of Luhansk and Donetsk regions, more than 15km from the contact line.[121] As at June 2018, The HALO Trust had 244 staff of whom 218 were engaged in survey, mine clearance, or BAC operations. A new training course for a further 40 staff began in June 2018. [122] 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.[123] Since the first quarter of 2017, The HALO Trust has recruited women who have subsequently begun working as the first female deminers in Ukraine.[124]

As at June 2018, The HALO Trust had imported one unarmoured CASE 621C front-loader, which was being armoured in-country. HALO Trust has planned to import a second armoured loader, as well as three lightly armoured remote-controlled vegetation-cutting machines. Trials of these machines was scheduled for mid-2018, with the potential to greatly increase tripwire search efficiency.[125]

The HALO Trust has been conducting survey in Volnovaskyi, Marinskyi, Yasynuvatskyi, Slovianskyi, Nikolskyi, Pokrovskyi, Bakhmutskyi, Kostantynivskyi, Dobropilskyi, Oleksandrivskyi, and Lymanskyi districts in the Donestk region, and Stanychno-Luhanskyi, Novoaidarskyi, and Milovskyi districts in the Luhansk region. HALO Trust's survey operations may take place less than 1km from the Line of Contact. As of writing, HALO Trust's nearest clearance task was situated 3km from the Line of Contact.

As at July 2018, humanitarian demining organisations in Ukraine did not have access to explosives to destroy ordnance and, as such, cannot conduct demolitions. This is severely hampering progress within the sector.[126] The HALO Trust EOD callouts involve handing over ammunition to state authorities. In 2017, HALO Trust handed over six landmines as a result of EOD callouts (two tripwire-initiated F1 fragmentation grenades, one MON-50, one MON-90, and one POMZ-2).[127] FSD is investigating the use of non-explosive methods to destroy ordnance while The HALO Trust continues to explore avenues for the granting of a licence to use explosives.[128] The lack of a functioning mine action authority means that there is no clear route for humanitarian organisations to receive such a licence.[129]

FSD started operations in Ukraine in early 2015 with a small grant for risk education in conflict-affected areas in the east. FSD subsequently gained accreditation for survey and clearance operations, and has had survey teams operating in eastern Ukraine since early

2017, including mine clearance and EOD. FSD works closely with regional security forces to clear explosive ordnance from conflict-affected areas.[130] In 2017, FSD increased its capacity to include a clearance team. The training was conducted at the Ukrainian Armed Forces Demining Centre at Kamianets-Podilsky in April 2017 and clearance operations began in May 2017. A further training course was conducted from March to April 2018 for additional clearance personnel and a non-technical survey team. FSD now employs female clearance personnel and they have appointed a female team leader to the non-technical survey team. It is expected that FSD will relocate a mechanical clearance machine to Ukraine from another FSD programme later in 2018.[131]

In addition, a Ukrainian organisation, "Demining Team of Ukraine" is active in demining in eastern Ukraine.[132]

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.[133]

LAND RELEASE

Since the outbreak of fighting in eastern Ukraine, clearance of ERW has been undertaken by both Ukrainian government authorities and separatist groups.[134] Clearance in the Donetsk and Luhansk regions is typically reactive, taking place soon after attacks or when a report of contamination is received from the local community.[135] Once identified, ERW are marked on the ground and their position fixed and reported to the local authorities.[136] ERW are either destroyed in situ or removed to storage areas or compounds for destruction later.[137]

SESU clearance has been slower in rural areas than in towns and cities.[138] In February 2016, SESU claimed that, since the beginning of fighting in 2014, it had cleared some 140km^2 across the whole country, and disposed of more than 202,000 explosive objects.[139] Non-technical survey is helping to identify contaminated land, especially in liberated areas.[140] The Ukrainian Armed Forces are responsible for clearing ERW in areas close to the front-lines and former military positions.[141] In December 2015, the working group of the Trilateral Contact Group on Ukraine agreed 12 priority areas for humanitarian demining.[142]

In areas controlled by pro-Russian groups, separatists are said to be also clearing ERW and mines. In areas of Donetsk not under the control of the Ukrainian government, former SESU personnel, now organised under the separatist Donetsk People's Republic, are undertaking the bulk of clearance around Donetsk city. Personnel are organised into regular shifts, with clearance conducted both day and night.[143]

The Ukrainian authorities and the pro-Russian separatists are, to varying degrees, recording written logs of emergency call-outs and clearance operations,[144] but data is not always disaggregated into weapon type.[145] Clearance data is not available from pro-Russian separatist groups, and an accurate picture is not available of the scale of ERW clearance being undertaken in eastern Ukraine and of remaining CMR contamination.

Survey in 2017

In 2017, The HALO Trust confirmed through survey as CMR contaminated four hazardous areas in Svatove village, in Svativskyi district of Luhansk oblast, totalling an estimated area of 431,537m^2.[146]

In 2017, FSD reduced one site by technical survey in the city of Kotovsk, Odessa Oblast. No CMR were found during the survey.[147]

In 2017, DDG confirmed 1.45km^2 as contaminated with mines/ERW in the Myrna Dolyna village, Popasnianskyi district, Luhansk region. A total of seven suspected hazardous areas (SHAs) were confirmed as contaminated by non-technical survey.[148] No CMR were found during the survey.[149]

Clearance in 2017

The HALO Trust cleared four areas in 2017 in Svatove village in Luhansk oblast totalling 50,432m^2. This clearance was of an ammunition storage area that exploded in 2015. No CMR were found during clearance.[150]

FSD began BAC operations in May 2017 and by the end of the year two sites had been cleared while a third task was suspended in early December 2017 because of poor weather. No CMR were found during clearance.[151]

DDG did not conduct BAC in 2017.[152]

Progress in 2018

The Ministry of Defence planned to focus on demining civilian territories and water pipe and gas pipe infrastructure in 2018, along with continued non-technical and technical survey, risk education, and victim assistance.[153]

The HALO Trust was expecting to expand its operational capacity to approximately 300 staff by the end of 2018. HALO Trust's priority for 2018 was to expand clearance capacity in the buffer zone, where 84% of mine and ERW incidents take place. The deployment of mechanical clearance assets, combined with the increase in capacity of manual deminers, will allow HALO Trust to finish current clearance tasks in areas further from the line of contact. This increased capacity will then focus on a number of high priority tasks that HALO Trust has

identified in Bakhmutskyi, Mariupolskyi, and Stanychno-Luhanskyi regions. The HALO Trust also intended to support capacity development in 2018, with QM training of the MoD's Demining Centre in Kamenets Podylskiy and non-technical survey training of SESU.[154]

FSD was planning to increase its clearance capacity in 2018 with the creation of dedicated "large loop" crews to assist with BAC tasks.[155]

DDG planned to expand capacity by deploying an additional demining team.[156]

ARTICLE 4 COMPLIANCE

Ukraine 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. Russia has similar obligations in any areas of Ukraine over which it exercises effective control.

National funding is provided for clearance of ERW and mines, and the Department of Environmental Safety and Mine Action is a division of the MoD, from which it is funded.[157] Ukraine also receives assistance from foreign partners (OSCE and NATO) for demining equipment.[158]

The HALO Trust was expecting to receive more funding in 2018 than the previous year as funding from its two largest donors was likely to increase.[159] FSD expected to receive the same amount of funding in 2018.[160] DDG was expecting to receive increased funding in 2018 after a slight reduction in 2017.[161]

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8 "Minefield Kill 261, Wound 479", Kiev Post, 21 January 2016, at: http://www.kyivpost.com/article/content/kyiv-post-plus/minefields-kill-261-wound-479-406428.html.

9 HRW, "Ukraine: More civilians killed in cluster munition attacks", 19 March 2014.

10 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), Ukraine Side-event, Geneva, 2 December 2015.

11 Interview with Lt.-Col. Yevhenii Zubarevskyi, Mine Action Department, Ministry of Defence (MoD), in Geneva, 20 May 2016.

12 "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: https://www.apminebanconvention.org/fileadmin/APMBC/IWP/IM-June17/statements/eng/05_COMPLIANCE_COMMITTEE_-_Ukraine.pdf.

13 Interview with Maksym Komisarov, Chief of Mine Action Department, Ministry of Defence, in Geneva, 8 June 2018.

14 Interview with Maksym Komisarov, MoD, in Geneva, 8 June 2018.

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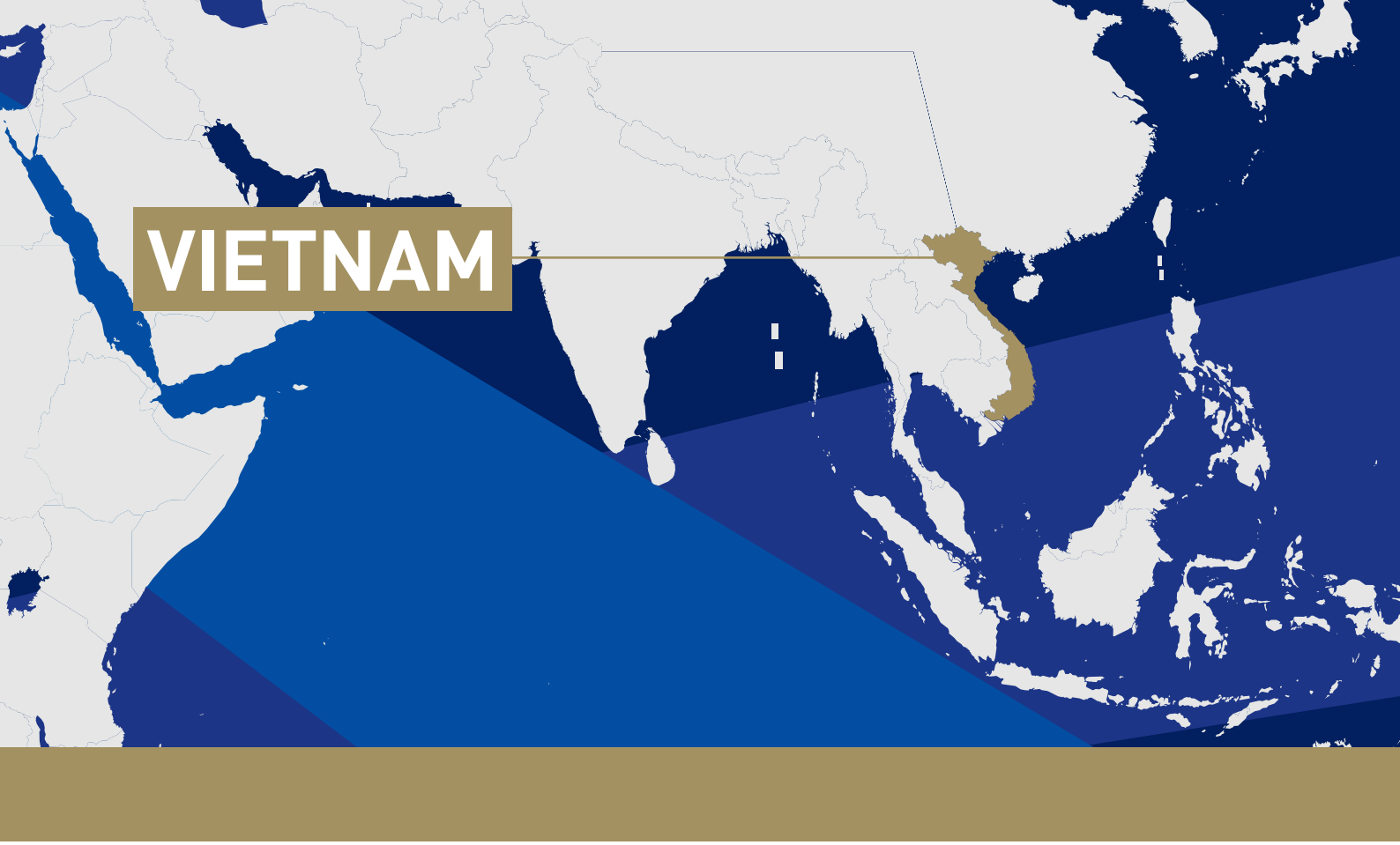

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	6	5
Target date for completion of cluster munition clearance	4	4
Targeted clearance	6	5
Efficient clearance	5	6
National funding of programme	6	6
Timely clearance	5	5
Land-release system in place	6	6
National mine action standards	5	5
Reporting on progress	3	3
Improving performance	6	5
PERFORMANCE SCORE: AVERAGE	**5.2**	**5.0**

PERFORMANCE COMMENTARY

The government is restructuring mine action management in a bid to improve coordination, efficiency, and standards. In the meantime, the lack of reporting by Vietnam's army engineers and affiliated companies, which constitute by far the greatest clearance capacity, remains a key weakness and obscured any evidence of progress. The proposed Mine Action Partnership Group, which might have helped to address some of the issues, has yet to start substantive work.

