

**ARTICLE 4 DEADLINE: 1 MAY 2026**  
NOT ON TRACK TO MEET DEADLINE

### KEY DATA

#### CLUSTER MUNITION CONTAMINATION: MEDIUM

NATIONAL ESTIMATE

**6.3 km<sup>2</sup>**

SUBMUNITION  
CLEARANCE IN 2021

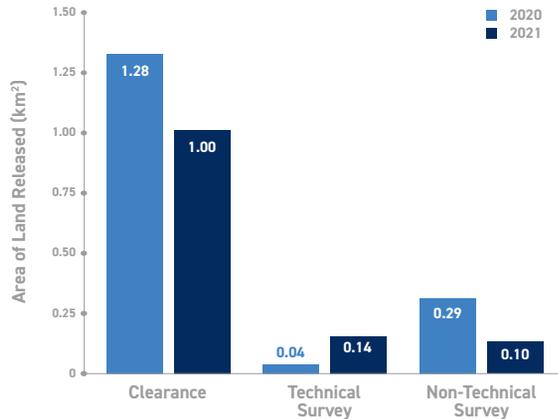
**1 km<sup>2</sup>**

SUBMUNITIONS  
DESTROYED IN 2021

**2,418**

(INCLUDING 315 SUBMUNITIONS  
DESTROYED DURING SPOT TASKS)

### LAND RELEASE OUTPUT



## KEY DEVELOPMENTS

The Lebanon Mine Action Centre (LMAC) continued to make good progress in addressing cluster munition remnant (CMR) contamination in 2021. Although clearance output in 2021 was lower than the previous year, the amount of cluster munition-contaminated area released through technical survey in 2021 increased slightly. This was as a result of LMAC now permitting routine technical survey of CMR tasks and the incorporation of technical survey into national mine action standards (NMAS) and operator standing operating procedures (SOPs) – a welcome and overdue development. However, Lebanon saw a significant drop in CMR clearance capacity in 2021, as a result of decrease in international funding and the absence of national funding for CMR clearance due to the economic crisis in Lebanon. The funding and capacity cuts will hinder Lebanon's ability to meet its extended Convention on Cluster Munitions (CCM) Article 4 clearance deadline of 1 May 2026.

## RECOMMENDATIONS FOR ACTION

- Following the updates to the NMAS in 2021, all implementing agencies in Lebanon should conduct technical survey (manual, mechanical, or with the use of explosive detection dogs (EDDs)), as a routine part of the toolbox for the release of CMR tasks.
- LMAC should continue making progress in its joint study with the Geneva International Centre for Humanitarian Demining (GICHD) to determine how it plans to address CMR in especially difficult terrain, such as deep canyons and very steep cliffs, and should publicly report on the number and size of CMR tasks concerned.
- Lebanon should provide regular updates to its Article 4 planning, based on actual annual outputs achieved.
- Lebanon should develop a resource mobilisation strategy, to help it fill funding gaps and secure the additional funding required to meet its annual CMR clearance targets as set out in its Article 4 deadline extension request.

## ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2021)	Score (2020)	Performance Commentary
<b>UNDERSTANDING OF CMR CONTAMINATION</b> (20% of overall score)	8	8	LMAC has a good understanding of its CMR contamination baselines, having completed non-technical re-survey of all CMR tasks in 2020. It has also corrected duplicate or inaccurate records identified as part of the migration to Information Management System for Mine Action (IMSMA) Core. The baseline, however, still includes confirmed hazardous areas (CHAs) with an estimated standard size of 10,000m <sup>2</sup> (for hazardous areas recorded without defined boundaries), whose true size may differ markedly. For the purposes of Article 4 planning LMAC has increased the standard sized area estimation by 250% to factor in fade-out.
<b>NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT</b> (10% of overall score)	8	8	LMAC continued to demonstrate effective programme management in 2021, maintaining Mine Action Forum and technical working group (TWG) meetings. Regrettably, due to continued political and financial unrest in Lebanon, none of the 50 billion Lebanese Pounds (approximately US\$33 million) for CMR clearance over five years (2019–23) had been allocated as of writing.
<b>GENDER AND DIVERSITY</b> (10% of overall score)	7	7	LMAC has acted to mainstream gender in its mine action programme, including through data disaggregation, inclusive survey, and participation in courses. Gender and diversity considerations are included in the National Mine Action Strategy 2020–25 and LMAC has a gender focal point. The number of staff at LMAC is determined by the Lebanese Armed Forces (LAF) headquarters, so LMAC has limited control over the number of women, but it consistently requests that the percentage of women be increased.
<b>INFORMATION MANAGEMENT AND REPORTING</b> (10% of overall score)	8	8	LMAC completed the migration to IMSMA Core in 2021 and the new database is now being used for all activities, and will also help inform prioritisation of clearance tasks. The transition to IMSMA Core revealed errors in the province name in which some CMR tasks were registered, and these have been corrected. LMAC produced a comprehensive and accurate Article 7 report covering 2021.
<b>PLANNING AND TASKING</b> (10% of overall score)	8	8	LMAC has a National Mine Action Strategy for 2020–25 and an accompanying plan for the implementation and monitoring of the strategy which will be updated annually. In 2021, Lebanon fell short of the 1.9km <sup>2</sup> clearance target from its 2020 Article 4 extension request, partly due to decreased clearance capacity as a result of funding cuts. A new prioritisation system was adopted in 2021 and LMAC introduced new forms for non-technical survey which now capture information needed for the new prioritisation matrix.
<b>LAND RELEASE SYSTEM</b> (20% of overall score)	8	7	LMAC has steadily strengthened its NMAS over the last five years. In 2021, the NMAS were updated to enable routine technical survey of CMR tasks – a welcome and long overdue development which is essential in order to improve operational effectiveness and ensure clearance of CMR is evidence-based. In addition, enhancements have also been made to the required fadeout distance, the marking system for battle area clearance (BAC) tasks, and the frequency of demolitions. Unfortunately, capacity for CMR technical survey and clearance decreased in 2021, due to funding cuts.
<b>LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE</b> (20% of overall score)	6	7	<p>While CMR clearance output of 1km<sup>2</sup> in 2021 was a slight decrease on output in 2020, there was a slight increase in the amount of CMR-contaminated area reduced through technical survey. This reflects the change to the NMAS published in May 2021, which now permits routine technical survey of CMR tasks. Lebanon's extended Article 4 clearance deadline is 1 May 2026, but a reduction in international funding and the lack of any national funding to CMR clearance in 2021, will significantly affect Lebanon's ability to meet this deadline.</p> <p>In 2020, Lebanon was granted a five-year extension to its CCM Article 4 deadline to 1 May 2026. However, meeting this deadline was contingent on funding, and a decrease in international funding and absence of national funds allocated to CMR clearance, mean that current CMR clearance capacity will be insufficient for Lebanon to complete clearance by its 2026 deadline, despite the gains in operational efficiency expected to result from widespread application of technical survey.</p>
<b>Average Score</b>	<b>7.5</b>	<b>7.5</b>	<b>Overall Programme Performance: GOOD</b>

# CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

## MANAGEMENT

- Lebanon Mine Action Authority (LMAA)
- Lebanon Mine Action Centre (LMAC)
- Regional Mine Action Centres (RMAC-N and RMAC-RB)

## NATIONAL OPERATORS

- Lebanese Armed Forces (LAF)/Engineering Regiment (ER)
- Peace Generation Organization for Demining (POD)

## INTERNATIONAL OPERATORS

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

## OTHER ACTORS

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

## UNDERSTANDING OF CMR CONTAMINATION

At the end of 2021, Lebanon had 709 confirmed hazardous areas (CHAs) containing CMR covering a total area of nearly 6.3km<sup>2</sup> (see Table 1).<sup>1</sup> This is a decrease in CMR contamination compared to the end of 2020, when 749 CHAs were confirmed to contain CMR, over a total area of almost 7.3km<sup>2</sup>,<sup>2</sup> and is the result of release of CMR-contaminated area through survey and clearance in 2021.

