

## RECOMMENDATIONS FOR ACTION

- Cambodia should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Cambodia should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- Cambodia should work with operators to elaborate a specific strategy for survey and clearance of CMR, with realistic annual targets for land release.
- Cambodia should improve CMR planning and prioritisation guidelines and implement them systematically.
- Cambodia should continue to work to establish an up-to-date and accurate national database that is open to all mine action stakeholders.
- Cambodia should set up a Technical Reference Group on CMR survey and clearance, sharing best practice and facilitating improvements to the implementation of the new standard on Cluster Munition Remnants Survey (CMRS).

## CLUSTER MUNITION REMNANT CONTAMINATION

Cambodia has extensive CMR contamination but the full extent is not known. At the end of 2018, CMR contamination was estimated at 738km<sup>2</sup> but it is thought this figure will rise as a result of completion of the national baseline survey (BLS) and the resolution of a data backlog.<sup>1</sup> This is an increase from the estimate at the end of 2017 of 624km<sup>2</sup> in 18 provinces.<sup>2</sup> Cambodia's National Mine Action Strategy 2018–2025 states that known CMR contamination covers 645km<sup>2</sup>.<sup>3</sup>

As at June 2019, the Cambodian Mine Action and Victim Assistance Authority (CMAA) reported CMR contamination in the eight eastern provinces close to the border with Vietnam, which are believed to account for most of the problem, at 433km<sup>2</sup>. This is a 5% decrease from its estimate of 457km<sup>2</sup> a year earlier. Two provinces, Kratie and Stung Treng, accounted for almost half of the CMR total.<sup>4</sup>

**Table 1: ERW survey of eight eastern provinces (BLS) in 2009–18<sup>5</sup>**

Province	CMR-contaminated area (m <sup>2</sup> )	Area with other UXO (m <sup>2</sup> )	Total ERW-contaminated area (m <sup>2</sup> )
Kampong Cham	35,907,219	11,065,474	46,972,693
Kratie	82,391,996	34,543,290	116,935,286
Mondolkiri	18,702,666	10,616,449	29,319,115
Prey Veng	31,437,996	55,673,912	87,111,908
Rattanakiri	54,269,131	1,272,322	55,541,453
Stung Treng	129,479,524	30,297,009	159,776,533
Svay Rieng	49,472,574	50,047,288	99,519,862
Tboung Khmum	31,016,660	21,223,130	52,239,790
<b>Totals</b>	<b>432,677,766</b>	<b>214,738,874</b>	<b>647,416,640</b>

ERW = Explosive remnants of war

The BLS was implemented between 2009 and 2012 across 124 districts. As at May 2019, BLS activities were ongoing across districts that were not surveyed or were only partially surveyed during the original implementation period. As at end 2018, 23 districts had been surveyed and the remaining 50 were expected to be surveyed by 2020.<sup>6</sup> In the eight provinces in the east and north-east of Cambodia, where most of the CMR are concentrated, the national database indicates that, as at April 2019, 1,490 villages within 27 districts were pending for the BLS. However, the exact number will only be clear once the Cambodian Mine Action Centre's (CMAC) data backlog has been resolved. CMAC, with support from Norwegian People's Aid (NPA), is working to upload over 5,000 records onto the national database. As at July 2019, a total of 86% of the backlog had been uploaded. The remaining records are explosive ordnance disposal (EOD) tasks conducted by CMAC in eastern Cambodia that are missing supporting documentation. CMAC and CMAA are in the process of working out how this data will be reported but this will not hinder the drafting of the plan to make eight targeted provinces in eastern Cambodia free from the humanitarian impact of ERW.<sup>7</sup>

The BLS employed a landmine survey methodology, resulting in exaggerated and inaccurate CMR polygons. Operators report that some polygons are found to contain little or no CMR and that they have found significant contamination outside BLS polygons. For example in Ratanakiri province, operators have an understanding of contamination from multiple sources

overlaying BLS data with United States (US) bombing data, data on accidents and explosive ordnance disposal (EOD) call-outs as well as information from ongoing survey and clearance operations. However, even with this information, operators are frequently receiving reports of newly found surface and subsurface CMR contamination. According to the World Bank, Cambodia is among the fastest growing economies in the world, and new contamination is being encountered due to increased demand for land, mechanisation of the agricultural sector, and changes in land use.<sup>8</sup>