RECOMMENDATIONS FOR ACTION

- Vietnam should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Vietnam should develop a national strategic plan and workplan, detailing the role of national and international implementing partners.
- 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.
- Vietnam should activate the Mine Action Partnership Group.

CONTAMINATION

Vietnam is massively contaminated by cluster munition remnants (CMR) but no accurate estimate of the extent exists, even to the nearest hundred square kilometres. The United States (US) dropped 413,130 tons of submunitions over Vietnam between 1965 and 1973, reportedly striking 55 provinces and cities, including Haiphong, Hanoi, Ho Chi Minh City, Hue, and Vinh.[1] An explosive remnants of war (ERW) impact survey, started in 2004 and completed in 2014, was only published in 2018. It found that 61,308km^2 or 19% of Vietnam's land surface area was affected by ERW but did not specify the area affected by CMR. It said, though, that CMR affected 32 of Vietnam's 63 provinces and cities.[2]

In Quang Tri, reputedly Vietnam's most contaminated province, estimates of the CMR-contaminated area are increasing sharply with the progress of survey. On the basis of partial survey results in one district, international operators had estimated in 2015 that total CMR contamination would affect around 57km^2. By the start of 2018, operators estimated total ERW contamination at more than 130km^2, and with survey still to be conducted in three districts they expected the total would rise to between 150km^2 and 200km^2.[3] The higher estimate would represent less than 5% of Quang Tri's total area of 4,470km^2. The impact of clearance is evident in sharply reduced ERW casualties. The Legacy of War Coordination Center of Quang Tri Province (LWCC) reported 2017 as the first year without a fatal casualty since the end of the war.

Vietnam's Military Engineering Command has recorded finding 15 types of US-made submunitions. Most submunition types used by the United States were air-dropped, but artillery-delivered submunitions were also used in central Quang Binh and provinces to the south of it.[4]

Most of the CMR international operators encounter in Quang Tri province are BLU 26, 29, and 61, and occasionally M 20 Rockeyes.[5] In Quang Nam, almost all the CMR cleared by Danish Demining Group (DDG) were M83 submunitions.[6] The Military Engineering Command has in the past 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 of them reportedly covering an area of 4,000m^2 and containing some 25 tons of munitions.[7]

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 central coastal provinces, the Central Highlands, the Mekong River delta, and the Red River delta.[8] The experience of international operators in central Vietnam points to wide variations in the types of contamination from district to district. International operators report encountering mainly projectiles, mortars, grenades and some aircraft bombs.[9]

PROGRAMME MANAGEMENT

Vietnam's mine action programme is undergoing a process of restructuring but management and operations continue to depend largely on the armed forces. A Prime Minister's Decision in 2006 assigned responsibility to the Ministry of National Defence for the national oversight of mine action, with clearance to be undertaken by the Army Engineering Corps of the People's Army of Vietnam (PAVN).[10] BOMICEN, part of the Ministry of National Defence, acted as a central coordinating body for clearance and survey by national operators.[11]

Vietnam set up Steering Committee 504 in 2010 under the Prime Minister and with the ministers of Defence and Labour, War Invalids and Social Affairs as deputies with responsible for overseeing the national mine action programme for 2010–25. In March 2018, the government merged Steering Committee 504 and Steering Committee 33 (in charge of responses to the impact of toxic chemical defoliants dropped by the United States) into Steering Committee 701 on the Settlement of Post-war Unexploded Ordnance and Toxic Chemical Consequences.

Under a Prime Minister's decision (738) in 2013, Vietnam set up a national mine action centre (VNMAC) to strengthen the direction of mine action and provide a focal point for mine action operations.[12] A decree issued in 2014 assigned responsibility for managing and coordinating the national mine action programme to the Ministry of National Defence and gave VNMAC responsibility to propose policy, draw up plans, serve as the focal point for international cooperation, lead fundraising, and "preside over" mine action information management. It is also responsible for organising and implementing quality assurance.[13]

VNMAC has four departments (Planning, Coordination, Technical Affairs and Finance) and three subordinate centres (Training, National Database, and Consulting Centre for Quality Monitoring and Management). The government appointed VNMAC's director and two deputy directors in 2014 and the centre became officially operational in February 2015.[14]

A further decree on management of mine action under preparation since 2016 is intended to clarify VNMAC's mandate and define the role of all state agencies involved in mine action to eliminate overlap.[15] A draft of the decree circulating in 2018 stated the Ministry of Defense will preside over, and coordinate with other relevant ministries and sectors, to develop the national mine action programme. It also identified the Ministry of Defense as the focal point for international cooperation in mine action. The decree stated instructed "VNMAC, under the direction of the Prime Minister and managed by Ministry of Defense, to monitor, coordinate and implement mine action tasks."[16] By April 2018, the draft had received endorsement of 20 ministries and was awaiting the Prime Minister's approval. VNMAC believed the decree would be issued by 1 July 2018.[17]

A Mine Action Partnership Group (MAPG), whose formation was approved by the Prime Minister in 2016 to strengthen coordination between national and international stakeholders, had its first Executive Committee meeting in June 2017. The committee agreed to set up four thematic working groups to take up priority issues in the second half of the year. These included i) contributing comments on the long-awaited decree on mine action management, updating national standards; ii) evaluating the status of victim assistance and risk education; iii) reviewing the status of information management and plans for a national database and iv) reviewing resource mobilisation. Delays in setting up a steering committee, however, stalled further activity.

Strategic Planning

Vietnam does not have a strategy specifically targeting cluster munition remnants. 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 clearance of 8,000km^2 of ERW contamination between 2016 and 2025.[18]

A VNMAC action plan for 2018 included three main targets[19]:

- Finalise legislation, decrees, and guidelines for the mine action sector in order to provide a unified framework for the sector country-wide.
- Clarify estimates of contamination through the release of the landmine impact survey and develop risk education.
- Clearance of some 300km^2 of ERW affected land.

Quang Tri Province[20]

Provincial authorities approved the creation of the LWCC in February 2015 to coordinate mine action in the province. The Centre, funded by the United Kingdom (UK) Department of International Development (DFID) until March 2018 and supported by NPA, has developed a system of task dossiers, draws up an annual workplan, and coordinates survey, clearance, and EOD by international operators. A hotline for the community to report the presence of ERW receives an average of four calls a day.

The LWCC maintains an Information Management System for Mine Action (IMSMA) database set up by NPA in 2013 and taken over by provincial authorities in 2016. The database holds results of survey and clearance by international organisations, 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. Casualties, averaging more than 60 a year between 2000 and 2008, fell to three in 2017, the first year the province recorded no fatal ERW-related accidents.

In 2015, international operators had projected completing clearance of Quang Tri province by 2020, but the sharp rise in estimates of the extent of its ERW contamination as a result of survey has made clear those targets are unattainable. In response, the LWCC is prioritizing tasks in consultation with operators. It is also seeking to integrate mine action into provincial socio-economic planning. A steering committee, which brings together representatives of the LWCC and the provincial authority, meets quarterly. The LWCC has been consulted by VNMAC and held workshops for authorities of other provinces raising awareness on programme and information management.

Information Management

On a national level, data remains a challenge. VNMAC is in the process of setting up an information management unit that is intended to combine data on operations and victim assistance held by other national agencies. The project is supported by NPA, which provided software, hardware, and training in 2016. VNMAC also started drafting national legislation that would provide for the sharing of information, and was revising the national standards for information management.

Priority tasks in 2017 included populating the database with results of survey and other operations and getting the draft legislation approved.[21] VNMAC's release in 2018 of the results of an impact survey was welcomed by mine action stakeholders as an important step towards information sharing. With the exception of Quang Tri, Vietnamese provinces with active mine action programmes do not have databases, and operators maintain their own.[22]

Operators

Most clearance in Vietnam is conducted by the Army Engineering Corps and military-owned commercial companies. Its current strength and deployment are unknown. Officials have previously reported that it had 250 mine clearance and battle area clearance (BAC) teams. Vietnam reportedly has more than 70 military-owned companies undertaking clearance related to infrastructure and commercial and development projects.[23]

International operators conclude agreements to work in Vietnam with the People's Aid Coordinating Committee, but negotiate their programme of operations separately with the authorities of each province. Humanitarian operators were concentrated in central provinces on either side of the demilitarised zone (DMZ), which are among the most heavily contaminated. International operators active in 2017 included DDG (in Quang Nam and Thua Tien Hue provinces); Mines Advisory Group (MAG) (in Quang Binh and Quang Tri provinces); Norwegian People's Aid (NPA) (in Quang Tri and Thua Thien Hue provinces); and PeaceTrees Vietnam (who have been working in Quang Tri province since 1995).

Under an agreement with the Korea International Cooperation Agency (KOICA), VNMAC, KOICA, and UNDP are collaborating on a US$20 million project for ERW survey and clearance, information management, mine risk education, and victim assistance in two central provinces (Binh Dinh and Quang Binh) for three years in 2018–20. A Joint Project Management Unit (JPMU), with representatives of each of these three organisations, will be responsible for the daily and coordinated project management, supported by a UNDP chief technical adviser who joined in March 2018. A Joint Project Coordination Committee (JPCC), comprising representatives from the Ministry of Defence, VNMAC, UNDP and KOICA, will provide overall strategic guidance and oversight.

The project, which was expected to become operational in the summer of 2018, calls for ERW survey and clearance in the two provinces to be carried out by 73 provincial military teams, (21 survey and 52 clearance teams), targeting survey of 200km^2 and clearance of about 80km^2. The project also provides for the development of information management resources and for capacity development in VNMAC and the Ministry of Labour and Social Affairs in support of risk education and victim assistance.[24]

Golden West, with offices in Hanoi and three provinces, is providing explosive ordnance disposal (EOD) training to Provincial Military Commands in Ha Tinh, Quang Binh, and Quang Tri provinces, as well as advising VNMAC on technologies and training and supporting US military-to-military EOD training. Golden West is also partnering the Geneva International Centre for Humanitarian Demining (GICHD) in a Management of Residual Explosive Remnants of War project to study the ageing of ERW, develop standards for the collection, cutting, and dissection of ERW, and to draw up and pilot a long-term risk management model.[25]

LAND RELEASE

The total extent of land released through survey and clearance in 2017 is unknown. VNMAC provided no information on operations conducted by BOMICEN, the Army Engineering Corps, provincial military commands, and military-owned commercial companies, which together have by far the most capacity in the country.

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. The report said that between completion of the survey in 2014 and the end of 2017 the estimate of contamination in Ha Tinh fell by 111km^2 and 321km^2, respectively.[26]

Four international NGOs cleared a total of almost 16.75km^2 of CMR-contaminated area in 2017,[27] approximately 0.5km^2 less than the previous year.[28]

Survey in 2017

In Quang Tri, ranked as Vietnam's most heavily contaminated province, NPA continued to work in a partnership with MAG, under which NPA conducted its cluster munitions remnants survey (CMRS) and MAG cleared the resulting confirmed hazardous areas (CHAs).