In 2021, 0.22km<sup>2</sup> of previously unrecorded CMR contamination was added to the database (11 new CMR sites in the north-east region totalling 117,045m<sup>2</sup> and resulting from new contamination that was first discovered in the region in 2017; and 105,477m<sup>2</sup> in other regions, resulting from the correction to the perimeters of existing CMR sites.<sup>3</sup>

**Table 1: Cluster munition-contaminated area by province (at end 2021)<sup>4</sup>**

Province	CHAs	Area (m <sup>2</sup> )
Beqaa (including the north-east region)	99	867,089
Janoub and Nabatiyeh (South of Lebanon)	550	4,924,455
Jabal Loubnan (Mount Lebanon)	60	478,918
<b>Totals</b>	<b>709</b>	<b>6,270,462</b>

With support from the GICHD, in 2021 the LMAC migrated its Information Management System for Mine Action (IMSMA) to the new version, IMSMA Core. The migration revealed that certain villages were registered in the wrong province, the correction of which resulted in a change to the distribution of the remaining contamination by province, but did not change the total amount of remaining CMR contamination.<sup>5</sup>

As part of a 2018 database review process, LMAC decided to change the standard size of CHAs with no defined boundaries (and in which there is no mine threat), to 10,000m<sup>2</sup> in the database, based on the fade-out distance for cluster munition clearance and LMAC's experience to date.<sup>6</sup> But operators have found that the standardised 10,000m<sup>2</sup> (per task) area is in some instances an overestimate and in other instances an underestimate of the actual task size.<sup>7</sup> LMAC, however, believes that this is the best approach for this type of hazardous area and to be conservative in its CCM Article 4 planning it has increased the size of these areas by 250% (to 25,000m<sup>2</sup>) to factor in fade-out.<sup>8</sup>

The accuracy of the baseline is further complicated by the fact that clearance undertaken in the aftermath of the 2006 cluster munition strikes was not conducted in accordance with the International Mine Action Standards (IMAS) and was mostly limited to rapid surface clearance.<sup>9</sup> This included emergency clearance undertaken by the Lebanese Armed Forces (LAF) in and around infrastructure, schools, and

1 Email from Lt.-Col. Fadi Wazen, Operations Section Head, LMAC, 29 March 2022: and presentation of Lebanon, CCM Intersessional meetings, Geneva, 16 May 2022.

2 Email from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021.

3 CCM Article 7 Report (covering 2021), Form F; LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 17; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

4 Article 7 Report (covering 2021), Form F; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

5 Ibid.

6 Email from Lt.-Col. Fadi Wazen, LMAC, 7 March 2019; LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 13; Article 7 Report (covering 2018), Form F; and revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 10.

7 Email from Valerie Warmington, Programme Manager, Norwegian People's Aid (NPA), 28 May 2020.

8 Email from Lt.-Col. Fadi Wazen, LMAC, 2 September 2020.

9 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 12.

roads, and clearance contracted out to non-governmental organisations (NGOs), commercial operators, and government groups by the UN Mine Action Coordination Centre – south Lebanon (MACC-SL), which assumed the role of coordinating CMR clearance in 2007, in cooperation with the National Demining Office (now known as LMAC).<sup>10</sup>

In order to determine its baseline of CMR contamination more accurately and inform Article 4 planning, LMAC has re-surveyed all remaining cluster munition-contaminated areas in its database. The nationwide non-technical re-survey was completed in November 2020,<sup>11</sup> and LMAC's non-technical survey teams will revisit the CMR sites every three years.<sup>12</sup>

A study on operational efficiency, conducted by an external international consultant in 2020, highlighted the need for greater emphasis on technical survey as part of the land release process in Lebanon, in order to reduce land found not to be contaminated, including in the fade-out, and prevent unnecessary clearance.<sup>13</sup> These recommendations were subsequently incorporated in Lebanon's NMAS (see section below, "Land Release System" for details).<sup>14</sup>

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.<sup>15</sup> An estimated one million submunitions failed to explode.<sup>16</sup> Some Israeli bombing data have been provided – most recently through the UN Interim Force in Lebanon (UNIFIL) – but has proved to be very inaccurate.<sup>17</sup> In addition, some CMR still remain from earlier conflicts with Israel in 1978 and 1982,<sup>18</sup> and there is a small amount of new CMR contamination on the north-east border with Syria, resulting from spill-over of the Syrian conflict onto Lebanese territory in 2014–17.<sup>19</sup> Types of submunitions found in Lebanon include Israeli, Soviet, and United States (US)-made submunitions, types AO-2.5 RT, BLU-18, BLU-26, BLU-61, BLU-63, M42, M43, M46, M77, M85, MK118, and MZD-2.<sup>20</sup> Some areas contain unexploded submunitions resulting from both ground-launched and air-dropped cluster munitions, which can further complicate the picture.<sup>21</sup>

## OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

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

## NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Lebanon's mine action programme is under the control of the military. The Lebanon Mine Action Authority (LMAA), which has overall responsibility for Lebanon's mine action programme, is the responsibility of the Ministry of Defence and is chaired by the Minister of Defence. 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.<sup>22</sup>

LMAC, part of the LAF, is based in Beirut. Since 2009, the Regional Mine Action Centre-Nabatiyeh (RMAC-N), which is a part of LMAC, has overseen operations in south Lebanon and western Beqaa, under LMAC supervision.<sup>23</sup> At the end of 2018, a new regional centre, the RMAC-Ras Baalbek (RMAC-RB), was established in the north-east of Lebanon, to oversee

the mine action operations in this region.<sup>24</sup> To a large extent LMAC has a well-functioning capacity, but, as they are army officers, the senior management of LMAC and RMAC are typically routinely rotated every two years or so, which can hamper development and continuity in the management of the three mine action centres.<sup>25</sup> The current director of LMAC started in March 2019, replacing his predecessor who had served as director for two years.<sup>26</sup>

A new SOP for LMAC was developed in 2020 and approved on 9 November 2020. The SOP specifies the roles of each section of LMAC and clarifies the responsibilities and cooperation between sections. It is hoped that it will help preserve institutional memory, assist new LMAC staff, and reduce the impact of staff rotations.<sup>27</sup>

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

11 Email from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021.

12 Article 7 Report (covering 2021), Form F; LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 17; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

13 LMAC, "Annual Report 2020", p. 36.

14 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

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

16 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; and Article 7 Report (covering 2019), Form F.

17 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016; presentation by Brig.-Gen. Fakhri, LMAC, Beirut, 16 November 2016; and Article 7 Report (covering 2019), Form F.

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

19 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 2.

20 *Ibid.*, p. 23.