CMR resulted from intensive bombing by the United States during the Vietnam War, concentrated in north-eastern provinces along the borders with the Lao People's Democratic Republic and Vietnam. The US Air Force dropped at least 26 million explosive submunitions, between 1.9 million and 5.8 million of which are estimated to have not exploded.<sup>9</sup>

### OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Cambodia estimated that in 2018 it had around 468km<sup>2</sup> of explosive remnants of war (ERW) contamination apart from CMR and more than 890km<sup>2</sup> of mined area.<sup>10</sup> Landmines are concentrated in, though not limited to, west and north-west Cambodia (see Mine Action Review's *Clearing the Mines* report on Cambodia for further information). ERW, including air-dropped bombs and ground artillery, is heaviest in the eastern provinces.

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## NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The CMAA, was established by Royal Decree No.177 with the mandate to regulate, monitor and coordinate the mine action sector in Cambodia.<sup>11</sup> Set up in September 2000, the CMAA's responsibilities include regulation and accreditation of all operators, preparing strategic plans, managing data, conducting quality control, and coordinating risk education and victim assistance.<sup>12</sup> Cambodian Prime Minister Hun Sen is the CMAA President and Senior Minister Ly Thuch its First Vice-President, overseeing the authority. Former CMAA Secretary-General, Prum Sophakmonkol, who was moved to the Ministry of Foreign Affairs in 2016, was reappointed to the position with effect from the start of January 2018 bringing extensive experience and knowledge of mine action to planning and operations.

CMAC was established in 1992, ostensibly as the mine action centre, but preceding the existence of CMAA it had the responsibilities of the mine action authority to regulate and coordinate the sector, as well as undertaking clearance activities.<sup>13</sup> CMAC's current core activities are survey and clearance of landmines and ERW, mine risk education, and training in mine action.<sup>14</sup> CMAC conducts both humanitarian and commercial demining within Cambodia and is the country's largest operator.<sup>15</sup> Historically there has been a lack of clarity between the roles and responsibilities of the CMAA and CMAC. However, it has been reported that the CMAA has strengthened over the past two years, roles and responsibilities are now more clearly defined, and the CMAA is functioning well.<sup>16</sup>

The Cambodian government established the Technical Working Group on Mine Action (TWG-MA) as a consultative mechanism between the government and development partners. The Mine Action Coordination Committee (MACC) and several Technical Reference Groups (TRGs) have been established by the CMAA to cover areas such as survey and clearance, mine risk education, victim assistance, information management, gender, and capacity development to facilitate coordination and feedback at a strategic and technical level.<sup>17</sup> Consultation is built into every stage of Cambodia's Three Year Implementation Plan 2018–20 and operators provide input into key strategic documents through open discussion forums and written feedback.<sup>18</sup> However, it has been reported that at times the process can be rather superficial, with feedback not necessarily taken into account.<sup>19</sup>

The operating environment in Cambodia is very permissive, with the Cambodian government open to the presence of international operators and supportive in administrative functions such as granting visas, approval of MoUs and import procedures, as well as, being open to the trialling and use of innovative clearance methods and tools to improve efficiency.<sup>20</sup>

The United Nations Development Programme (UNDP), NPA, and the Geneva International Centre for Humanitarian Demining (GICHD) all provide capacity development support to CMAA. NPA, as part of a UK Department for International Development

(DFID)-funded consortium that includes MAG and The HALO Trust, focuses on information management, planning and prioritisation, gender mainstreaming, quality management, and strategic planning.<sup>21</sup> UNDP is in the third phase of its Clearing for Results programme, which was ending in 2019. Its key capacity development deliverables are to support the development of the National Mine Action Strategy 2018–2025, establish a programme performance monitoring system that links human development to mine action, and strengthen the CMAA's international and national participation in relevant fora.<sup>22</sup> The GICHD provides information management and risk management support to the CMAA.<sup>23</sup> In 2018, the GICHD presented a case study on the Management of Residual ERW in Cambodia, and

hosted a Long Term Risk Management workshop, which included participation from the CMAA and operators, and an exchange visit between the CMAA and the NMAC in Sri Lanka.<sup>24</sup>