NPA, with a total staff of 183 in Vietnam, confirmed almost 54km^2 of hazardous area in Quang Tri province in 2017, 15% more than the previous year. It attributed the increase to improvements in the CMRS methodology developed with MAG and to greater efficiency in information management. Impact and evidence points are first assessed and then investigated by technical survey teams, which define CHAs for clearance. As part of the process of refining CMRS, NPA adopted a more systematic investigation of search boxes and in the last three months of 2017, trialled new procedures that have significantly accelerated the process of defining CHA boundaries.[29] NPA aims to complete survey of Quang Tri in 2019 and will then deploy survey teams for clearance.

In Quang Binh province, MAG conducts clearance of CHAs identified from a process of mapping evidence points. The area confirmed in 2017 dropped to a little over 0.3km^2 from 5.47km^2 the previous year as a result of reduced capacity caused by a drop in donor funding for its work in the province.[30] DDG confirmed CMR contamination affecting 0.2km^2 of Quang Nam and almost 0.5km^2 of Thua Tien Hue province in 2017.[31]

Table 1: Non-technical and Technical Survey in 2017[32]

Operator	Province	Areas confirmed	Area confirmed (m^2)
DDG	Quang Nam	26	225,085
	Thua Tien Hue	46	465,394
MAG	Quang Binh	26	345,343
NPA	Quang Tri	91	53,675,545
Totals		**189**	**54,711,367**

Clearance in 2017

Most clearance is undertaken by army engineers but neither VNMAC nor the Ministry of National Defence provided information on the scope or results of clearance operations. In Quang Tri province, incomplete data provided by the Provincial Military Command to the LWCC database showed clearance of 1.5km^2,[33] but it is not known whether this refers to general UXO clearance or specifically clearance of CMR so it is not included in the national total.

International operators cleared 16.75km^2 in 2017, a little more than half a square kilometre less land overall than the previous year, mainly reflecting lower funding for clearance in Quang Binh. In Quang Tri, two operators cleared a total of almost 15km^2, an increase of more than 1km^2 (see Table 2). This was in particular the result of progress of the US-funded collaboration in Quang Tri province between NPA (conducting technical survey), and MAG (clearing the resulting polygons).

Table 2: Clearance of CMR in 2017[34]

Operator	Province	Areas cleared	Area cleared (m^2)	Submunitions destroyed	Other UXO destroyed
DDG	Quang Nam	39	569,226	136	200
MAG	Quang Binh	20	1,090,208	831	83
	Quang Tri	35	14,328,140	3,570	3,636
NPA	Thua Thien Hue	7	658,353	441	196
PTVN	Quang Tri	5	103,552	61	46
Totals		**106**	**16,749,479**	**5,039**	**4,161**

DDG more than doubled the area it cleared in Quang Nam province compared with the previous year, despite the necessity of reducing clearance capacity to one BAC team at the start of 2017 due to funding constraints. In September 2017, it started operating in Thua Thien Hue province's A Luoi district with funding from Japan, working with three non-technical survey teams. In April 2018, it increased capacity in the province, adding two EOD teams and two BAC teams.[35]

MAG received less funding for operations in Quang Binh province in 2017, which resulted in reduced clearance capacity and clearance of only one-third of the area cleared the previous year. By contrast, in Quang Tri province, where it conducted only evidence-based clearance of polygons identified by NPA survey, MAG cleared 7% more area in 2017, though it destroyed fewer items. Since 2015, MAG had conducted clearance in the province's central Cam Lo district but in 2018 it started taking on tasks in neighbouring Trieu Phong and Hai Lang districts.[36] In 2018, MAG added four mine action teams funded by the US Department of State and specifically tasked with clearing CHAs defined by NPA's latest version of CMRS with a view to identifying whether further amendments could enhance the methodology's efficiency and effectiveness.[37]

PeaceTrees, working with four clearance teams in 2017, cleared 0.1km^2 of CMR-affected areas tackling NPA polygons in Da Krong district, as well as 0.44km^2 of requested community-related development clearance, mostly in Hoang Hoa district.[38] LWCC data showed PTVN more than doubled the amount of land it cleared in 2017 compared with the previous year.[39]

NPA focuses on survey in Quang Tri but worked with two clearance teams in two of seven districts in Thua Thien Hue province. It cleared 18% more area in 2017 but funding that was due to expire in 2018, leaving a question mark against the future of its operations in the province. Most of NPA's EOD operations were conducted in Quang Tri and continued at much the same level in 2018 as the previous year.[40]

Table 3: Spot/Roving Clearance and EOD in 2017[41]

Operator	Province	Roving tasks	Submunitions destroyed	Other UXO destroyed
DDG	Quang Nam	255	0	391
MAG	Quang Binh	3,166	685	2,231
	Quang Tri	1,552	141	4,073
NPA	Quang Tri	1,079	99	4,076
	Thua Thien Hue	109	36	350
PTVN	Quang Tri	1,667	157	2,469
Totals		**7,828**	**1,118**	**13,590**

ARTICLE 4 COMPLIANCE

Vietnam is not a state party or signatory to the CCM. Nonetheless, Vietnam has obligations under international human rights law to protect life, which requires that CMR be cleared as soon as possible.

1 "Vietnam mine/ERW (including cluster munitions) contamination, impacts and clearance requirements", Presentation by Sr. Col. Phan Duc Tuan, People's Army of Vietnam, in Geneva, 30 June 2011; Handicap International, Fatal Footprint, the Global Human Impact of Cluster Munitions, Brussels, November 2006, p. 15.

2 Vietnam National Mine Action Centre (VNMAC), "Report on Explosive Remnants of War Contamination in Vietnam Based on the "Vietnam Explosive Remnants of War Contamination Survey and Mapping – Phase 1 Project", Hanoi, 2018, p. 38.

3 Interviews with Resad Junuzagic, Country Director; Jan Eric Stoa, Operations Manager; and Magnus Johansson, Operations Manager, Norwegian People's Aid (NPA), Hanoi, 17 April 2018; and with Simon Rea, Country Director; and Michael Raine, Technical Operations Manager, Mines Advisory Group (MAG) Quang Tri, 19 April 2018.

4 "Vietnam mine/ERW (including cluster munitions) contamination, impacts and clearance requirements", Presentation by Sr. Col. Phan Duc Tuan, People's Army of Vietnam, in Geneva, 30 June 2011; Handicap International, Fatal Footprint, the Global Human Impact of Cluster Munitions, Brussels, November 2006, p. 15.

5 Interview with Magnus Johansson, NPA, Hanoi, 17 April 2018, and Michael Raine, MAG, Quang Tri, 18 April 2018.

6 Email from Clinton Smith, Country Director –Vietnam, DDG, 23 March 2017.

7 Interview with Sr. Col. Phan Duc Tuan, People's Army of Vietnam (PAVN), in Geneva, 30 June 2011.

8 VNMAC, "Report on Explosive Remnants of War Contamination in Vietnam", Hanoi, 2018, pp. 33–36.

9 Interviews with Resad Junuzagic, NPA, Jan Eric Stoa, NPA, and Magnus Johansson, NPA, Hanoi, 17 April 2018, and with Simon Rea, MAG, and Michael Raine, MAG, Quang Tri, 19 April 2018; and emails from Clinton Smith, Country Director –Vietnam, DDG, 23 March 2017 and 19 April 2018.

10 Prime Minister's Decision No. 96/2006/QD-TTg, 4 May 2006.

11 Email from Col. Nguyen Trong Dac, Ministry of National Defence, 6 August 2006.

12 Interview with Maj. Gen. Pham Quang Xuan, Director, VNMAC, in Geneva, 31 March 2014.

13 Prime Minister's Decision 319/QD-TTg, 4 March 2014.

14 Information provided by Do Van Nhan, Deputy Director General, VNMAC, received by email from Vietnam Veterans of America Foundation (VVAF), 19 June 2015.

15 Interview with Dang Van Dong, Deputy Director General, VNMAC, in Geneva, 7 February 2017.

16 Draft Decree on the "management and implementation of mine action activities", Hanoi, April 2018.

17 Interview with Nguyen Hang Phuc, Deputy Director General, VNMAC, Hanoi, 18 April 2018.

18 Prime Minister, "Decision on Approval of the National Mine Action Plan Period 2010–2025", Hanoi, 21 April 2010.

19 Interview with Nguyen Hang Phuc, VNMAC, Hanoi, 18 April 2018.

20 Meeting with Christopher Ramsden, Senior Technical Adviser, LWCC, Nguyen Duc Thien, Manager, LWCC; Nguyen Van Duc, Data Processing Officer, LWCC; and Snr Lieutenant Tran Van Hai, Operations Officer, Provincial Military Command, in Dong Ha, Quang Tri, 19 April 2018.

21 Interview with Dang Van Dong, VNMAC, in Geneva, 7 February 2017; and email from Resad Junuzagic, NPA, 7 April 2017.

22 Emails from Resad Junuzagic, Country Director, NPA, 7 April 2017; Simon Rea, Country Director, MAG, 11 April 2017; and Clinton Smith, DDG, 23 March 2017.

23 Interview with Sr. Col. Nguyen Thanh Ban, Engineering Command, Hanoi, 18 June 2013; email from Executive Office of the National Steering Committee, 6 August 2012; and interviews with mine action stakeholders, Hanoi, 16–20 April 2018.

24 Interview with Nguyen Hang Phuc, Deputy Director General, VNMAC, Hanoi, 18 April 2018; telephone interview with Nils Christiansen, Chief Technical Adviser, UNDP, 23 April 2018; and emails, 3 May and 11 June 2018.

25 Emails from Lee Moroney, Vietnam Country Director, Golden West Humanitarian Foundation, 22 April 2018; and Rob White, Adviser, Strategic Management and Residual Contamination, GICHD, 25 April 2018.

26 VNMAC, "Report on Explosive Remnants of War Contamination in Vietnam", Hanoi, 2018, pp. 36–37.

27 Emails from Resad Junuzagic, NPA, 7 April 2017; Simon Rea, MAG, 11 April 2017; Clinton Smith, DDG, 23 March 2017; and Nguyen Van Duc, LWCC, Quang Tri, 15 May 2017.

28 Mine Action Review reported DDG, MAG, and NPA cleared a total of 17.41km^2 in 2016. The LWCC database reported PeaceTrees Vietnam cleared an additional 0.22km^2 in 2016.

29 Emails from Resad Junuzagic, NPA, 7 April 2017 and 2 April 2018

30 Email from Simon Rea, MAG, 11 April 2018.

31 Email from Clinton Smith, DDG, 19 April 2018.

32 Ibid.; and emails from Simon Rea, MAG, 11 April 2018; and Resad Junuzagic, NPA, 2 April 2018.

33 Email from Nguyen Van Duc, LWCC, Quang Tri, 27 April 2018.

34 Emails from Resad Junuzagic, NPA, 7 April 2017; Simon Rea, MAG, 11 April 2017; Clinton Smith, DDG, 23 March 2017; Nguyen Van Duc, LWCC, Quang Tri, 15 May 2017; and Claire Yunker, Executive Director, PeaceTrees Vietnam, 21 May 2018.

35 Emails from Clinton Smith, DDG, 19 and 23 April 2018.

36 Interviews with Simon Rea and Michael Raine, MAG, Quang Tri, 18 April 2018.

37 Ibid.; and email from Simon Rea, MAG, 12 June 2018.

38 Interview with Ha Pham, Project Manager, PeaceTrees Vietnam, Quang Tri, 19 April 2018; email from Claire Yunker, PeaceTrees Vietnam, 21 May 2018.

39 Email from Nguyen Van Duc, LWCC, Quang Tri, 27 April 2018.

40 Email from Resad Junuzagic, NPA, 2 April 2018.

41 Emails from Resad Junuzagic, NPA, 7 April 2017; Simon Rea, MAG, 11 April 2017; and Clinton Smith, DDG, 23 March 2017.

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	4	4
Target date for completion of cluster munition clearance	3	4
Targeted clearance	4	4
Efficient clearance	4	3
National funding of programme	3	3
Timely clearance	5	4
Land-release system in place	3	2
National mine action standards	5	5
Reporting on progress	3	4
Improving performance	5	4
PERFORMANCE SCORE: VERY POOR	**3.9**	**3.7**

PERFORMANCE COMMENTARY

Continued use of cluster munitions by the Saudi Arabia-led coalition added new contamination but the Yemen Mine Action Centre (YEMAC) reportedly increased administrative and operational capacity and productivity.