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

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

23 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011, p. 4.

24 Email from Lt.-Col. Fadi Wazen, LMAC, 21 August 2019.

25 LMAC, Lebanon Mine Action Strategy 2020–25, signed June 2020, p. 4.

26 Email from Brig.-Gen. Ziad Nasr, Director, LMAC, 26 March 2019.

27 Emails from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020 and 15 March 2021; and LMAC, "Annual Report 2020", p. 28.

UN Development Programme (UNDP) personnel, funded by the European Union (EU), are also seconded to LMAC, providing support for capacity building, including transparency reporting, strategic reviews, IMSMA database entry, community liaison, and quality assurance (QA). In 2021, there were six UNDP personnel supporting LMAC.<sup>28</sup>

UNDP received funding in 2020 from the Norwegian Embassy for a three-year project for 2020–23 of support to LMAC coordination capacities.<sup>29</sup> In April 2021, the Netherlands agreed a further three-year contract with UNDP for international support to LMAC, totalling US\$1.5 million.<sup>30</sup>

The GICHD also provides support to LMAC on information management and on gender and diversity. LMAC staff have benefitted from courses under the regional framework of the Arab Regional Cooperation Programme (ARCP).<sup>31</sup> In addition, the GICHD is partnering with LMAC on a study of contamination in “difficult” terrain.<sup>32</sup>

A “Mine Action Forum” was established in Lebanon in close partnership between LMAC and Norway. The forum was the result of a two Lebanon-focused workshops, the first of which took place in November 2016, convened by Norway and the Netherlands in their capacity as CCM Co-Coordiators on clearance, and facilitated by the GICHD. The second workshop, in January 2018, convened in partnership between Norway and LMAC, resulted in the establishment of the Mine Action Forum. The forum meets twice a year, with UNDP designated as the secretariat for the Forum.<sup>33</sup> In 2021, the Netherlands took over from Norway as Forum co-chair.<sup>34</sup>

The Mine Action Forum provides an informal mechanism for LMAC to maintain open dialogue and information sharing with implementing partners and donors on national priorities and needs for the survey and clearance of CMR and landmines.<sup>35</sup> 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 as well as CMR. During each meeting, stakeholders present achievements compared to previously set action points, discuss challenges and needs, and then propose future steps for the coming six months.<sup>36</sup> In 2021, the Netherlands has taken the lead for the forum. The Forum is said to have resulted in better coordination and greater transparency as well as

enhancements to land release methodology, enshrined in the revised national mine action standards (NMAS).<sup>37</sup>

There is good coordination and collaboration between LMAC/ the RMAC and clearance operators, with the operators consulted before key decisions are taken.<sup>38</sup> International clearance operators reported that an enabling environment exists for mine action in Lebanon, with LMAC facilitating the processing of visas for international staff and assisting with the importation of equipment, including exemption of customs fees for equipment.<sup>39</sup> Norwegian People’s Aid (NPA) reported that a challenge was the length of time needed to obtain security clearances for new local staff. This process can take more than three months.<sup>40</sup>

A technical working group (TWG) was established in March 2018, under the auspices of LMAC, based on recommendations of the Mine Action Forum and following the release of the revised NMAS. The TWG, provides a useful forum for LMAC/the RMACs to meet collectively with clearance operators to review and discuss field issues, including implementation of revisions to the NMAS, to identify issues, and suggest further NMAS revisions and potential ways to improve operational efficiencies. The LMAC is open to suggestions from operators for improvements.<sup>41</sup> The TWG met twice in 2021 – in March and December.<sup>42</sup>

As in the previous year, the Lebanese government contributed US\$9 million annually in 2021 towards mine action in Lebanon (for both mine- and CMR-related work): to support costs associated with the running of LMAC (facilities and staff); for the LAF Engineering Regiment companies working in demining (four teams, two of which work on CMR, in addition to mechanical and mine detection dog (MDD) support); risk education; victim assistance, and training. However, the devaluation of the Lebanese Pound due to the economic crisis in the country affects the amount actually received.<sup>43</sup>

The Lebanese government had pledged an additional 50 billion Lebanese Pounds (approximately US\$33 million) to CMR clearance over five years (2019–23), to increase the number of CMR clearance teams and help meet the State’s Article 4 obligations under the CCM. Unfortunately, due to political and financial unrest in Lebanon this national funding has not been provided.<sup>44</sup> LMAC had expected that a reduced amount of

28 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

29 Email from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020; and LMAC, “Annual Report 2020”, p. 28.

30 Email from Lt.-Col. Fadi Wazen, LMAC, 15 June 2021; and LMAC, “2021 Annual Report Lebanon Mine Action Centre”, p. 38.

31 Email from GICHD, 22 April 2022.

32 Email from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020.

33 LMAC, “2018 Annual Report Lebanon Mine Action Centre”, p. 23.

34 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

35 LMAC, “2018 Annual Report Lebanon Mine Action Centre”, p. 23; Statement of Lebanon on International Cooperation and Assistance, CCM Ninth Meeting of States Parties, Geneva, 4 September 2019; and LMAC, Lebanon Mine Action Strategy 2020–25, Foreword by the chair of the LMAA (Minister of Defence).

36 Statement of Lebanon, CCM Intersessional meetings, Geneva, 16 May 2022.

37 Emails from Lt.-Col. Fadi Wazen, LMAC, 7 March 2019 and 19 March 2020; LMAC, “Annual Report 2018”, p. 23; and revised 2020 Article 4 deadline Extension Request, 25 February 2020, pp. 38 and 39.

38 Emails from Sylvain Lefort, Country Director, MAG, 24 March 2021; Hala Amhaz, NPA, 15 March 2021; Mahmoud Rahhal, POD, 8 March 2019; and David Ligneau, Mine Action Programme Manager, Humanity and Inclusion (HI), 21 April 2020.

39 Emails from Hiba Ghandour, Programme Manager, MAG, 7 April 2022; and Southern Craib, Operations Manager, NPA, 28 March 2022.

40 Email from Southern Craib, NPA, 28 March 2022.

41 LMAC, “2018 Annual Report Lebanon Mine Action Centre”, pp. 4, 7, and 17; and emails from Lt.-Col. Fadi Wazen, LMAC, 7 March 2019; Emile Ollivier, NPA, 19 March 2019; Hiba Ghandour, MAG, 7 April 2022; Southern Craib, NPA, 28 March 2022; and Mouhamed Chour, acting Country Director, DCA, 4 April 2022; and Revised 2020 Article 4 deadline Extension Request, 25 February 2020, pp. 8 and 54.