The Cambodian government contributes funding towards clearance and the management of the sector. The government also takes responsibility for the import tax of mine clearance equipment certified and approved by CMAA.<sup>25</sup> Cambodia included a resource mobilisation strategy for 2018–19 in its second extension request to achieve the goals outlined in its National Mine Action Strategy 2018–2025, which includes a specific goal for CMR clearance (see Planning and Tasking section below for details).<sup>26</sup>

## GENDER

CMAA has developed a Gender Mainstreaming in Mine Action Plan (GMAP 2018–22), an objective of the National Mine Action Strategy 2018–2025, which consists of six goals. These include:

- Preparation of guidelines to aid gender mainstreaming across all mine action
- Capacity building of relevant stakeholders to implement the GMAP
- Female representation and participation in planning and prioritisation, mine risk education, and in mine action and advocacy at all levels.<sup>27</sup>

The Three Year Implementation Plan 2018–20 sets out activities in support of these goals.<sup>28</sup> NPA, as part of its capacity development, will support the CMAA with training on gender mainstreaming in mine action, on implementation of the GMAP and the development of associated guidelines, and on using sex and age-disaggregated data in planning and prioritisation processes.<sup>29</sup>

CMAC provides equal employment opportunities to both men and women. As at April 2019, women made up 10.5% of CMAC's workforce. CMAC operates in accordance with Cambodian Labour Law and are actively recruiting women to reach 15% female employment. Women currently work across all levels of the organisation including in managerial level/supervisory positions. As at April 2019, two of the six directors were women.<sup>30</sup>

NPA and Mines Advisory Group (MAG) both have organisational gender policies. NPA's policy states that they will mainstream a gender perspective in the design, implementation, monitoring, and evaluation of their programmes, in order to work towards and achieve gender equality. NPA is working towards achieving gender equality in Cambodia both in the composition of its survey and clearance teams and in the consultation of all groups affected by CMR contamination.<sup>31</sup>

Within MAG, Cambodia's staff handbook contains guidelines on equal opportunities but, as at May 2019, no specific national policy or implementation plan had been elaborated. One of MAG Cambodia's key strategic objectives, in 2019–20, is to focus on "meaningful" gender mainstreaming and gender equity within the programme. The programme will closely review recruitment policies and procedures to identify areas in which MAG can further encourage the recruitment and retention of women, as well as their development and promotion into more senior positions.<sup>32</sup>

As at May 2019, more than 60% of NPA's operational staff were women and more than 50% of NPA's staff in managerial level/supervisory positions were female.<sup>33</sup> In Ratanakiri province, NPA has two all-female CMRS teams, which include women from local minority ethnic groups.<sup>34</sup>

MAG's community liaison teams are gender balanced to ensure full representation of all groups during data-collection and community liaison activities. In MAG's survey and clearance teams 42% of staff are female, while 21% of their managerial level/supervisory positions are staffed by women.<sup>35</sup>

## INFORMATION MANAGEMENT AND REPORTING

The CMAA upgraded to operating the Information Management System for Mine Action (IMSMA) New Generation in 2014. The CMAA database unit (DBU) is responsible for collecting, storing, analysing and disseminating data in support of planning and prioritisation of activities.<sup>36</sup> Completing clearance of the CMR data backlog, due to occur by mid 2019, should improve accuracy of the data in the database.

CMAA have introduced a new reporting form following the endorsement of the national standard on CMRS in November 2018.<sup>37</sup> The new reporting form, the CMTS, in conjunction with the standard, should aid the improvement of both the effectiveness of the CMRS and the reporting of the survey results to the national database.<sup>38</sup>

CMAA shares all available data with operators on a monthly basis. In 2018, the DBU set up a virtual private network (VPN), which allows operators to send their daily data input directly to the DBU IMSMA database. The DBU controls the quality of all submitted reports and approves them via this online network.<sup>39</sup> However, information management remains an issue with incompatibilities between operator databases and the national database, high turnover of data management staff at CMAA, and inconsistencies between operator data and the data held by CMAA.<sup>40</sup>

Strengthening the national information management system for mine action is an objective of Goal 8 of the National Mine Action Strategy 2018–2025. Achieving this involves enhancing Cambodia’s mine action information management capacity and ensuring sustainability of the national system; reviewing and enhancing relevant standards on information management; and diversifying the use of innovative technology to improve information management.<sup>41</sup>