RECOMMENDATIONS FOR ACTION

- Yemen should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Yemen should report on the threat from cluster munition remnants (CMR) and prepare a plan for their clearance and destruction.
- YEMAC should allow and facilitate survey and clearance by international operators.
- YEMAC should report on its activities and, at a minimum, publish annual reports on programme capacity, the progress of survey and clearance operations, and funding.

CONTAMINATION

Yemen was contaminated with explosive remnants of war (ERW), including CMR, 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.[1] Human Rights Watch has documented Saudi air strikes using cluster munitions dating back to 2009.[2] In March 2017, it said it had documented 18 coalition attacks using cluster munitions since the upsurge in conflict in 2015 that killed at least 18 civilians and injured 74 more.[3]

YEMAC reported in 2014 it had identified some 18km^2 of suspected CMR hazards in the northern Saada governorate bordering Saudi Arabia. It also knew of other areas of contamination in north-western Hajjah governorate that it had not been able to survey.[4] Since the start of the latest round of hostilities in March 2015, international observers and researchers reported that Saudi coalition land and aerial bombardments using a variety of cluster munitions had struck many areas of north-western and central Yemen. YEMAC has identified heavy CMR contamination in Saada and al-Jawf governorates, as well as new CMR contamination in Amran, Hodeida, Mawit, and Sana'a governorates, including in Sana'a City.[5]

In 2015, after reviewing photographs and citing witness accounts, Human Rights Watch reported finding air-dropped BLU-97 and CBU-105 sensor-fuzed cluster munitions as well as artillery-fired ZP-39 dual-purpose improved conventional munition (DPICM) submunitions in Saada governorate. It also reported finds of CBU-105 submunitions in Amran and Sana'a governorates. In 2016, it documented the presence of BLU-63 submunitions in Sanaa city after an air strike on the capital in January, and CBU-105 submunitions after an attack on the port town of Hodeida.[6]

Amnesty International also reported coalition attacks using Brazilian Astros II munitions in Saada city and governorate, and British-made BL-755 submunitions in Hayran in Hajjah governorate.[7] In December 2016, Saudi Arabia confirmed it had used BL-755 munitions and said it had decided to stop using them[8] but the United Nations said it had documented use of cluster munitions in Saada governorate in December 2016 and May 2017.[9]

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.[10] NMAC, chaired by the Minister of State (a member of the cabinet), brings together representatives of seven concerned ministries and a number of non-governmental organisations.

YEMAC was established in Sana'a in January 1999 as NMAC's implementing body with responsibility for coordinating mine action in the country.[11] It works 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 (Hadramout governorate) added in March 2004. REMABs are responsible for field implementation of the national mine action plan. YEMAC is also responsible for information management and quality control.[12]

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 2017, its international staff included a 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.[13]

Escalating political turmoil and conflict in Yemen since 2015, together with lack of funding, severely limited mine action planning and implementation.[14] Communication and coordination between YEMAC headquarters and its Aden branch have been hampered by Yemen's de facto division between the Saudi-led coalition that controls Aden and operates in much of the south in support of the internationally recognised but exiled government, and Houthi rebels who control

the capital Sana'a and operate in much of the north.[15] In 2017, UNDP reported that YEMAC administrative and operational capacity and productivity improved in 2017, helped by training courses for new recruits in ERW clearance, training for a survey leadership group, and Information Management System for Mine Action (IMSMA) training in Jordan for database staff.[16]

Total funding for mine action reached $5.8 million in 2017.[17] By January 2018, funding received or pledged for mine action in 2018 amounted to $4.1 million provided by the United States ($1.5 million), the Netherlands ($1.4 million), Germany ($0.6 million), and the United Kingdom ($0.5 million).[18]

Strategic Planning

Yemen has no strategic plan for tackling CMR. In late 2015, UNDP said it was giving priority to reducing the emergency threat of explosive weapons and providing relief to heavily-affected communities. This approach had three basic aims: prevent the situation from deteriorating, provide relief from existing threats, and address the longer-term Anti-Personnel Mine Ban Convention obligations.[19]

From July 2017, UNDP and YEMAC embarked on a plan for the fifth phase of cooperation covering 2017–20. The plan's "overarching principles" included aiding restoration of basic services, enabling access to infrastructure, and reducing casualties.[20]

Operators

YEMAC is the only organisation authorised to conduct survey and clearance of ERW. YEMAC provided no information on its activities in 2017. UNDP reported it employed some 800 staff in 2017 and clearance teams were active in 14 of Yemen's 21 governorates. The number and size of operational teams reportedly varied according to operational needs.[21] The Danish Demining Group (DDG) provided risk education through an office in Aden.[22]

LAND RELEASE

YEMAC conducts survey and clearance on an emergency basis. UNDP reported its teams completed a mixture of desk-top, non-technical, and technical survey of ERW-affected areas covering a total of more than 3km^2 in 2017.

YEMAC teams also released 8,540,313m^2 and destroying 349,919 items, including 3,245 cluster munition remnants. Teams conducted clearance in 55 districts of 14 provinces.[23] Operations included response to requests for emergency clearance of Hodeida port, the main entry point for international humanitarian assistance to Yemen, and Amran cement factory, an important contributor to economic activity.[24]

UNDP acquired thermite torches in 2017 to aid demolitions of cluster munitions but did not receive authorisation to bring them into the country. Plans were drawn up with The HALO Trust to train YEMAC personnel in Jordan in use of the torches.[25]

ARTICLE 4 COMPLIANCE

Yemen is not a state party to the CCM and therefore does not have a specific clearance deadline under Article 4. Nonetheless, Yemen has obligations under international human rights law to clear CMR as soon as possible.

1 United Nations Development Programme (UNDP), Grant Progress Report for 1 October–31 December 2015, 25 January 2016.

2 Human Rights Watch, "Yemen: Cluster munitions harm civilians", 31 May 2015.

3 Human Rights Watch, "Brazilian cluster munitions wound children", 17 March 2017.

4 Email from Ali al-Kadri, General Director, YEMAC, 20 March 2014.

5 Interviews with Ahmed Alawi, YEMAC, 17 February 2016; and Stephen Bryant, Chief Technical Adviser, UNDP, in Geneva, 6 February 2017.

6 Human Rights Watch, "Yemen: Saudi-Led Airstrikes Used Cluster Munitions", 3 May 2015; "Yemen: Cluster munitions harm civilians", 31 May 2015; and "Yemen: Coalition Drops Cluster Bombs in the Capital", 7 January 2016.

7 Amnesty International, "Yemen: children among civilians killed and maimed in cluster bomb 'minefields'", 23 May 2016.

8 "Coalition Forces supporting legitimacy in Yemen confirm that all Coalition countries aren't members to the Convention on Cluster Munitions", Saudi Press Agency, 19 December 2016; Human Rights Watch, "Saudi Arabia-led coalition uses banned Brazilian cluster munitions on residential areas", 9 March 2017.

9 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. 10.

10 Anti-Personnel Mine Ban Convention (APMBC) Article 7 Report, Form I, 31 March 2009.

11 APMBC Article 5 deadline Extension Request, 31 March 2008, p. 2.

12 UNDP, "Emergency Mine Action Project, Annual Report 2017", January 2018, p. 8.

13 Ibid.

14 Interviews with mine action stakeholders who declined to be identified, February–June 2015.

15 Interview with Ahmed Alawi, YEMAC, and Stephen Bryant, Chief Technical Adviser, UNDP, both in Geneva, 17 February 2016.

16 UNDP, "Emergency Mine Action Project, Annual Report 2017", January 2018, pp. 10–12.

17 UNDP, "YEMAC clearance activities, 2016–17", provided by email from Stephen Bryant, UNDP, 3 April 2018.

18 UNDP, "Emergency Mine Action Project, Annual Report 2017", January 2018, p. 9.

19 Ibid., p. 6.

20 Ibid., p 12.

21 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 12.

22 Email from Maria Ersvaer, Programme and Operations Coordinator, DDG, 19 April 2018.

23 UNDP, "Emergency Mine Action Project, Annual Report 2017", January 2018, p. 12. The provinces included Abyan, Aden, Al-Dhalee, Al-Jawf, Al Asimah, Amanat, Amran, Dhamar, Hadramout, Hajjah, Lahej, Saada, Sana'a, Shabwar, and Taiz.

24 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, pp. 12, 20.

25 Ibid., p. 22.

OTHER AREAS

KOSOVO

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	7	7
Target date for completion of cluster munition clearance	7	6
Targeted clearance	7	7
Efficient clearance	7	7
National funding of programme	5	3
Timely clearance	6	6
Land-release system in place	7	7
National mine action standards	7	7
Reporting on progress	5	5
Improving performance	6	6
PERFORMANCE SCORE: AVERAGE	**6.4**	**6.1**

PERFORMANCE COMMENTARY

Clearance output in Kosovo increased in 2017 owing to Norwegian People's Aid (NPA) initiating clearance operations in northern Kosovo. The Kosovo Mine Action Centre (KMAC), with the support of The HALO Trust, has begun a nationwide socio-economic impact assessment, the results of which will be used to prioritise release of the remaining hazardous areas.

RECOMMENDATIONS FOR ACTION

- Kosovo should commit to respect and implement the Convention on Cluster Munitions (CCM) and to clear all cluster munition remnants (CMR) as soon as possible.
- Kosovo should consider adjusting its national standards so that the minimum clearance depth is mandated at less than 30cm, with exceptions for certain areas, such as swampy marsh land, where CMR can be found at depths of 50cm.

CONTAMINATION

At the end of 2017, contamination from CMR in Kosovo was estimated to cover a total of 15.4km^2 across 49 areas according to KMAC.[1] This compares to 15km^2 across 53 areas at the end of 2016.[2]

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.[3] 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.[4] Forces of the FRY also used cluster munitions during the 1998–99 conflict in Kosovo.[5] 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.[6]

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 districts in the north. The survey identified 130 confirmed hazardous areas (CHAs): 51 cluster munition strikes, covering 7.63km^2, and 79 mined areas over 2.76km^2.[7]

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.[8] The NPA survey confirmed 8.9km^2 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).[9] On the basis of available evidence, NPA believes that 83 cluster bombs were dropped in this region, dispersing a total of 17,041 submunitions.[10]

Cluster munition contamination in Kosovo is said to impede and endanger use of land for agriculture, pasture, tourism, and firewood collection, and most directly affects the rural poor.[11] Kosovo is a small country with a relatively large population, and submunitions are often found in close proximity to human activity.[12] In 2017, at the Kryshec clearance task in the Peje district, The HALO Trust reported that the primary land use after clearance was for residential purposes, with local residents looking to build houses.[13]

NPA's 2015 non-technical survey in northern Kosovo revealed that of the confirmed CMR-contaminated area, 43% is mountainous, in area intended for tourism (a key developmental potential for the region), 25% is agricultural land, and 23% forests.[14] In the three CMR-contaminated provinces in northern Kosovo, NPA identified 995 local inhabitants as being directly vulnerable, and a further 1,027 as indirectly vulnerable.[15]

KMAC, with the support of The HALO Trust, is in the process of undertaking a nationwide socio-economic impact assessment to further understand the impact of CMR and mine contamination. The result will be used to prioritise release of the remaining hazardous areas according to need and according to national development priorities.[16] The assessment began on 12 March 2018 and was expected to be completed at the end of May, with a report to be produced in June 2018.[17]

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.[18] Kosovo Protection Force (KFOR) EOD teams regularly dispose of ERW in response to information provided by the public and demining organisations.[19]

Programme Management

In January 2011, the EOD Coordination Management Section became KMAC under the Ministry of the Kosovo Security Forces (KSF). KMAC is responsible for managing clearance of mines and ERW, including CMR. It prepares an annual workplan in cooperation with demining non-governmental organisations (NGOs) and coordinates operations of both the NGOs and KFOR. It also coordinates survey, quality assurance, risk education, public information, and victim assistance.[20]

Strategic Planning

The current 2015–18 multi-year strategic plan for the Kosovo Mine Action Programme aims to reduce the social, economic, and environmental impact of mines, submunitions, and other UXO in Kosovo.[21] A new strategic plan for 2019–24 is being developed with a section dedicated to the clearance of cluster munition remnants.[22] The nationwide baseline socio-economic impact assessment will guide the development of the new strategic plan.[23] Clearance of CMR is not expected to be completed before 2024.[24]

Legislation and Standards

Kosovo has a law on humanitarian demining, adopted on 11 April 2012, in addition to other relevant regulations.[25] Kosovo also has mine action standards in place, which are said to conform to the International Mine Action Standards (IMAS).[26]

Quality Management

KMAC has two Quality Assurance (QA) officers, who conduct site visits at least once a week to ensure work is conducted in accordance with the standards as well as standing operating procedures (SOPs).[27]

Information Management

KMAC uses the Information Management System for Mine Action (IMSMA) database.