42 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

43 Article 7 Report (covering 2021), Form I; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

44 Article 7 Report (covering 2019), Form I; and email from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020.

around US\$3 million of national funding would still be allocated to CMR clearance yearly.<sup>45</sup> In fact, no national funds were allocated for CMR clearance in either 2020 or 2021.<sup>46</sup>

A Regional School for Humanitarian Demining in Lebanon (RSHDL) was established in partnership between Lebanon and France.<sup>47</sup> The School became operational in 2017, enabling civilian and military personnel from Arab and other countries to benefit from an array of courses and workshops on non-technical survey, explosive ordnance disposal (EOD), operational efficiency, and gender and diversity.<sup>48</sup>

## ENVIRONMENTAL POLICIES AND ACTION

LMAC said that it recognises its responsibility to ensure that demining operations are conducted responsibly and efficiently while also minimising the impact on the environment. Lebanon's NMAS on Safety and Occupational Health – Protection of the Environment (10.70) specifically aims to achieve this. LMAC and its implementing partners ensure that they operate in conformity with NMAS 10.70 including:

- Coordinating with local authorities and landowners before start of operations.
- Compiling a list of factors related to operations that may affect the environment for all types of assets, assessing the threat, and making informed decisions.
- After demining and EOD operations have been completed at a worksite, but before the formal release of the area, implementing agencies are required to remove and appropriately dispose of all rubbish and large fragments of EO, and fill any holes in the ground to stabilise the surface to allow for natural regeneration, using water to consolidate the soil when appropriate.<sup>49</sup>

DanChurchAid (DCA) reported that it is compliant with the Environmental Health and Safety Guidelines and that it follows NMAS and IMAS procedures with regards to the

environment. DCA's SOPs identify specific smoking areas at task sites to prevent uncontrolled fires and DCA monitors all vegetation-cutting procedures to prevent damage to flora that is protected under Lebanese law, especially when its teams are deployed in national reserves such as the Al Shuf Cedars, where DCA conducted clearance in 2021.<sup>50</sup>

Mines Advisory Group (MAG) has an environmental management system in place, which was in the process of being revised as at April 2022.<sup>51</sup> The integration of non-technical and technical survey in the land release approach for CMR tasks will lead to a greater proportion of uncontaminated land being released through cancellation or reduction, rather than through clearance, therefore decreasing the use of finite resources in unnecessary clearance.<sup>52</sup> This will have a significant positive impact on the environment.

NPA Lebanon said it has an environmental plan in place which it is implementing, including recent installation of a solar system; a recycling programme (paper, plastic, glass, and plastic); and fleet upgrading for fuel efficiency. NPA has also begun to track its environmental footprint through the use of an annual reporting tool. It also strives to minimise the removal of vegetation to the extent that it is safe.<sup>53</sup>

## GENDER AND DIVERSITY

The gender and diversity-related policy applied at LMAC is that of the LAF military rules. According to LMAC, all its personnel are familiar with these rules and the specific provisions related to gender equality and inclusion, safeguarding, and behavioural codes.<sup>54</sup>

LMAC has taken several actions to mainstream gender in its implementation plan, including through inclusive policies, data disaggregation in risk education and victim assistance, and participation in courses at the RSHDL.<sup>55</sup> In agreement with LMAC,

45 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 38; and 2020 Article 4 deadline Extension Request, answers to analysis group, 6 February 2020.

46 Emails from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021 and 29 March 2022; Article 7 Reports (covering 2020 and 2021), Form I; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 30.

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

48 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; CCM Article 7 Reports (covering 2018 and 2019), Form A; Statement of Lebanon on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4–6 September 2017; and LMAC, "Annual Report 2020", p. 29.

49 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

50 Email from Mouhamed Chour, DCA, 4 April 2022.

51 Email from Hiba Ghandour, MAG, 7 April 2022.

52 Ibid.

53 Email from Southern Craib, NPA, 28 March 2022.

54 Email from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020.

55 LMAC, "Annual Report 2018", p. 5; and email from Lt.-Col. Fadi Wazen, LMAC, 7 March 2019.

the GICHD conducted a gender and diversity capacity assessment mission to Lebanon in July 2019. The aim was to reinforce a sustainable national capacity for gender and diversity mainstreaming in the LMAC and contribute to the achievement of gender equality and inclusion.<sup>56</sup> In August 2019, LMAC reported that it had appointed a new gender focal point, who will help mainstream gender-sensitive policies and procedures and monitor their implementation in the mine action centre and across the national programme.<sup>57</sup> LMAC's gender focal point participated in the Remote regional ARCP Gender Equality and Inclusion capacity development programme held online from October 2020 to March 2021.<sup>58</sup>

Lebanon's new National Mine Action Strategy 2020–25, approved by the LMAA in June 2020, includes considerations on gender and diversity.<sup>59</sup> Of the five objectives in the new strategy, the fifth states that: "The specific needs and perspective of women, girls, men and boys from all groups of society are considered, in order to deliver an inclusive HMA [mine action] response". LMAC also acknowledges in the strategy that mine action "is a male-dominated environment and we have therefore a particular responsibility to empower women and ensure that we have a gender sensitive approach to our work".<sup>60</sup> As per its strategic implementation plan, LMAC has drafted a code of conduct regarding gender, diversity, and inclusion, in collaboration with a committee composed of human resources personnel, safeguarding personnel, and gender focal points from the NGOs in Lebanon.<sup>61</sup> Lebanon's NMAS was due to be reviewed in 2022 from a gender perspective.<sup>62</sup>

Of LMAC's total personnel, 17 (11%) are female. With respect to operational roles, eight (16%) of LMAC's 49 personnel are female. With respect to managerial/supervisory level positions at LMAC, none are currently held by women.<sup>63</sup> The number of staff at LMAC is determined by the LAF headquarters, so LMAC has limited control over the number of women, but it consistently requests that the percentage of women be increased.<sup>64</sup> However, the proportion of women at LMAC is more than double the 5% average of the Lebanese armed forces and LMAC seeks to improve this ratio further.<sup>65</sup>

DCA's gender focal point conducted internal training on gender and diversity mainstreaming in 2021 and encouraged DCA to enhance the role of women within the organisation.

DCA also held meetings with other NGOs regarding strengthening the role of women and attended two meetings convened by LMAC on gender and diversity mainstreaming. It reported that 15 of its 69 overall staff in Lebanon are female, with women accounting for 53% of managerial/supervisory positions (8 women) and 14% of all operations positions (7 women).<sup>66</sup>

MAG, NPA, and Peace Generation Organization for Demining (POD) all reported having gender policies in place.<sup>67</sup>

MAG reported that it consults women during survey and community liaison activities; that all its community liaison teams are mixed; and that its data is disaggregated by sex, age, and nationality. Overall, women account for 19% of MAG's Lebanon programme, including 18% of operational roles in MAG's survey and clearance teams in Lebanon, and 14% of managerial level/supervisory positions.<sup>68</sup> MAG considers a wide range of elements under diversity as part of its operations, taking into consideration the diverse community and religious background of the areas in which it works and trying to consider these aspects during recruitment, to ensure they are reflected in MAG's personnel.<sup>69</sup> In 2021, MAG promoted the first women as Field Operations Manager and the first national staff member (male) to Technical Field Manager. MAG was able to establish a Gender Diversity and Inclusion Steering Committee for the programme.<sup>70</sup>

NPA was implementing its organisational gender policy for Lebanon, based on recommendations from the GICHD. It is encouraging more women to apply for field positions through job postings and social media. NPA personnel participated in various trainings and fora on gender and diversity co-hosted by the GICHD and LMAC in 2021. As at June 2022, NPA reported that 22% of its employees are women, including 16% of employees in operational roles, and 50% of management personnel.<sup>71</sup> NPA disaggregates data by sex and age.<sup>72</sup>

Women, girls, boys, and men are said to be consulted during survey and community liaison activities.<sup>73</sup> According to LMAC, Lebanon's baseline of CMR contamination has been developed over many years. As per Lebanon's NMAS, non-technical survey teams consult with women, girls, boys, and men, including, where relevant, minority groups, in order to make sure all available information is included.<sup>74</sup>

56 Email from Rana Elias, Cooperation Programmes Coordinator, GICHD, 26 August 2020.

57 Email from Lt.-Col. Fadi Wazen, LMAC, 21 August 2019.

58 Emails from GICHD, 14 May 2021 and 22 April 2022.

59 Emails from Lt.-Col. Fadi Wazen, LMAC, 19 March and 22 July 2020.

60 LMAC, Lebanon Mine Action Strategy 2020–25, p. 8.

61 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

62 Ibid.

63 Ibid.

64 Emails from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020 and 15 March 2021; and LMAC, "Plan for the Implementation and Monitoring of the LMAP Strategy (2020–25)", p. 19.