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## PLANNING AND TASKING

Cambodia does not have a CMR-specific strategic plan. Since March 2018, however, the CMAA, NPA, and CMAC have been working together as part of a US-funded project to define and draft a comprehensive plan, that references the Cambodian National Mine Action Strategy 2018–2025, to make eight targeted provinces in eastern Cambodia free from the humanitarian impact of ERW, including CMR.<sup>42</sup> The national mine action strategy, prepared in 2017 and formally adopted in May 2018, includes targets for tackling CMR contamination as the second of its eight goals. It called for “release of prioritised cluster munition-contaminated areas of 43.4km<sup>2</sup> of total 130.2km<sup>2</sup> by 2025” and specified two CMR-related objectives:<sup>43</sup>

- Plan and prioritise CMR-contaminated areas to be released
- Conduct survey and release confirmed areas of CMR contamination, develop national standards for survey and clearance, implement the CMRS methodology and increase survey and clearance capacity.

The Three-Year Implementation Plan 2018–20 sets out the activities and indicators that will need to be completed in order to meet the goals and objectives of the National Mine Action Strategy 2018–2025, including for CMR. This includes the development of the planning and prioritisation guidelines on CMR which were

finalised by the CMAA in 2018, although according to operators, they lack clarity and are not systematically applied.<sup>44</sup> At a provincial level, operators work with the Mine Action Planning Unit (MAPU) and the Provincial Mine Action Committee (PMAC) to develop an annual workplan and prioritise tasks. This is based on the development needs in the province, as recommended by both the MAPU and the PMAC. The end use for most clearance tasks is agriculture and often the land is already being cultivated regardless of CMR contamination. This makes it difficult to produce clear prioritisation criteria, so the survey and the clearance plan is based on village-by-village, commune-by-commune, and district-by-district approaches.<sup>45</sup>

Task dossiers are issued in a timely and effective manner through provincial authorities and the MAPUs. Task dossiers are mainly prepared by the operators with the support of local communities, provincial authorities, and MAPUs, with final approval from CMAA.<sup>46</sup>

Goal seven of the national mine action strategy focuses on establishing a sustainable national capacity to address residual contamination after 2025. The objectives include developing a comprehensive national strategy and the necessary legal, institutional and operational frameworks. All of this is due to take place during the first implementation phase, in 2018–22.<sup>47</sup>

## LAND RELEASE SYSTEM

### STANDARDS AND LAND RELEASE EFFICIENCY

The CMAA approved the CMRS methodology in principle in 2017 and endorsed a national mine action standard for CMRS (CMAS-16) in November 2018. CMAS-16 is based on the experience of other programmes implementing the CMRS method across the region. Implementation of CMAS-16 began in January 2019 and is ongoing. While the CMAA has reported some quality control issues with submunitions being found after land has been cleared by operators they are supporting the operators to improve CMRS processes and apply the methodology consistently.<sup>48</sup> For instance, the CMAA has recently agreed that operators can apply evidence-based technical survey methodologies to BLS/NTS polygons found in the database, which are often inflated, in order to reduce the area and ensure a more efficient use of resources.<sup>49</sup> Previously, operators were expected to fully clear the entire BLS polygon regardless of whether technical survey had defined a much smaller CHA within the original SHA. The CMRS methodologies were to be further discussed, reviewed, and defined during a planned regional workshop at the end of August 2019.<sup>50</sup>

In 2019, the CMAA, with support from NPA, was planning to develop two new standards – on animal detection and mechanical demining – and to conduct a review of the standard on information management. All operators will be consulted as part of this process and will provide feedback on any proposed modifications.<sup>51</sup>

National standards are reflected in operators' standing operating procedures (SOPs).<sup>52</sup> Updates to the SOPs are conducted as and when required, such as when a need is identified through the CMAA-led Technical Reference Group. Reviews are conducted in consultation with all operators, and against IMAS and best practice.<sup>53</sup>

### OPERATORS

National operator CMAC and The Royal Cambodian Armed Forces and its National Centre for Peace Keeping Forces, Mine and ERW Clearance (NPMEC) and international operators MAG and NPA all conducted CMR clearance in 2018.