Operators

The KSF provide clearance capacity in Kosovo, including round-the-clock EOD emergency response.[28] During EOD spot tasks in 2017, five submunitions were destroyed.[29] The HALO Trust and NPA also conducted battle area clearance (BAC) in 2017.[30]

In 2017, The HALO Trust deployed two BAC teams: similar to its capacity in 2016.[31] HALO Trust expected to maintain its current BAC capacity in 2018.[32] There were nine manual demining teams in addition to the two BAC teams and the total number of operational staff in 2017 was 97 (on average), this includes deminers, team leaders, supervisors and medics. All deminers are trained in both manual and BAC methods.[33]

NPA started 2017 with one BAC team totalling eight operational staff from Bosnia and Herzegovina.[34] By August, NPA had deployed two national BAC teams totalling 16 operational staff, which were mentored by six staff members from Bosnia and Herzegovina.[35] NPA had planned to conduct a three-month pilot project using special detection dogs for targeted technical survey but KMAC did not permit the use of dogs in CMR operations so the two dogs were used for mine clearance instead.[36]

KSF operated four platoons for BAC and one platoon for demining in 2017.[37]

LAND RELEASE

A total of almost 0.9km^2 of CMR-contaminated area was cleared in 2017, while just over 0.5km^2 was reduced by technical survey and 2,290m^2 was cancelled by non-technical survey.[38]

Survey in 2017

In 2017, NPA reduced 501,510m^2 by technical survey and cancelled 2,290m^2 by non-technical survey in Tovariste and reduced 350m^2 by technical survey in Boljetin Zvečan municipality, and reduced 4,836m^2 by technical survey in Berim, Zubin Potok municipality, northern Kosovo.[39] It was planned that all of these areas would be cancelled by non-technical survey but NPA conducted technical survey due to the quantity of submunitions it encountered in the area.[40] A total of seven submunitions were destroyed during technical survey.[41]

Clearance in 2017

Collectively, KSF, The HALO Trust, and NPA cleared almost 0.88km^2 in 2017, with the destruction of 64 submunitions (see Table 1).[42] This represents a significant increase on the 0.47km^2 cleared in 2016.[43]

In 2017, KSF cleared 189,325m^2 in five hazardous areas that were all suspended at the end of the demining season.[44] In the course of clearance, no submunitions were found but 714 other items of UXO were destroyed.[45] The KSF did, however, destroy five submunitions during EOD spot tasks in 2017.[46]

The HALO Trust cleared 0.44km^2 of area containing CMR in 2017, during which 16 submunitions were destroyed.[47] HALO released five CHAs by clearance and worked on one other which was suspended at the end of the demining season.[48]

NPA cleared 0.25km^2 of area and released two CHAs by clearance and worked on one other that was suspended at the end of the demining season.[49]

Table 1: Clearance of CMR-contaminated area in 2017[50]

Operator	Areas cleared	Area cleared (m²)	Submunitions destroyed	Other UXO destroyed
KSF	0	189,325	0	714
HALO	5	441,180	16	1
NPA	2	249,384	*48	1
Totals	**7**	**879,899**	**64**	**716**

*Including the seven submunitions destroyed during technical survey.

According to KMAC, CMR-contaminated areas with high impact are prioritised for clearance. This is based on the number, location, and livelihoods of communities at risk.[51] According to NPA, along with expected impact, political and cultural factors were also taken into account when assigning tasks.[52] The nationwide socio-economic impact assessment being conducted in 2018 will re-assess the priority of tasks based on socio-economic need as well as on the Standardised Beneficiary Definitions of land use.[53] Clearance operations focus on areas confirmed as CMR contaminated rather than on suspected hazardous areas (SHAs).[54] In 2017, however, one area was partially cleared and then released as no submunitions were found.[55]

A 2014 evaluation of Kosovo's mine action programme, conducted on behalf of the International Trust Fund (ITF) Enhancing Human Security, concluded that KSF and The HALO Trust would not be able to complete clearance operations until 2026 using their existing capacity and procedures. The evaluation report suggested that if both organisations, with existing capacity, had access to HSTAMIDs (Handheld Standoff Mine Detection Systems) and adopted NPA's cluster munition remnants survey (CMRS) methodology, clearance could be completed in nine years. Since the 2014 evaluation, HSTAMIDS has been introduced, and the clearance capacity has grown, but The HALO Trust is unconvinced that CMRS methodology presents advantages in the context of Kosovo.[56] NPA is now using a CMRS-inspired methodology which has been modified to take account of the conditions in Kosovo.[57]

Clearance depth for BAC has been set at 50cm by KMAC.[58] In forested and stony areas NPA has found CMR at a maximum depth of 25cm.[59] A reduction in clearance depth to 30cm in these areas would enable detectors to be set to a medium rather than high sensitivity setting. This would be more efficient as it would result in fewer fake indicators being investigated.[60] The HALO Trust has reported that most items are not found below 30cm which also suggests that the clearance depth could be reduced in certain locations.[61]

Progress in 2018

Once the nationwide socio-economic impact assessment is completed in June 2018, The HALO Trust expects that the remaining dangerous areas will be reprioritised before subsequent tasks are assigned.[62] NPA will continue to deploy two ethnically mixed cluster clearance teams in northern Kosovo in 2018.[63] NPA will also try to field an additional survey team if funding allows.[64]

ARTICLE 4 COMPLIANCE

Kosovo is neither a state party nor a signatory 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.

With adequate funding, KMAC and The HALO Trust predict that clearance of CMR will be completed by 2024.[65] 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.

The Kosovo government provided approximately €135,000 in financial support to KMAC in 2017 up from approximately €125,000 in 2016.[66] The KSF received €980,000 for mine and CMR clearance in 2017 up from €960,000 in 2016.[67] The current funding from the US for BAC clearance by The HALO Trust is due to end in August 2018, a proposal has been submitted for further funding.[68] The US funding for NPA will continue until the end of October 2018 and NPA has submitted a proposal for a continuation. Funding from TVA (NRK Telethon) ended in 2017, but NPA has a new three-year funding agreement with the Norwegian Ministry of Foreign Affairs.[69] KMAC, HALO and NPA expect to receive the same amount of funding for CMR clearance in 2018.[70]

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 is a poor country and needs economic assistance to help it complete cluster munition clearance in a timely manner, otherwise completion risks being prolonged for decades after the end of the conflict.[71]

1 Email from Ahmet Sallova, Head, KMAC, 4 May 2018.

2 Email from Ahmet Sallova, KMAC, 20 February 2017.

3 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.

4 ICRC, Explosive Remnants of War, Cluster Bombs and Landmines in Kosovo, rev. June 2001, Geneva, pp. 4 and 6; and The HALO Trust, "Action on cluster munitions in Kosovo", 10 September 2015, at: https://www.halotrust.org/media-centre/news/action-on-cluster-munitions-in-kosovo/.

5 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, Geneva, p. 6.

6 A. Moore, The HALO Trust, "Action on cluster munitions in Kosovo", Side event, First CCM Review Conference, Dubrovnik, 10 September 2015.

7 Ibid.

8 NPA, Cluster Munition Remnants in Northern Kosovo: non-technical survey of contamination and impact, September 2015; and email from Goran Peršic, NPA Bosnia and Herzegovina, 13 May 2016.

9 Ibid.

10 NPA, Cluster Munition Remnants in Northern Kosovo: non-technical survey of contamination and impact, September 2015.

11 Email from Ahmet Sallova, KMAC, 4 May 2018.

12 A. Moore, "Action on cluster munitions in Kosovo", Side event, First CCM Review Conference, Dubrovnik, 10 September 2015.

13 Email from Tom Welling, Programme Manager, HALO Trust, 7 May 2018.

14 NPA, Cluster Munition Remnants in Northern Kosovo: non-technical survey of contamination and impact, September 2015, pp. 7 and 18.

15 Ibid.

16 Email from Ahmet Sallova, KMAC, 4 May 2018; Email from Tom Welling, HALO Trust, 7 May 2018.

17 Email from Tom Welling, HALO Trust, 7 May 2018.

18 UNMIK, "OKPCC EOD Management Section Annual Report 2008", Pristina, 12 January 2009, p. 4.

19 Email from Ahmet Sallova, KMAC, 1 August 2012.

20 Ibid.

21 Emails from Ahmet Sallova, KMAC, 20 February 2017; and Andrew Moore, Regional Director Europe, HALO Trust, 2 June 2016.

22 Email from Ahmet Sallova, KMAC, 4 May 2018.

23 Email from Tom Welling, HALO Trust, 7 May 2018.

24 Email from Ahmet Sallova, KMAC, 4 May 2018.

25 Emails from Ahmet Sallova, KMAC, 16 June and 3 July 2017.

26 Emails from Ahmet Sallova, KMAC, 12 April 2016; and Andrew Moore, HALO Trust, 2 June 2016.

27 Emails from Ahmet Sallova, KMAC, 4 May 2018.

28 A. Moore, HALO Trust, "Action on cluster munitions in Kosovo", Side event, First CCM Review Conference, Dubrovnik, 10 September 2015.

29 Email from Ahmet Sallova, KMAC, 4 May 2018.

30 Ibid.

31 Email from Rhys Mansel, Capability Support Officer, HALO Trust, 28 May 2018.

32 Email from Tom Welling, HALO Trust, 7 May 2018.

33 Email from Rhys Mansel, HALO Trust, 28 May 2018.

34 Email from Terje Eldøen, Programme Manager, NPA, 7 May 2018.

35 Ibid.

36 Ibid.

37 Email from Ahmet Sallova, KMAC, 4 May 2018.

38 Ibid; and emails from Tom Welling, HALO Trust, 7 May 2018; and Terje Eldøen, NPA, 21 June 2018.

39 Email from Terje Eldøen, NPA, 11 June 2018.

40 Ibid.

41 Email from Terje Eldøen, NPA, 21 June 2018.

42 Emails from Ahmet Sallova, KMAC, 4 May 2018; Tom Welling, HALO Trust, 7 May 2018; and Terje Eldøen, NPA, 7 May 2018. The five submunitions destroyed by the KSF during spot tasks are added to the total in Table 1.

43 Email from Ahmet Sallova, KMAC, 20 February 2017.

44 Email from Ahmet Sallova, KMAC, 4 May 2018.

45 Ibid.

46 Ibid.

47 Email from Tom Welling, HALO Trust, 7 May 2018.

48 Ibid.

49 Email from Terje Eldøen, NPA, 11 June 2018.

50 Emails from Ahmet Sallova, KMAC, 4 May 2018; Tom Welling, HALO Trust, 7 May 2018; and Terje Eldøen, NPA, 7 May and 21 June 2018.

51 Email from Ahmet Sallova, KMAC, 20 February 2017.

52 Email from Terje Eldøen, NPA, 7 May 2018.

53 Email from Tom Welling, HALO Trust, 7 May 2018; see The HALO Trust, Mines Advisory Group (MAG), and NPA "Standardising Beneficiary Definitions", 1st Edn, October 2016. The HALO Trust, MAG and NPA came together in 2016 to establish common definitions of beneficiaries of mine action activities. For example, direct beneficiaries of land release are those who use/will use cleared and reduced land post-clearance for a productive and/or frequent and/or sustainable activity. The direct beneficiary definition for residential post-clearance land use is 'number of people in households who are/will be living or are/will be settled in existing or new settlements/compounds/housing/shelters on cleared/reduced land'.