65 LMAC, "Annual Report 2020", p. 37.

66 Email from Mouhamed Chour, DCA, 2 June 2022.

67 Emails from Emile Ollivier, NPA, 19 March 2019; David Willey, MAG, 7 March 2019; and Mahmoud Rahhal, POD, 8 March 2019.

68 Emails from Hiba Ghandour, MAG, 7 April and 3 June 2022.

69 Email from Sylvain Lefort, MAG, 27 May 2021.

70 Email from Hiba Ghandour, MAG, 7 April 2022.

71 Email from Valerie Warmington, NPA, 6 June 2022.

72 Email from Valerie Warmington, NPA, 28 May 2020.

73 Email from Lt.-Col. Fadi Wazen, LMAC, 5 April 2019.

74 Email from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020.

## INFORMATION MANAGEMENT AND REPORTING

In 2021, LMAC completed migrating from its former version of IMSMA (New Generation) to IMSMA Core, with support from the GICHD. The transition to IMSMA Core revealed errors in the province name in which some CMR tasks were registered, which were corrected.<sup>75</sup> As at April 2022, IMSMA Core was fully functional for all activities, but LMAC was still in a transition period for daily and weekly progress reporting. Any errors identified are corrected by LMAC's information management section and feedback from NGOs on the use of the different applications is used to help improve the entire system.<sup>76</sup>

LMAC hopes IMSMA Core will help facilitate the production of clearer reports that can be translated into dashboards for stakeholders, including donors, to monitor and follow.<sup>77</sup> Operators believe that IMSMA Core will enable better direct access to data, which will enhance understanding of broader CMR contamination and assist in identifying tasks where further non-technical and technical survey could be valuable.<sup>78</sup>

Disclaimed areas in the database are those for which the owner of the land has not granted permission for implementing agencies to conduct land release operations. In such cases, the landowner has to sign a personal disclaimer taking full responsibility for any kind of explosive remnant of war (ERW) hazard including CMR on the land. LMAC is trying

to end the disclaimers, the records of which were mainly taken before 2009. The majority of disclaimed areas are being cancelled as a result of re-survey currently in process, when the owners are found to be using the land. If clearance is required, survey and community liaison teams, along with local authorities, will encourage landowners to allow clearance in order to ensure the land is free from hazards and will provide assurance of measures that will be taken to prevent disruption to the use of the land.<sup>79</sup> According to its 2020 Article 4 deadline extension request, there were 116 disclaimed areas on the database, totalling 338,932m<sup>2</sup>.<sup>80</sup>

DCA has been using Tiramisu Information Management Tool (T-IMS) for the past three years.<sup>81</sup> MAG started using "Survey123" software in Lebanon in August 2021 after training and field testing the new data collection system.<sup>82</sup> In the second half of 2020, NPA introduced the ARC-GIS programme for data collection to its information management system, which has allowed more precise monitoring and evaluation of the programme's activities, efficiency, outputs, and reporting.<sup>83</sup>

The GICHD provides support to LMAC under its Information Management Capacity Development Framework and conducts IM training sessions and workshops.<sup>84</sup>

## PLANNING AND TASKING

In September 2011, LMAC adopted a strategic mine action plan for 2011–20.<sup>85</sup> The plan called for clearance of all CMR by 2016 and for completion of mine clearance outside the Blue Line by 2020. Both goals were dependent on capacity, but progress fell well short of planning targets, which were not met.

LMAC has developed a new National Mine Action Strategy for 2020–25, with support from the EU-funded UNDP project, in a participatory approach with national and international implementing agencies, mine action NGOs, UN agencies, and donors.<sup>86</sup> One objective of the new strategy is to complete clearance of all known cluster munition-contaminated areas by the end of 2025.<sup>87</sup> The new strategy was approved by the LMAA in June 2020. A mid-term and final external review are planned, as well as annual reporting on progress.<sup>88</sup>

LMAC has also elaborated a strategic implementation plan for 2020–25, based on the new strategy and in collaboration with implementing partners, to operationalise the new strategy with objectives, outputs, and indicators.<sup>89</sup> Results from the monitoring of the strategic implementation plan will be discussed at the operational level with implementing agencies at the TWG and a group of recommendations agreed and then presented at the biannual Mine Action Forum meetings.<sup>90</sup> The implementation plan will be revised annually by LMAC, the Institutional Support Programme (UNDP at present), and in consultation with humanitarian clearance operators.<sup>91</sup> LMAC planned to conduct a full review of the strategy and implementation plan in 2022, in cooperation with all stakeholders.<sup>92</sup> In addition, LMAC had an annual work

75 Article 7 Report (covering 2021), Form F; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

76 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

77 Email from Brig.-Gen. Ziad Nasr, LMAC, 27 April 2018; email from LMAC Operations Department, 28 June 2018; "Mine Action Forum: Action Points 1<sup>st</sup> Quarter Progress Report, March 2018"; and LMAC, "2018 Annual Report Lebanon Mine Action Centre", p. 14.

78 Email from Valerie Warmington, NPA, 28 May 2020.

79 Emails from Lt.-Col. Fadi Wazen, LMAC, 2 September 2020 and 15 June 2021.

80 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 36.

81 Email from Matthew Benson, Country Director, DCA, 4 June 2021.

82 Email from Hiba Chandour, MAG, 7 April 2022.

83 Email from Hala Amhaz, NPA, 15 March 2021.

84 Emails from GICHD, 14 May 2021 and 22 April 2022.

85 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011, p. 4.

86 LMAC, Lebanon Mine Action Strategy 2020–25; and LMAC, "Annual Report 2019", p. 7.

87 LMAC, Lebanon Mine Action Strategy 2020–25, p. 4.

88 Email from Lt.-Col. Fadi Wazen, LMAC, 22 July 2020; and LMAC, Lebanon Mine Action Strategy 2020–25, p. 4.

89 Emails from Lt.-Col. Fadi Wazen, LMAC, 22 July 2020 and 15 March 2021; and LMAC, "Plan for the Implementation and Monitoring of the LMAP Strategy (2020–25)", p. 3.