In 2018, CMAC deployed 25 non-technical survey personnel across five teams, the same as in 2017. In 2019, there are no plans to deploy non-technical survey teams. CMAC also deployed a total of 202 technical survey personnel across 30 teams of between five and seven staff per team. This was an increase from the 187 staff deployed across 27 teams in 2017. In 2019, the number of technical survey personnel was planned to increase to 231 across 37 teams. In 2018, CMAC deployed 1,248 clearance personnel, an increase of 7% on the 1,164 clearance personnel deployed in 2017. This decreased to 1,037 clearance personnel in 2019.<sup>54</sup>

NPMEC have conducted clearance in CMR-affected areas in previous years but had not reported the extent and results of their operations.<sup>55</sup> In 2018, NPMEC conducted clearance in Stung Treng province.<sup>56</sup>

In 2018, NPA had one non-technical survey team of five staff in Ratanakiri province who responded to community requests based on new evidence of CMR. The non-technical survey team also conducted post clearance visits and were responsible for operating the drone. NPA also deployed two technical survey teams, with a total of ten staff, and one battle area clearance (BAC) team of five explosive detection dogs (EDDs) with handlers supported by four manual searcher and two strimmer operators cutting vegetation. The only change in capacity from 2017 was the addition of one EDD and handler, and NPA did not expect any major changes in 2019 unless funding increases, in which case they will increase both technical survey and BAC capacity.<sup>57</sup> NPA also provides oversight of survey conducted by CMAC teams, who are required to conduct CMRS, as part of a US-funded partnership project for CMR survey and clearance in the north-east, which is due to run until February 2020.<sup>58</sup>

NPA and CMAC have an ongoing CMR survey and clearance partnership project in eastern Cambodia targeting the eight provinces which are believed to account for most of the CMR contamination. CMAC teams conduct CMRS and clearance while NPA is providing mentoring and monitoring of all aspects of the project which is funded by the United States until February 2020. The objectives of the project are to resolve the CMAC data backlog, complete baseline survey in the remaining districts allocated to NPA/CMAC, develop the capacity of CMAC staff to conduct CMRS in the targeted provinces, and to release prioritised CMR contaminated areas in the targeted provinces.<sup>59</sup>

As well as having its main operational base in the west of the country focused on minefield survey and clearance, MAG also has an operations base in Ratanakiri province concentrating on CMR survey and clearance. In 2018, MAG deployed two community liaison staff who undertake non-technical survey and risk education alongside other activities. This is a newly established capacity. No change in capacity was expected in 2019. MAG also deployed a total of 94 personnel conducting CMR survey and clearance of whom 13 conducted technical survey and 67 people conducted BAC, with the remainder in supervisory roles. This is a change in capacity from 2017 as MAG added an additional clearance team and introduced its first technical survey team. No change in capacity was expected in 2019. MAG also deployed three EOD teams in Ratanakiri province, each consisting of five staff, who respond to reports of ERW including CMR. Approximately 51% of items removed by the EOD teams were CMR. MAG uses the data from these EOD tasks to plot initial CHAs using its Evidence Point Polygon (EPP) mapping approach pioneered in the Lao People's Democratic Republic.<sup>60</sup>

The CMAA's quality management (QM) teams visit operations every month, conducting both quality assurance and quality control. Operators report that the CMAA has a strong and effective QM system in place.<sup>61</sup>

## OPERATIONAL TOOLS

CMAC currently employs explosive detection dogs as the primary clearance tool for CMR-contaminated areas while machines provide support for field preparation and brush-cutting. In 2019, a pilot was planned for dogs to also conduct CMRS.<sup>62</sup>

NPA's primary detection tool for BAC are EDDs, supported by searchers with metal detectors. NPA conducted an extensive trial in 2018 deploying EDDs for technical survey. The results were positive and NPA will use EDDs for technical survey in the near future, if funding permits. NPA is confident the efficiency and accuracy of technical survey can be increased if EDDs are included as part of the toolbox. NPA deploys drones for aerial mapping of both technical survey and BAC tasks. Drones are also used during EOD tasks and for

quality assurance. NPA has also been conducting field tests of all-terrain vehicles (ATVs) and have found them particularly useful in transporting personnel and EDDs in hard to reach areas.<sup>63</sup>

MAG uses a wide variety of assets and methodologies as part of its operational toolbox, with the national authorities very open to the use and trialling of new technologies. In 2018, mechanical assets were used to conduct ground preparation. MAG also continues to trial advanced detection systems for CMR survey and clearance, provided by the US Humanitarian Demining Research and Development programme, and uses drones to conduct non-technical survey, task planning, and post-impact monitoring.<sup>64</sup>

## LAND RELEASE OUTPUT AND PROGRESS TOWARDS COMPLETION

### LAND RELEASE OUTPUT IN 2018

In 2018, operators cleared a total of over 39km<sup>2</sup> of CMR-contaminated area, destroying 8,365 submunitions in the process. A further 4,680 submunitions were destroyed during EOD spot tasks while 571 submunitions were destroyed during technical survey.