54 Email from Ahmet Sallova, KMAC, 4 May 2018.

55 Ibid.

56 Email from Ash Boddy, Regional Director, HALO Trust, 5 May 2017.

57 Email from Terje Eldøen, NPA, 11 June 2018.

58 Email from Ahmet Sallova, KMAC, 4 May 2018.

59 Email from Terje Eldøen, NPA, 7 May 2018.

60 Ibid.

61 Email from Tom Welling, HALO Trust, 7 May 2018.

62 Ibid.

63 Email from Terje Eldøen, NPA, 7 May 2018.

64 Ibid.

65 Emails from Ahmet Sallova, KMAC, 4 May 2018; Tom Welling, HALO Trust, 7 May 2018 and Terje Eldøen, NPA, 7 May 2018.

66 Email from Ahmet Sallova, KMAC, 4 May 2018.

67 Ibid.

68 Email from Tom Welling, HALO Trust, 7 May 2018.

69 Emails from Terje Eldøen, NPA, 7 May 2018; and 11 June 2018.

70 Emails from Ahmet Sallova, KMAC, 4 May 2018; Tom Welling, HALO Trust, 7 May 2018; and Terje Eldøen, NPA, 7 May 2018.

71 A. Moore, The HALO Trust, "Action on cluster munitions in Kosovo", Side event, First CCM Review Conference, Dubrovnik, 10 September 2015.

NAGORNO-KARABAKH

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	6	6
Target date for completion of cluster munition clearance	3	3
Targeted clearance	6	6
Efficient clearance	6	6
National funding of programme	2	2
Timely clearance	5	5
Land-release system in place	7	7
National mine action standards	7	7
Reporting on progress	5	5
Improving performance	2	3
PERFORMANCE SCORE: POOR	**4.9**	**5.0**

PERFORMANCE COMMENTARY

Clearance output decreased in 2017 as emergency clearance of new cluster munition remnants (CMR) resulting from the April 2016 conflict came to an end. Overall CMR contamination has risen by 0.18km^2 since 2016 following the discovery by survey of new contamination in the Askeran district. In addition, donors have prioritised released of mined areas over CMR clearance, so it is likely that CMR clearance output will continue to fall.

RECOMMENDATIONS FOR ACTION

→ The Nagorno-Karabakh authorities should make a formal commitment to respect and implement the Convention on Cluster Munitions (CCM) and to clear all CMR.

→ The Nagorno-Karabakh authorities should provide funding for CMR survey and clearance.

CONTAMINATION

The exact extent of contamination from CMR in Nagorno-Karabakh is not known, but it is significant and widespread.[1] At the end of 2017, CMR contamination (both surface and subsurface) was estimated to be 71.62km^2 across 212 confirmed hazardous areas (CHAs), in seven of a total of eight districts (see Table 1).[2] This represents a small increase in CMR contamination of 0.18km^2 from 2016[3] to 2017, despite clearance in 2017, following confirmation of three suspected hazardous areas (SHAs) totalling 1.5km^2 in the Askeran district.[4]

Table 1: CMR contamination by district (at end 2017)[5]

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**

In 1988, a decision by the parliament of the Nagorno-Karabakh Autonomous Province to secede from Azerbaijan and join Armenia resulted in armed conflict from 1988 to 1994 between Armenia and Azerbaijan. Large numbers of cluster munitions were dropped from the air during the conflict. Nagorno-Karabakh declared independence in 1991 but this has not been internationally recognised.

On 1 April 2016, intense fighting broke out in Nagorno-Karabakh along the front line between Armenian and Nagorno-Karabakh forces and the armed forces of Azerbaijan. While ground fighting was confined to areas close to the Line of Contact (LOC), artillery fire penetrated more than 10km into Nagorno-Karabakh, and included use of cluster munitions. A ceasefire was agreed on 5 April 2016.[6] The HALO Trust has estimated the four days of hostilities added 2.4km^2 of CMR contamination.[7]

More than two-thirds of remaining contamination is in Askeran, Martakert, and Martuni. Most of the remaining CMR are located in woods and hillsides, where the threat endangers the lives of woodcutters, foragers, and domestic livestock grazing in common areas around rural settlements.[8] Between 1996 and 2017, The HALO Trust recorded 18 incidents from submunitions, including seven fatalities.[9] The last recorded incident involving CMR was in November 2017, when a 23 year old man picked up a ShOAB cluster bomb (thinking it was a rock) and threw it, causing it to detonate. He received multiple shrapnel wounds to his left hip, right shoulder and right eye.[10]

Other Explosive Remnants of War and Landmines

Nagorno-Karabakh is also contaminated by other explosive remnants of war (ERW) and landmines.[11] Mine contamination reportedly covered 3.6km^2 in April 2018 (see Mine Action Review's *Clearing the Mines* report on Nagorno-Karabakh for further information).[12]

Programme Management

A mine action coordination committee is responsible for liaising between the local authorities and The HALO Trust.[13] Regular coordination committee meetings are said to be held between the local authorities, The HALO Trust, and the International Committee of the Red Cross (ICRC).[14]

In 2000, The HALO Trust established the Nagorno-Karabakh Mine Action Centre (NKMAC), which consolidates all mine action-related information and responds to requests from the government ministries, non-governmental organisations (NGOs), and local communities.[15] The NKMAC maintains maps and a database of all SHAs surveyed, all areas cleared of mines or ERW, locations of all mine- and ERW-related incidents, and a record of all risk education given.[16]

Legislation and Standards

No national standards exist in Nagorno-Karabakh, and The HALO Trust follows its own standing operating procedures (SOPs).[17]

Quality Management

Similarly, The HALO Trust uses its own quality management systems, with quality assurance (QA) and quality control (QC) applied by four levels of management.[18]

Operators

Since 2000, The HALO Trust has been the sole organisation conducting land release in Nagorno-Karabakh. HALO's Nagorno-Karabakh operations cover both CMR clearance and mine clearance, and The HALO Trust does not field separate teams dedicated solely to either. Operational staff are trained and experienced in working in both capacities.[19] Since the April 2016 conflict, The HALO Trust has collaborated with the Nagorno-Karabakh Rescue Services when gathering information about CMR and mines, and as part of the QA process through its participation in the official handover ceremony with community representatives.[20]

In 2017, The HALO Trust employed an average of 180 personnel, an increase compared to over the 142 staff average for 2016.[21] In 2017, HALO employed one manual team to complete clearance of the cluster munition strikes from the April 2016 fighting.[22] HALO then employed two teams for occasional CMR clearance between April and October 2017.[23]

Over the course of 2017, HALO Trust battle area clearance (BAC) teams were employed for 80 days, compared to 209 the previous year.[24] This reflects the shift in donor priorities away from BAC and onto landmine clearance.

The average per square metre cost of CMR clearance has been gradually increasing year on year, which may partly be accounted for by the increase in sub-surface BAC in recent years.[25] In 2017, one manual team cleared 13,654m^2 per day, with 15% of the total being sub-surface clearance. This compares to 28,182m^2 per day in 2012, with 5% of the total being sub-surface clearance.[26]

LAND RELEASE

A total of some 1.1km^2 of area contaminated with CMR was released by clearance in 2017,[27] compared with 3.3km^2 in 2016.[28] A total of 0.26km^2 was released by survey in 2017.

Survey in 2017

In 2017, The HALO Trust reduced 2,659m^2 of land by technical survey in the Martakert region and 260,000m^2 of land by technical survey in the Martuni region. The HALO Trust also confirmed three areas totalling 1.5km^2 in the Askeran region as CMR-contaminated.[29]

In order to determine whether a strike requires further clearance, The HALO Trust initially surveys a 500,000m^2 area around evidence of submunitions. Clearance starts from the centre of the area of known evidence and extends outwards, employing a buffer. If no further evidence of CMR is found, the remaining area is released.[30]

Clearance in 2017

The HALO Trust cleared 1.06km^2 of area containing CMR and other unexploded ordnance (UXO) in 2017, during which seven submunitions and one other item of UXO were destroyed. Three areas were released by clearance and one other, in the Askeran district, was suspended at the end of the demining season.[31]

Table 2: Clearance of CMR-contaminated areas in 2017

District	Areas cleared	Area cleared (m^2)	Submunitions destroyed	Other UXO destroyed
Askeran	1	814,700	5	1
Martakert	1	171,300	0	0
Martuni	1	70,000	2	0
Totals	**3**	**1,056,000**	**7**	**1**

In 2017, The HALO Trust completed clearance of CMR in the villages of Nerkin Horatagh and Mokhratagh in the north-east Martakert region, which resulted from the April 2016 fighting.[32] Between 10 August 2016 and 28 February 2017, The HALO Trust cleared 723,130m^2 of land through sub-surface clearance and a further 50,000m^2 through surface clearance, of which 171,300m^2 of sub-surface clearance was completed in 2017.[33] Overall, HALO found and destroyed 17 submunitions through this clearance, though none was found in 2017.[34]

In addition to planned clearance, The HALO Trust destroyed 45 submunitions during explosive ordnance disposal (EOD) spot tasks in 2017.[35]

The clearance output in 2017 has decreased from the previous year. In 2016, clearance output was high due to the emergency clearance of the April 2016 contamination.[36] The HALO Trust's CMR clearance operations continue to remain a "secondary" activity, as per the donors' request to prioritise mine clearance.[37] Submunition clearance is conducted on days when minefields cannot be accessed safely due to adverse conditions.[38]

Progress in 2018

As at May 2018, The HALO Trust was planning to continue to prioritise clearance of mines over CMR, and as such has not included CMR survey or clearance in its workplan for 2018.[39] Survey and clearance of CMR will continue on an ad hoc basis whenever adverse weather or other conditions do not permit safe mine clearance.[40]

ARTICLE 4 COMPLIANCE

Nagorno-Karabakh 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. No target date has been set to complete clearance of CMR.

The Nagorno-Karabakh authorities do not provide The HALO Trust with any funding for clearance of CMR-contaminated or mined areas.[41]

Progress in clearance of CMR has fluctuated over the last five years, as shown in Table 2. The HALO Trust is currently prioritising clearance of mines, as part of its efforts to complete clearance of all accessible mined areas by 2020, and The HALO Trust deploys teams to conduct BAC only in a reserve capacity.[42]

Table 3: Clearance of CMR-contaminated area in 2013–17

Year	Area cleared (km^2)
2017	1.06
2016	3.28
2015	2.91
2014	13.01
2013	4.65
Total	**24.91**

The HALO Trust saw its expected USAID funding reduced for the 2016/17 financial year, but its operational capacity has not been impacted.[43] The HALO Trust was expecting to receive $3.5 million from USAID to complete landmine clearance of Nagorno-Karabakh over 2018 and 2019.[44] USAID has requested that funds be used for clearance operations within the former Soviet-era Nagorno-Karabakh Autonomous Oblast (NKAO), and that The HALO Trust focus on mine clearance.[45] CMR surface clearance is funded by USAID as a secondary activity, to be conducted when weather or other conditions do not permit safe mine clearance.[46]

Since 2015, the HALO Trust has received support from an anonymous donor for mine clearance outside the Soviet oblast boundary, along with matching funds, with a view to completing all clearance. This has attracted a number of private individuals and foundations.[47] The HALO Trust secured a partnership with ONEArmenia, which successfully crowdfunded in 2017 to help raise funds for HALO Trust's demining operations.[48] The HALO Trust reports that funding from a number of private donors would decrease or end in 2018.[49] Funding to The HALO Trust from the United Kingdom Foreign and Commonwealth Office (FCO), through its conflict, stability and security fund (CSSF), ended on 31 March 2017.[50]