90 LMAC, "Plan for the Implementation and Monitoring of the LMAP Strategy (2020–25)", p. 21.

91 LMAC, "Annual Report 2020", p. 33.

92 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

plan for 2021 which was subsequently shown to have been slightly over-ambitious – something which its 2022 work plan has taken into consideration.<sup>93</sup>

Lebanon's request to extend its Article 4 deadline by five years to 1 May 2026 was considered by States Parties at the Part 1 of Second CCM Review Conference in November 2019. It was granted by a so-called "silence" procedure (meaning it is granted unless there are objections from any State Party), because Part 2 of the Review Conference, which had been scheduled to be held in a hybrid format in early 2021, was forced to be postponed due to COVID-19. Clearance operators were consulted by LMAC on the extension request, including in a workshop prior to the request being elaborated.<sup>94</sup>

LMAC aims to release 1.6km<sup>2</sup> of cluster munition-contaminated area each year, subject to the availability of funding.<sup>95</sup> The projected clearance rates in Lebanon's extension request were based on an average of the previous three years and while LMAC anticipates that application of the new, more efficient methodologies will increase this average, it also expects that any gain will be offset by the more difficult terrain of contaminated area that remains to be cleared.<sup>96</sup>

Table 2 outlines the predicted annual clearance output and capacity up to the end of 2025, as per its 2021 extension request. Planned output considers fade-out and the possible increase in the area to be cleared in the 10,000m<sup>2</sup> sites, using a factor of 2.5.<sup>97</sup> LMAC plans to conduct technical survey, where appropriate, but did not provide predictions in the extension request of the amount of area expected to be reduced through technical survey. In 2021, LMAC cleared just over 1km<sup>2</sup> (and reduced a further 0.14km<sup>2</sup> through technical survey, and cancelled 0.10km<sup>2</sup> through non-technical survey), less than the 2021 clearance target in the extension request.<sup>98</sup>

With regard to task prioritisation, LMAC conducted a study, whose results have informed a new national prioritisation system, based on three strategic categories: safety, economy, and treaty compliance. Each category contains subcategories which take operational considerations and impact into account.<sup>99</sup> LMAC has introduced new forms for non-technical survey for entry into IMSMA Core which now capture information needed for the new prioritisation matrix. The new IMSMA Core only became fully functional in 2021, therefore additional information is still required to be able to specify the priorities. As at April 2022, non-technical survey teams had collected information and updated the priorities for three districts and were working to complete reprioritisation in 2022. In the meantime, LMAC is using the district-level priorities for the equitable distribution of teams.<sup>100</sup>

**Table 2: Planned CMR clearance and capacity (2021-25)**<sup>101</sup>

Year	2021	2022	2023	2024	2025
Cleared (km <sup>2</sup> )	1.9	1.9	1.9	1.5	1.5
Teams	26	26	26	21	21

## LAND RELEASE SYSTEM

### STANDARDS AND LAND RELEASE EFFICIENCY

Lebanon developed its first NMAS in 2010.<sup>102</sup> In 2017, LMAC revised and harmonised national standards with IMAS, adding new modules not present in the original standards.<sup>103</sup> It has since continued to review and revise the NMAS to focus more on land release and evidence-based decision making, based on recommendations and analysis of operational data.

Most recently, LMAC has focused on strengthening evidence-based non-technical and technical survey to more accurately define the presence of an explosive threat (or confirm its absence).<sup>104</sup> A study on operational efficiency found that the NMAS generally places heavy limitations on how mine action operators are able to operate and that this drastically affects efficiency.<sup>105</sup> The

93 Ibid.

94 Emails from Sylvain Lefort, MAG, 3 April 2020; and Valerie Warmington, NPA, 28 May 2020.

95 Article 7 Report (covering 2020), Form F.

96 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, pp. 5 and 34.

97 Email from Lt.-Col. Fadi Wazen, LMAC, 19 March 2020.

98 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

99 Email from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021; and LMAC, "Annual Report 2020", p. 35.

100 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

101 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 37.

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

103 Emails from Brig.-Gen. Elie Nassif, LMAC, 7 July 2015; Dave Wiley, MAG, 27 April 2018 and 7 March 2019; and Craig McDiarmid, Programme Manager, NPA, 17 April 2018 and 19 March 2019; and Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 15.

104 Emails from Lt.-Col. Fadi Wazen, LMAC, 7 March 2019; Dave Wiley, MAG, 27 April 2018; and Craig McDiarmid, NPA, 17 April 2018; and Statement of Lebanon on Clearance, CCM Ninth Meeting of States Parties, Geneva, 2 September 2019.

105 Email from Hala Amhaz, NPA, 15 March 2021.

study called for a comprehensive and harmonised understanding of, and training on, land release across stakeholders, with an emphasis on the importance of evidence-based technical survey before clearance.<sup>106</sup> The study also recommended use of technical survey for fade-out in many instances, as the existing system stipulated clearance of areas that were most likely free of CMR. Other recommendations included allowing a more flexible marking system based on the NMAS; extending the time slot for demolitions; and improving and expanding the role of animal detection systems (ADS).<sup>107</sup>

Participants at the Mine Action Forum meeting on 22 January 2021 agreed on the need to strengthen the use of technical survey and analyse existing methods and tools to identify areas for potential improvement in operational efficiency.<sup>108</sup> LMAC subsequently reviewed and field tested the recommendations, and further updates to the NMAS on technical survey, battle area clearance (BAC), and minefield clearance were discussed in the TWG in 2021, and shared with operators for feedback. Training was subsequently conducted in April 2021 and the revised NMAS, which now includes technical survey of BAC tasks (including CMR tasks), were adopted by LMAC and released in May 2021.<sup>109</sup> NGO clearance operators updated their SOPs accordingly and commenced application of technical survey on BAC tasks.<sup>110</sup> LMAC is supporting the LAF ER to update its SOPs.<sup>111</sup>

LMAC updated its strategic implementation plan to reflect the increased focus on technical survey,<sup>112</sup> and it was agreed at the TWG meeting in December 2021 that more technical survey will be conducted by manual search teams. Further training was conducted in February 2022 to unify and enhance understanding of the concept and improve the application of technical survey in all hazardous areas, and specifically in CMR tasks.<sup>113</sup> This will significantly improve the operational efficiency of CMR operations in Lebanon. LMAC found that where technical survey for CMR tasks was applied in 2021, an average of 34% of land was reduced.<sup>114</sup>

Prior to the incorporation of technical survey into the revised NMAS released in May 2021, technical survey activities had not been a routine part of the toolbox for operators for the release of cluster munition tasks.<sup>115</sup>

In addition, following recommendations and discussions with implementing partners in early 2021 regarding reducing the amount of fade-out area requiring full clearance, the required fade-out distance was formally reduced from a 50-metre

radius to a 30-metre radius in high-density CMR tasks, and to a minimum 25-metre radius in low density tasks. LMAC and operators reported that this approach is now being operationally applied.<sup>116</sup>

MAG had also previously noted that excessive marking reduced productivity and increased costs. It presented and demonstrated to LMAC a new marking system for BAC tasks, which was positively received and subsequently approved by LMAC.<sup>117</sup>

Furthermore, LMAC planned to update the NMAS with respect to demolitions, following a discussion with operators which revealed that reducing the frequency of destruction of items found in cluster munition sites to one demolition day per week, rather than daily as suggested in the existing NMAS, would save an average of 2 hours per day required for the preparation and execution of demolitions. As a consequence, an additional 4–8 hours of work per team per week will be saved.<sup>118</sup>

With respect to non-technical survey, LMAC completed re-survey of all CMR tasks in November 2020, in order to have a clearer estimation of the remaining contamination for Article 4 planning.<sup>119</sup> LMAC plans to re-survey these tasks every three years and it also has a non-technical survey officer in its operations section, who is responsible for developing an annual plan and following up with all implementing agencies.<sup>120</sup> LMAC also agreed with the NGO operators the option for each to have a non-technical survey team to re-survey each new task prior to starting clearance.<sup>121</sup>