A total of 26km<sup>2</sup> was confirmed by operators through technical survey, while 8km<sup>2</sup> was reduced from the baseline survey.

### SURVEY IN 2018

In 2018, 133 CHAs totalling almost 26.5km<sup>2</sup> were confirmed as containing CMR, as set out in Table 2.

NPA's technical survey outputs were slightly lower in 2018 compared with 2017. The main reason for this was a ban on the use of explosives for six weeks during the general election so all technical survey and BAC operations were halted during that period.<sup>65</sup> MAG only began technical survey operations in September 2018 so there were no outputs before then.<sup>66</sup>

**Table 2: Technical survey of CMR-contaminated area in 2018**

Operator	Area surveyed (m <sup>2</sup> )	CHAs identified	Area confirmed (m <sup>2</sup> )	Area reduced from BLS (m <sup>2</sup> )	Submunitions destroyed	Other UXO destroyed
NPA	3,542,500	25	4,479,481	0	313	2
MAG	362,500	13	1,235,000	0	17	1
CMAC	50,550,354	95	20,757,890	8,205,408	241	1,652
<b>Totals</b>	<b>54,455,354</b>	<b>133</b>	<b>26,472,371</b>	<b>8,205,408</b>	<b>571</b>	<b>1,655</b>

### CLEARANCE IN 2018

In 2018, over 39km<sup>2</sup> was cleared by operators, a significant increase from the 23km<sup>2</sup> cleared in 2017. CMAC's reported clearance output increased by 56% from 21.9km<sup>2</sup> in 2017 to just over 34.2km<sup>2</sup> in 2018. CMAC attributed this to an increase in its clearance capacity along with an improved methodology and better information systems that allow their teams on the ground to better identify and make task selections for clearance.<sup>67</sup> NPA and MAG both marginally increased their respective clearance outputs in 2018. For NPA, this was mainly due to the introduction of drones, which improved task planning and increased efficiency.<sup>68</sup> MAG's 3% increase in clearance output is ascribed to a small increase in operational capacity.<sup>69</sup> NPMEC reported CMR clearance of more than 2.25km<sup>2</sup> for 2018.<sup>70</sup>

**Table 3: Clearance of CMR-contaminated area in 2018**

Operator	Province	Areas cleared	Area cleared (m <sup>2</sup> )	Submunitions destroyed	Other UXO destroyed
NPA	Ratanakiri	6	981,839	448	2
MAG	Ratanakiri	12	2,163,551	679	*10
CMAC	Kampong Cham	36	7,415,199	1,733	244
CMAC	Kampong Chhnang	5	1,321,621	192	146
CMAC	Kampong Thom	17	3,024,413	373	73
CMAC	Kratie	15	2,673,205	307	190
CMAC	Preah Vihear	5	891,453	69	107
CMAC	Prey Veng	47	5,991,499	1,333	344
CMAC	Stung Treng	6	1,907,751	259	127
NPMEC	Stung Treng	3	2,250,030	454	152
CMAC	Svay Rieng	71	9,455,454	1,910	335
CMAC	Tboung Khmum	41	1,524,222	608	86
<b>Totals</b>		<b>264</b>	<b>39,600,237</b>	<b>8,365</b>	<b>1,816</b>

\* MAG also destroyed 1 anti-personnel mine during BAC in Ratanakiri province.