While surface clearance of legacy CMR contamination within the NKAO boundaries of Nagorno-Karabakh could potentially be completed within a few years, this would still leave subsurface contamination within the NKAO boundaries of Nagorno-Karabakh, in addition to CMR contamination in areas outside the NKAO which are under the control of the Nagorno-Karabakh forces. The HALO Trust hopes to clear Nagorno-Karabakh of all mines by 2020, but no equivalent target date exists for CMR.[51]

The international isolation of Nagorno-Karabakh also makes it difficult for The HALO Trust to raise funds to work in the region, and funds raised are often subject to territorial restrictions.[52] Almost no CMR is conducted outside the NKAO.[53] Funding is needed to prevent Nagorno-Karabakh's communities being blighted by mines and CMR for decades to come.[54]

1 Email from Andrew Moore, Caucasus and Balkans Desk Officer, HALO Trust, 29 May 2015.
2 Email from Amasia Zargarian, Programme Support Officer, HALO Trust, 4 May 2018.
3 The figures in the 2016 CMR report for Nagorno-Karabakh have been amended from those previously reported in Mine Action Review as the earlier figures provided by HALO Trust did not include clearance of suspended areas.
4 Ibid.
5 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
6 The HALO Trust, "HALO Trust begins emergency clearance in Karabakh", 19 April 2016, at: https://www.halotrust.org/media-centre/news/halo-begins-emergency-clearance-in-karabakh/.
7 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
8 Ibid.
9 Emails from Ash Boddy, Regional Director, HALO Trust, 13 April 2017; and Amasia Zargarian, HALO Trust, 1 June 2018.
10 Email from Amasia Zargarian, HALO Trust, 1 June 2018.
11 The HALO Trust, "Nagorno-Karabakh", accessed 13 April 2017, at: https://www.halotrust.org/minefreenk/.
12 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
13 Email from Andrew Moore, HALO Trust, 28 June 2013.
14 Email from Andrew Moore, HALO Trust, 26 May 2016.
15 Email from Andrew Moore, HALO Trust, 28 June 2013.
16 United States Agency for International Development (USAID), "De-mining Needs Assessment in Nagorno-Karabakh", September 2013, p. vii.
17 Email from Andrew Moore, HALO Trust, 26 May 2016.
18 Ibid.
19 Email from Andrew Moore, HALO Trust, 22 May 2015.
20 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
21 Emails from Ash Boddy, HALO Trust, 13 April 2017; and Amasia Zargarian, HALO Trust, 1 June 2018.
22 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
23 Ibid.
24 Emails from Ash Boddy, HALO Trust, 13 April 2017; and Amasia Zargarian, HALO Trust, 1 June 2018.
25 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
26 Emails from Amasia Zargarian, HALO Trust, 4 May 2018 and 19 June 2018.
27 Ibid.
28 Email from Ash Boddy, HALO Trust, 13 April 2017.
29 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
30 Ibid., and email from Ash Boddy, HALO Trust, 13 April 2017.
31 Email from Amasia Zargarian, HALO Trust, 1 June 2018.
32 Ibid.
33 Ibid.
34 Ibid.
35 Ibid.
36 Email from Andrew Moore, HALO Trust, 7 June 2016.
37 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
38 Ibid.
39 Ibid.
40 Ibid.
41 Ibid.
42 Ibid.
43 Email from Ash Boddy, HALO Trust, 13 April 2017.
44 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
45 Emails from Andrew Moore, HALO Trust, 26 May 2016 and 11 June 2015.
46 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
47 Email from Ash Boddy, HALO Trust, 28 September 2017.
48 Emails from Ash Boddy, HALO Trust, 3 April and 28 September 2017.
49 Email from Amasia Zargarian, HALO Trust, 4 May 2018.
50 Email from Ash Boddy, HALO Trust, 27 April 2017.
51 Emails from Andrew Moore, HALO Trust, 26 May 2016, and Ash Boddy, HALO Trust, 14 April 2017.
52 The HALO Trust website, accessed 27 May 2015, at: http://www.halotrust.org/where-we-work/nagorno-karabakh.
53 Email from Andrew Moore, HALO Trust, 11 June 2015.
54 The HALO Trust website, accessed 27 May 2015.

PROGRAMME PERFORMANCE	2017	2016
Problem understood	8	7
Target date for completion of cluster munition clearance	6	4
Targeted clearance	8	8
Efficient clearance	6	6
National funding of programme	4	4
Timely clearance	6	5
Land-release system in place	7	7
National mine action standards	9	9
Reporting on progress	5	5
Improving performance	7	6
PERFORMANCE SCORE: AVERAGE	6.6	6.1

PERFORMANCE COMMENTARY

With the return to full operational capacity and the removal of political restrictions by Morocco on United Nations Mine Action Service (UNMAS)-contracted mine action operations, along with an increase in available resources, progress to address cluster munition remnant (CMR) contamination in Western Sahara increased significantly in 2017. There was a near five-fold increase in clearance of CMR-contaminated area compared with 2016, although the programme was hampered by the suspension of mine action activities from March to September of that year. In 2018, UNMAS reaffirmed that clearance of all remaining CMR contamination was expected to be completed by the end of 2019 (subject to the security situation and available resources remaining unchanged).[1]

RECOMMENDATIONS FOR ACTION

- The Saharawi Arab Democratic Republic (SADR) should make a formal commitment to respect and implement the Convention on Cluster Munitions (CCM) and to clear all CMR east of the Berm as soon as possible.
- All efforts should be taken to complete clearance of all CMR-contaminated areas in Western Sahara by the end of 2019.
- Morocco is strongly encouraged to provide cluster strike data to other relevant stakeholders to facilitate survey and clearance of CMR.

CONTAMINATION

Western Sahara had approximately 2.6km^2 of confirmed hazardous area (CHA) containing CMR east of the Berm[2] at the end of 2017. Of the 40 CHAs in total, six cluster munition strike areas, with a total size of 0.5km^2, are located inside the buffer strip and are inaccessible for clearance.[3] Confirmed CMR contamination was a decrease from the 44 areas totalling 4.5km^2 recorded by UNMAS at the end of 2016.[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 2017)[6]

Region	CHAs	Area (km^2)
North	15	0.88
South	25	1.73
Totals	**40**	**2.61**

The Royal Moroccan Armed Forces (RMAF) used both artillery-fired and air-dropped cluster munitions against Polisario Front forces during their conflict in Western Sahara from 1975 to 1991. According to SADR, BLU-63, M42, and Mk118 submunitions were used by the RMAF 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 unknown contaminated areas meant this target date was not met. New contaminated areas continued to be identified in 2017 and new strike areas are expected to be found in the future as mine action activities continue and additional information is 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 520,609m^2, 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 explosive remnants of war (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] In 2017, four previously recorded areas of CMR contamination in Mijek covering a total estimated size of 0.4km^2 were not made accessible for clearance due to security concerns on the part of the Polisario Front.[12]

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). The contamination remains a daily threat to the local and nomadic populations, as well as to UN personnel and humanitarian actors.[13] According to Norwegian People's Aid (NPA), the impact of contamination is primarily socio-economic, although human accidents continue to occur. In 2017, the local mine action authority, the Saharawi Mine Action Coordination Office (SMACO), reported 13 incidents affecting 11 people.[14]

In 2017, mines and ERW, including CMR contamination, continued to block access to arable land and critical water sources for the local population and impeded the free movement of UN personnel on patrol routes and in areas of UN operations.[15] Areas near to the Berm are considered the most heavily contaminated, however contamination from mines and ERW remains a significant risk along frequently used tracks and in close proximity to traditional settlements.

NPA reported that in 2017, mines and ERW continued to pose a threat to the approximately 12,000 Sahrawi nomads and internally displaced persons in refugee camps who traversed contaminated areas to graze livestock, cultivate land, and visit relatives. Once cleared, the majority of land released is put to use for pasture and grazing of livestock by nomadic and semi-nomadic communities, while released land located close to village centres is used for building.[16]

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, which were implemented by commercial contractor Dynasafe MineTech Limited (DML) and humanitarian mine action NGO NPA in 2017.

In 2013-14, the Polisario Front, with UN support, established SMACO which is responsible for coordinating mine action activities in Western Sahara east of the Berm and for land release activities.[17]

In 2017, UNMAS implemented an ongoing capacity development project with SMACO, funded for 28 months, scheduled to end in October 2018.[18] It contracted a capacity development Technical Advisor to work with SMACO to improve operations and coordination with the MACC and operators. Individual training was provided to SMACO staff on all aspects of mine action programme management, including information management and support services.[19] Training on operational skills such as prioritisation, tasking, marking, accreditation, the development of mine action standards, and survey and clearance methodology were also conducted. 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.

UNMAS stated that efforts were also aimed at regularly raising the profile of SMACO within the local and wider communities and internationally.[20] The construction of an office building for SMACO in 2017 with German funding was another significant contributor to increasing its capacity and effectiveness.[21]

Strategic Planning

MINURSO MACC's activities are conducted in accordance with the Strategy of the United Nations on Mine Action 2013–18 and the International Mine Action Standards (IMAS). UNMAS planned to develop a mine action strategy specific to Western Sahara in the second half of 2015.[22] According to UNMAS, the strategy was finalised in 2017, yet still was considered an internal document and was not made publicly available as at May 2018.[23]

UNMAS has reported that the strategy identifies priorities for tackling CMR contamination and sets a target to release all recorded cluster munition strike areas east of the Berm by the end of 2019.[24] It also foresees the completion of non-technical survey in 2017/18 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.[25]

In 2017, NPA claimed that the development of the strategy had brought about a significant improvement in the management of mine action in Western Sahara and increased coordination between the MACC, SMACO, and the operators. Meetings were convened every two months where all mine action stakeholders provided updates on their progress against the plan and future activities, it said.[26]

Legislation and Standards

Local mine action standards were in place and implemented in 2017. The standards were developed and finalised in 2016 by UNMAS, together with SMACO, and in coordination with mine action partners, and were planned to be translated into Arabic. They include provisions specific to the survey and clearance of CMR.[27] NPA reported that operators had updated their standing operating procedures (SOPs) accordingly, and that the local mine action standards set realistic benchmarks for efficient operations.[28] A first annual review of the standards was set to be held in 2018 with a review board consisting of representatives from UNMAS, SMACO, and all implementing partners.[29]

The MACC identifies priorities for clearance of both cluster munition strike areas and minefield clearance to the east of the Berm in conjunction with SMACO and MINURSO. SMACO identifies priorities based on humanitarian needs for the safety and freedom of movement of local populations, while the MACC ensures that observation patrol routes are safe for military observers and the transport of logistical supplies.[30] 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.[31]

In 2017, UNMAS reported that gender policies were implemented in accordance with UNMAS, UNOPS, and MINURSO guidelines, as well as with direction from the Polisario.[32] NPA stated 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.[33]

Quality Management

An external quality management system was in place in 2017 and implemented by MINURSO MACC, which consisted of inspection visits for the accreditation of multi-task teams (MTTs) as well as visits during clearance. UNMAS reported that a total of 42 quality assurance (QA) visits were carried out on CMR tasks during the year, a significant increase compared with 2016.[34] NPA likewise confirmed a considerable increase in QA activities in 2017, which it said was due to the relocation of the MACC to Tindouf, Algeria, with easier access to territory under Polisario control. It reported that two accreditation missions and three QA visits were carried out on its CMR clearance operations during the year.[35]

This compared to 2016, when no external QA/QC was carried out on demining activities in April-September owing to the expulsion of UNMAS and MINURSO staff from Western Sahara by Morocco.[36]

Information Management

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, which continued throughout 2017.[37] UNMAS confirmed that information on CMR is recorded separately from ERW and explosive ordnance disposal (EOD) spot tasks, and that a revised SOP for data management was introduced, putting a stronger emphasis on verification of information.[38] In 2017, UNMAS reported that there was regular support from the Geneva International Centre for Humanitarian Demining (GICHD) to correct database errors, and plans were under consideration to upgrade the database to the latest IMSMA Core software version.[39]

NPA noted significant improvements in information management during the year, with better coordination and monthly updates from the database sent to operators, and easier access for SMACO to receive trainings at the MACC's relocated office in Tindouf.[40]