LMAC has said that with the introduction of IMSMA Core, the assigning of tasks for non-technical survey teams, and the reviewing of them by the implementing partners and by LMAC's non-technical survey officer, is faster, easier, and very effective. LMAC's non-technical survey officer meets with the non-technical survey teams from implementing agencies on a weekly basis, to discuss results and planning. LMAC also assigns a group of tasks to implementing agencies rather than one task, and the operators have the capability in IMSMA Core to see which tasks are close by to the area in which they are working and to ask to expand their mission directly while in the field. Priority levels in accordance with the new system are then determined based on their reports.<sup>122</sup>

With respect to environmental considerations, as noted above Lebanon has an NMAS (10.70) on Safety & Occupational Health – Protection of the Environment.<sup>123</sup>

106 LMAC, "Annual Report 2020", p. 36.

107 Ibid.

108 Ibid., p. 26.

109 Emails from Lt.-Col. Fadi Wazen, LMAC, 15 June 2021 and 29 March 2022; and Hiba Ghandour, MAG, 7 April 2022.

110 Emails from Hiba Ghandour, MAG, 7 April 2022; and Mouhamed Chour, DCA, 4 April 2022.

111 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

112 Email from Lt.-Col. Fadi Wazen, LMAC, 15 June 2021.

113 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

114 Article 7 Report (covering 2021), Form F; LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 32.

115 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016 and with Lt.-Col. Fadi Wazen, LMAC, Beirut, 16 April 2019; and emails from Lt.-Col. Fadi Wazen, LMAC, 15 June 2020; and Hala Amhaz, NPA, 15 March 2021.

116 Emails from Lt.-Col. Fadi Wazen, LMAC, 15 June 2021; Hiba Ghandour, MAG, 7 April 2022; and Mouhamed Chour, DCA, 4 April 2022.

117 Emails from Sylvain Lefort, MAG, 24 March and 27 May 2021; Hiba Ghandour, MAG, 7 April 2022; and Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

118 Article 7 Report (covering 2021), Form F; and presentation of Lebanon, CCM Intersessional meetings, Geneva, 16 May 2022; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 33.

119 Article 7 Report (covering 2019), Form F; and LMAC, "Annual Report 2019", p. 12.

120 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

121 Emails from Lt.-Col. Fadi Wazen, LMAC, 5 April 2019 and 19 March 2020.

122 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

123 Ibid.

## OPERATORS AND OPERATIONAL TOOLS

In 2021, CMR clearance was conducted by international operators DCA, MAG, and NPA; national operator POD; and the LAF Engineering Regiment.<sup>124</sup>

The LAF Engineering Regiment has two BAC teams. A further three Engineering Regiment companies conduct rapid response call-outs. In addition, each deployed Combat brigade company has its own combat engineering company which can also conduct rapid-response call-outs. The LAF has seven MDD teams for technical survey and for use as a secondary asset supporting clearance, but none of these is used for CMR. Through the Engineering Regiment, LMAC provides mechanical assistance to clearance operators that lack this capacity.<sup>125</sup>

In Lebanon, machines are mostly used as secondary assets to support clearance teams (e.g. for ground preparation, rubble removal, or for fade-out); in areas where manual clearance is difficult; and for technical survey and low threat hazardous

area (LTHA).<sup>126</sup> Often, however, the terrain is not suitable for machines. Unfortunately, the economic crisis in Lebanon has resulted in huge budget cuts in all government institutions and therefore the LAF teams are not able to conduct the same level of activities as before, including with respect to some of the mechanical assets. Clearance operators who are supported by mechanical assets from the LAF are providing fuel, maintenance, and spare parts for the machines.<sup>127</sup> In addition, new mechanical assets have been introduced by MAG, which will be used as primary assets.<sup>128</sup>

NPA worked with LMAC and the LAF to assess the capacities of the LAF EDDs for surveying and clearing CMR. As at April 2022, a proposal was being developed to build the capacity of the LAF EDD teams in order to provide LMAC with IMAS/ NMAS compliant EDD capacity for technical survey.<sup>129</sup> Dogs are not currently accredited for CMR clearance in Lebanon.<sup>130</sup>

**Table 3: NGO operational CMR clearance capacities deployed in 2021<sup>131</sup>**

Operator	Manual teams	Total clearance personnel*	Dogs and handlers	Machines**	Comments***
DCA	2	20	0	0	Combined mine and BAC capacity. Each team consists of 10 operational personnel (supervisor, team leader, and 8 searchers; in addition to a medic and driver). Reduction of one team compared to previous year.
MAG	5	50	0	12	LMAC reported MAG as having 7 manual CMR clearance teams, most likely splitting the large teams into subteams.
NPA	4	26	0	0	NPA had 9 clearance teams (totalling 56 deminers) up to the end of March 2021. This was then decreased to 8 teams (totalling 42 personnel) in April, and then further reduced to four teams totalling 26 personnel for the remainder of the year.
POD	4	N/K	N/K	N/K	Reduction of one team compared to previous year.
<b>Totals</b>	<b>15</b>	<b>&gt;96</b>	<b>0</b>	<b>12</b>	

\* Clearance personnel may also conduct technical survey. \*\* Excluding vegetation cutters and sifters. \*\*\* Clearance teams also work on technical survey tasks. N/K = not known.

<sup>124</sup> Ibid.

<sup>125</sup> Ibid.

<sup>126</sup> Ibid.

<sup>127</sup> Ibid.

<sup>128</sup> Ibid.

<sup>129</sup> Emails from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; and Southern Craib, NPA, 28 March 2022; Article 7 Report (covering 2021), Form F; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 32.

<sup>130</sup> Email from Southern Craib, NPA, 28 March 2022.

<sup>131</sup> LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 12; and emails from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; Hiba Ghandour, MAG, 7 April 2022; Southern Craib, NPA, 28 March 2022; and Mouhamed Chour, DCA, 2 June 2022.

DCA's clearance capacity remained constant in 2021 and was expected to continue to remain constant in 2022. It reported a decrease in the amount of required clearance as part of technical survey and a reduction in clearance fade-out. In addition, the types of tasks assigned to DCA in 2021 allowed it to deploy several types of detectors, including large-loop detectors.<sup>132</sup>

MAG's BAC capacity was reduced by two teams in 2021, due to the loss of UK Foreign, Commonwealth & Development Office (FCDO) funding. MAG expected its survey and clearance capacity to remain constant in 2022.<sup>133</sup>

Likewise, NPA saw a significant reduction in operational capacity in 2021 due to loss of funding, in particular from the EU and FCDO, which resulted in closure of NPA's sub-base and operations in north-east Lebanon from the end of April 2021.<sup>134</sup>

With respect to non-technical survey capacity (for both CMR and mines) in 2021, there were seven non-technical survey teams in total: two LMAC teams (totalling two personnel); two

DCA teams (totalling four personnel); one person deployed for Humanity and Inclusion (HI); one MAG team (totalling three personnel); and one NPA team (totalling three personnel up to the end of March and then one person thereafter).<sup>135</sup>

With respect to technical survey capacity, in 2021, DCA had two teams, totalling 14 personnel (conducting both technical survey and clearance).<sup>136</sup> NPA had one EDD-supported technical survey team comprising two EDDs and two dog handlers, and two manual technical surveyor personnel, which was stood down at the end of April due to lack of funding. NPA's other technical survey personnel are clearance personnel and included in Table 3.<sup>137</sup> MAG's clearance teams conduct technical survey and are included in Table 3.<sup>138</sup>

In August 2021, MAG introduced the Vallon VMH4 and VMX10 detectors in 2021, having previously conducted trials for these detectors. The deployment of the Vallon detectors on BAC tasks has resulted in increased productivity in CMR tasks.<sup>139</sup>

## LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE

### LAND RELEASE OUTPUTS IN 2021

A total of 1.2km<sup>2</sup> of CMR-contaminated area was released in 2021, of which more than 1km<sup>2</sup> was cleared, almost 0.14km<sup>2</sup> was reduced through technical survey, and more than 0.10km<sup>2</sup> was cancelled through non-technical survey.<sup>140</sup> A total of 2,418 submunitions were destroyed in 2021, including 315 submunitions during EOD spot tasks.