During EOD spot tasks in 2018, NPA destroyed 220 submunitions, MAG destroyed 3,979 submunitions, and CMAC destroyed 481 submunitions.<sup>71</sup>

Cambodia has committed to address 80% of the total known CMR contamination by 2025: 499km<sup>2</sup> of an estimated total of 645km<sup>2</sup> in the National Mine Action Strategy 2018–2025. The remaining 20% of CMR will be categorised as “residual” contamination and dealt with accordingly. To reach the clearance goal Cambodia planned to release 62km<sup>2</sup> every year from 2018 to 2025, of which 30% would be through land reclamation/cancellation and the remaining 70% through land release methodology. Based on this analysis, Cambodia calculated that approximately 44km<sup>2</sup> will need to be released annually through technical survey and full clearance. From 2014 to 2016, Cambodia released an average of 11km<sup>2</sup> per year through technical survey and clearance, but it expected to achieve vastly increased clearance output through improved land release methodology, innovative technology, and animal detection systems.<sup>72</sup>

Cambodia’s clearance output in 2018 was a dramatic improvement from 2017 and it has been estimated by operators that at current capacity around 30km<sup>2</sup> of CMR contaminated land could be released each year, leading to total release of some 200km<sup>2</sup> of CMR-contaminated land by 2025. The implementation of the new CMRS standard should mean that operators are more effective in their approach and focus clearance on CHAs while reducing SHAs through technical survey. However, the CMAA will need to ensure that the standard is being applied consistently by all operators and in the most efficient and effective way possible. The CMAA should facilitate the sharing of best practice and support adjustments and improvements to the methodology amongst operators. It is encouraging that there will be a regional meeting on CMRS in August 2019 with all operators and national authorities from Vietnam, Cambodia, and the Lao People’s Democratic Republic.<sup>73</sup>

Cambodia is not yet a state party to the CCM but has made accession to the CCM by 2020 a goal of the National Mine Action Strategy 2018–2025.<sup>74</sup> In April 2019, the CMAA stated that the Cambodian government is ready to accede to the CCM, but “for security reasons” is not willing to do so until other countries in the region also accede.<sup>75</sup>

- 1 Anti-Personnel Mine Ban Convention (APMBC) Article 5 Extension Request, 27 March 2019, p. 6; and interview with Prum Sophakmonkol, Secretary General, CMAA, Phnom Penh, 24 April 2019.
- 2 APMBC Article 7 Report (for 2017), Annex B; and email from the CMAA, 22 May 2018.
- 3 CMAA, National Mine Action Strategy 2018–2025, p. 9.
- 4 Email from CMAA, 22 May 2018.
- 5 Email from CMAA, 1 July 2019.
- 6 APMBC Article 5 Extension Request, 27 March 2019, p. 3.
- 7 Emails from Zlatko Vezilic, Interim Country Director, NPA, 4 April, 25 June, and 10 July 2019; and interview with Prum Sophakmonkol, CMAA, Phnom Penh, 24 April 2019.
- 8 Interviews with Sophorn Lim, Project Manager, NPA, 30 April 2019 and Ingemar Anderka, Technical Field Manager, MAG, 1 May 2019, Rattanakiri; World Bank, "The World Bank in Cambodia", at: <http://bit.ly/2YZA0rs>.
- 9 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.
- 10 APMBC Article 5 Extension Request, 27 March 2019, p. 6.
- 11 CMAA, "Legal framework and mandate", at: <http://bit.ly/2W7r3dJ>.
- 12 Geneva International Centre for Humanitarian Demining (GICHD), "A Study of the Development of National Mine Action Legislation", November 2004, pp. 64–66.
- 13 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. 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.
- 14 CMAC, "20 Years' Achievement in Mine Action 1998-2018 and Path Ahead", 2018.
- 15 Interview with Heng Rattana, Director General, CMAC, Phnom Penh, 25 April 2019.
- 16 Interviews with Su Yeon Yang, Conflict Prevention Officer, and Tong Try, Senior National Project Officer, UNDP, 23 April 2019; and Rebecca Letven, Country Director, MAG, 25 April 2019, Phnom Penh.
- 17 CMAA, National Mine Action Strategy 2018–2025, p. 24; and email from Tong Try, UNDP, 18 June 2019.
- 18 APMBC Article 5 Extension Request, 27 March 2019, pp. 146–150; and email from Rebecca Letven, MAG, 9 May 2019.
- 19 Interview with Heng Rattana, CMAC, Phnom Penh, 25 April 2019.
- 20 Emails from Zlatko Vezilic, NPA, 4 April 2019; and Rebecca Letven, MAG, 9 May and 28 June 2019.
- 21 Email from Zlatko Vezilic, NPA, 4 April 2019.
- 22 UNDP, "Clearing for Results Phase III project document", 17 December 2015.
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