Operators

DML and NPA were the implementing operators conducting CMR survey and clearance in Western Sahara in 2017. UNMAS reported that the overall mine action capacity in Western Sahara in 2017 consisted of nine MTTs and one community liaison/survey team, with a total of 116 operational staff in the field, 18 support staff, and 8 senior staff.[41] This included six DML teams and one community liaison/survey team, of which four teams were tasked on CMR operations during the year.[42] NPA deployed two manual teams to clear CMR-contaminated areas and a large-loop detector to facilitate CMR clearance.[43]

This is an increase from 2016, when in January–November, there were a total of five MTTs (three DML teams and two NPA teams), with one DML team deployed to conduct CMR survey and clearance. At the end of 2016, new funding from Germany allowed additional DML teams to be deployed and assigned to CMR survey and clearance.[44] NPA did not carry out any tasks related to CMR contamination in 2016.[45]

LAND RELEASE

Total CMR-contaminated area released by clearance was just over 6.1km^2 in 2017.[46] This was a near five-fold increase compared with 2016, when just over 1.21km^2 was cleared, hampered by the political suspension of mine action activities in March–September.[47] The return to full freedom of movement for all civilian MINURSO and UNMAS staff to implement mine action operations, along with an increase in resources and capacity, accounted for the substantial rise in productivity to address CMR contamination in 2017.[48]

Survey in 2017

In 2017, 57 areas with a size of just over 1.45km^2 of CMR contamination were confirmed through survey, including nearly 0.69km^2 by DML and 0.77km^2 by NPA.[49] This is a significant increase in the size of CMR-contaminated area identified in 2016, when DML confirmed five previously unrecorded strike areas with a size of 0.25km^2 through its survey activities.[50]

Table 2: CMR survey in 2017[51]

Operator	SHAs cancelled	Area cancelled (m^2)	SHAs confirmed as contaminated	Area confirmed (m^2)	Area reduced by TS (m^2)
DML	0	0	53	687,211	0
NPA	0	0	4	767,361	0
Totals	**0**	**0**	**57**	**1,454,572**	**0**

Clearance in 2017

In 2017, there was a near five-fold increase compared to the previous year in the area of CMR contamination cleared, with the clearance of 62 cluster munition strike areas with a size of just over 6.1km^2 and the destruction of 688 submunitions and 27 items of other UXO.[52] This compares to the clearance of 17 CMR-contaminated areas with a total size of 1.2km^2 in 2016.[53]

Additionally, in 2017, DML conducted a total of 27 EOD spot tasks, locating and destroying 33 items of UXO, while NPA carried out 22 EOD spot tasks destroying 81 items of UXO.[54]

As noted above, UNMAS attributed the significant increase in CMR clearance in 2017 to an increase in resources and teams deployed on CMR tasks and a return to full productivity, compared to the six-month suspension of activities due to the political crisis in 2016.[55] NPA reported that at the end of 2017, only two areas of CMR contamination remained to be addressed in its area of operations in Bir Lahlou.[56]

Table 3: Clearance of cluster munition contaminated-areas in 2017[57]

Operator	Areas cleared	Area cleared (m^2)	Submunitions destroyed	Other UXO destroyed*
DML	58	4,964,087	631	27
NPA	4	1,142,779	57	0
Totals	**62**	**6,106,866**	**688**	**27**

* UXO = unexploded ordnance other than unexploded submunitions

ARTICLE 4 COMPLIANCE

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".[58] The SADR also has obligations under international human rights law to clear CMR as soon as possible.

Despite the significant increase in clearance output in 2017, UNMAS 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.[59] 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.[60] 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.[61]

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, should be released by 2019.[62] 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.[63] It did not expect a change in funding in 2018.[64]

NPA's priority for 2018 was to clear all cluster munition strikes in its area of operations in Bir Lahlou by the end of June. As at the end of May, it was on track to do so. It then planned to deploy teams to Agwanit in the south to clear the last remaining province with CMR contamination in Western Sahara. However, it expected significant logistical challenges for operations to complete clearance of Agwanit as the areas are very remote and scarcely populated. Nevertheless, NPA remained confident that clearance of all CMR in Western Sahara can be completed by the end of 2019.[65]

Table 4: Five-year summary of CMR clearance

Year	Area cleared (m^2)
2017	6,106,866
2016	1,208,930
2015	1,841,225
2014	1,756,566
2013	985,000
Total	**11,898,587**

1 Emails from Graeme Abernethy, Programme Manager, UNMAS, 1 March 2018; and Dandan Xu, Associate Programme Management Officer, UNMAS, 16 July 2018.

2 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.

3 Email from Graeme Abernethy, UNMAS, 1 March 2018. The buffer strip is an area 5km wide, east of the Berm.

4 Email from Virginie Auger, UNMAS, 17 May 2017.

5 Email from Graeme Abernethy, UNMAS, 1 March 2018.

6 Ibid. 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, at: http://www.the-monitor.org/index.php/cp/display/region_profiles/theme/.

8 Email from Karl Greenwood, Chief of Operations, Action On Armed Violence/Mechem Western Sahara Programme, 18 June 2012.

9 Email from 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, at: http://reliefweb.int/sites/reliefweb.int/files/resources/N1709720.pdf.

12 Emails from Graeme Abernethy, UNMAS, 1 March and 18 and 31 May 2018.

13 Email from Graeme Abernethy, UNMAS, 1 March 2018.

14 Email from El Hadji Mamadou Kebe, Programme Manager, NPA, 14 March 2018.

15 Email from Graeme Abernethy, UNMAS, 1 March 2018.

16 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

17 Response to questionnaire by Sarah Holland, UNMAS, 24 February 2014, and email, 25 February 2014.

18 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

19 Ibid.

20 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

21 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

22 Email from Sarah Holland, UNMAS, 5 June 2015.

23 Emails from Graeme Abernethy, UNMAS, 1 March, 5 May, and 18 May 2018.

24 Emails from Graeme Abernethy, UNMAS, 18 May 2018; and Virginie Auger, UNMAS, 24 April and 29 March 2017.

25 Ibid.

26 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

27 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.

28 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

29 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

30 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

31 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

32 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

33 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

34 Email from Graeme Abernethy, UNMAS, 1 March 2018.

35 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

36 Email from El Hadji Mamadou Kebe, NPA, 8 April 2017.

37 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

38 Email from Graeme Abernethy, UNMAS, 1 March 2018; and Virginie Auger, UNMAS, 24 April and 29 March 2017.

39 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

40 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

41 Email from Graeme Abernethy, UNMAS, 1 March 2018.

42 Emails from Graeme Abernethy, UNMAS, 1 March and 18 May 2018. Of the six DML teams contracted by UNMAS, three were funded by the mission and three by the German Federal Foreign Office.

43 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

44 Email from Virginie Auger, UNMAS, 10 May 2017.

45 Email from El Hadji Mamadou Kebe, NPA, 8 April 2017.

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 Virginie Auger, UNMAS, 15 March 2017; and Sarah Holland, UNMAS, 21 April 2016.

48 Emails from Graeme Abernethy, UNMAS, 1 March and 18 May 2018.

49 Emails from Graeme Abernethy, UNMAS, 1 March and 22 May 2018; and El Hadji Mamadou Kebe, NPA, 20 and 27 May 2018.

50 Emails from Virginie Auger, UNMAS, 15 March 2017; and Sarah Holland, UNMAS, 21 April 2016. DML declined to provide data directly to Mine Action Review and requested that UNMAS data be used instead. Email from Melanie Villegas, Project Executive, DML, 3 March 2017.

51 Emails from Graeme Abernethy, UNMAS, 1 March and 22 May 2018; and El Hadji Mamadou Kebe, NPA, 20 and 27 May 2018.

52 Emails from Graeme Abernethy, UNMAS, 1 March and 20 May 2018; and El Hadji Mamadou Kebe, NPA, 20 and 27 May 2018.

53 Email from Virginie Auger, UNMAS, 15 March 2017.

54 Emails from Graeme Abernethy, UNMAS, 1 March 2018; and El Hadji Mamadou Kebe, NPA, 20 May 2018.

55 Emails from Graeme Abernethy, UNMAS, 1 March and 5 May 2018.

56 Email from El Hadji Mamadou Kebe, NPA, 14 March 2018.

57 Emails from Graeme Abernethy, UNMAS, 1 March and 20 May 2018; and El Hadji Mamadou Kebe, NPA, 20 and 27 May 2018.

58 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.

59 Email from Virginie Auger, UNMAS, 15 March 2017.

60 Emails from El Hadji Mamadou Kebe, NPA, 8 April 2017 and 14 March 2018.

61 UNMAS, "About UNMAS in Western Sahara", updated January 2017, at: http://www.mineaction.org/programmes/westernsahara

62 Emails from Virginie Auger, UNMAS, 29 March 2017; and Graeme Abernethy, UNMAS, 31 March 2018.

63 Email from Graeme Abernethy, UNMAS, 1 March 2018.

64 Ibid.

65 Emails from El Hadji Mamadou Kebe, NPA, 14 March and 31 May 2018.

ANNEXES

ANNEX 1: 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.

ANNEX 2: REPORTING TEMPLATES

Annex 2 provides templates for reporting accurately and meaningfully on cluster munition remnants (CMR) contamination and identification and release of land confirmed or suspected to contain CMR.

Table 1: CMR contamination by province as at the end of [2017]

Province/ Region	No. of CHAs with CMR	Area (km²)	No. of SHAs with CMR	Area (km²)
Totals				

CHAs = Confirmed hazardous areas SHAs = Suspected hazardous areas

Table 2: Non-technical survey in [2017]

Operator	No. of SHAs cancelled	Area cancelled (km²)	No. of SHAs confirmed as CMR contaminated	Area confirmed (km²)
Totals				

Table 3: Technical survey of CMR-suspected area in [2017]

Operator	Area covered (km²)	No. of CHAs identified	Area confirmed (km²)	Area reduced (km²)
Totals				

Table 4: Clearance of CMR-contaminated areas in [2017]

Operator	No. of areas cleared	Area cleared (km²)	Submunitions destroyed	Other UXO destroyed	APM destroyed	AVM destroyed
Totals						

APM = Anti-personnel mine AVM = Anti-vehicle mine UXO = Unexploded ordnance

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

APM	Anti-personnel
APM	Anti-personnel mine
APMBC	Anti-Personnel Mine Ban Convention
AV	Anti-vehicle
AVM	Anti-vehicle mine
AXO	Abandoned explosive ordnance
BAC	Battle area clearance
BLS	Baseline survey
CHA	Confirmed hazardous area
CCM	Convention on Cluster Munitions
CCW	Convention on Certain Conventional Weapons
CMR	Cluster munition remnants
CMRS	Cluster Munition Remnants Survey
DCA	DanChurchAid
DDG	Danish Demining Group
DR Congo	Democratic Republic of Congo
EOD	Explosive ordnance disposal
ERW	Explosive remnants of war
EU	European Union
FSD	Swiss Foundation for Mine Action
HALO	The HALO Trust
HI	Humanity and Inclusion (formerly Handicap International)
ICC	Integrated Clearance Capacity (team)
IED	Improvised explosive devices
IMAS	International Mine Action Standards
IMSMA	Information Management System for Mine Action
Lao PDR	Lao People's Democratic Republic
LOC	Line of Contact
MAC	Mine action centre
MACCA	Mine Action Coordination Centre of Afghanistan
MAG	Mines Advisory Group
MAPA	Mine Action Programme of Afghanistan
MDD	Mine detection dog (team)
MoU	Memorandum of Understanding
MTT	Multi-task team
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organisation
NMAA	National Mine Action Authority
NMAS	National Mine Action Standards
NPA	Norwegian People's Aid
NTS	Non-technical survey
NTSG	National Technical Standards and Guidelines
QA	Quality assurance
QC	Quality control
RACC	Route Assessment and Clearance Capacity (team)
SHA	Suspected hazardous area
TS	Technical survey
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNMAS	United Nations Mine Action Service
US	United States
UXO	Unexploded ordnance

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