In addition, 0.22km<sup>2</sup> of previously unrecorded CMR contamination was added to the database in 2021.<sup>141</sup>

### SURVEY IN 2021

In 2021, 96,602m<sup>2</sup> was cancelled through non-technical survey (see Table 4) and a further 140,392m<sup>2</sup> was reduced through technical survey (see Table 5).<sup>142</sup>

Non-technical survey output in 2021 marked a decrease compared In 2020, when almost 286,443m<sup>2</sup> was cancelled through non-technical survey as part of efforts to complete re-survey of all CMR tasks. This decrease was expected, since non-technical survey of all CMR sites was completed in late 2020.<sup>143</sup>

Technical survey output in 2020 was an increase on the 35,209m<sup>2</sup> reduced through technical survey in 2020. This was the result of the positive development of technical survey being conducted by manual search teams in CMR tasks in 2021, and not only EDD teams.<sup>144</sup>

In 2021, 222,522m<sup>2</sup> of previously unrecorded CMR contamination was added to the database (117,045m<sup>2</sup> in the north-east region and 105,477m<sup>2</sup> in other regions).<sup>145</sup>

132 Email from Mouhamed Chour, DCA, 4 April 2022.

133 Email from Hiba Ghandour, MAG, 7 April 2022.

134 Email from Southern Craib, NPA, 28 March 2022.

135 LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 17; and emails from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; Hiba Ghandour, MAG, 7 April 2022; Southern Craib, NPA, 28 March 2022; and Mouhamed Chour, DCA, 4 April 2022.

136 Emails from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; and Mouhamed Chour, DCA, 4 April 2022.

137 Emails from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; Valerie Warmington, NPA, 2 June 2021; and Southern Craib, NPA, 28 March 2022.

138 Email from Hiba Ghandour, MAG, 7 April 2022.

139 Emails from Hiba Ghandour, MAG, 7 April 2022; and Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; Article 7 Report (covering 2021), Form F; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 32.

140 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

141 Ibid.

142 Ibid.

143 Email from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021.

144 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

145 LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 17; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022. DCA reported discovering 52,500m<sup>2</sup> of previously undiscovered CMR contamination through non-technical survey in Mount Lebanon in 2021 (email from Mouhamed Chour, DCA, 4 April 2022). Neither MAG nor NPA discovered any previously undiscovered CMR contamination in 2021.

**Table 4: Cancellation through non-technical survey in 2021<sup>146</sup>**

Province	Operator	Area cancelled (m <sup>2</sup> )
Bekaa	MAG	13,047
Mount Lebanon	DCA	80,767
Mount Lebanon	HI	2,788
<b>Total</b>		<b>96,602</b>

**Table 5: Reduction through technical survey in 2021<sup>147</sup>**

Province	Operator	Area reduced (m <sup>2</sup> )
Bekaa	MAG	20,854
Bekaa	NPA	19,712
Mount Lebanon	DCA	99,826
<b>Total</b>		<b>140,392</b>

## CLEARANCE IN 2021

Lebanon reported clearing more than 1km<sup>2</sup> of CMR-contaminated land in 2021 (see Tables 6 and 7), destroying in the process 2,418 submunitions.<sup>148</sup> This included 315 submunitions destroyed during rapid response/EOD spot tasks.<sup>149</sup>

Clearance during the year was a decrease on the 1.28km<sup>2</sup> of CMR-contaminated land cleared in 2020, due to a reduction in funding and clearance capacity in 2021.<sup>150</sup>

A further 315 submunitions were destroyed during spot tasks in 2021: 208 by the LAF and 107 by clearance operators.<sup>151</sup>

DCA's clearance output increased in 2021, compared to the previous year, due to a decrease in the number of lockdown days caused by COVID-19, protests, and roadblocks. DCA reported that all its CMR-clearance tasks in 2021 contained submunitions.<sup>152</sup>

**Table 6: CMR clearance by province in 2021<sup>153</sup>**

Province	Area cleared (m <sup>2</sup> )	Submunitions destroyed*
Bekaa	536,516	N/R
Mount Lebanon	217,650	N/R
South of Lebanon	247,425	N/R
<b>Totals</b>	<b>1,001,591</b>	<b>2,418</b>

\* Figures include items destroyed during technical survey and EOD spot tasks. N/R = Not reported

**Table 7: CMR clearance in 2021 by implementing agency<sup>154</sup>**

Operator	Area cleared (m <sup>2</sup> )	Submunitions destroyed*
DCA	196,805	567
LAF	20,845	47
MAG	521,384	55
NPA	113,342	954
POD	149,215	480
<b>Totals</b>	<b>1,001,591</b>	<b>*2,103</b>

\* Figures include items destroyed during technical survey but not the 315 submunitions destroyed during EOD spot tasks.

146 Ibid. LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 16. LMAC's Article 7 Report (covering 2021), Form F also reported that 96,602m<sup>2</sup> of CMR-contaminated area was cancelled through non-technical survey in 2021, however it had a slightly different split by geographical region compared to the data reported to Mine Action Review: 8,608m<sup>2</sup> cancelled in Bekaa; 4,439m<sup>2</sup> in Mount Lebanon; and 83,555m<sup>2</sup> in South of Lebanon. Furthermore, DCA and MAG reported slightly different cancellation data to Mine Action Review, compared to LMAC data. DCA reported that it cancelled 93,326m<sup>2</sup> in Mount Lebanon in 2021 (email from Mouhamed Chour, DCA, 4 April 2022). MAG reported that it cancelled a total of 746,000m<sup>2</sup> in 2021: 141,000m<sup>2</sup> in Baalbek; 428,000m<sup>2</sup> in Bekaa; 154,000m<sup>2</sup> in Mount Lebanon; and 23,000m<sup>2</sup> in Nabatiyeh (email from Hiba Ghandour, MAG, 7 April 2022). The differences between LMAC and MAG data may be due to LMAC registering cancellation upon approval of non-technical survey reports, and MAG reporting cancellation upon completion of the non-technical survey and submission of the report.

147 LMAC's Article 7 Report (covering 2021), Form F; LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 16; and emails from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; Mouhamed Chour, DCA, 4 April 2022; and Southern Craib, NPA, 28 March 2022. MAG's data was slightly different to that of LMAC's. MAG reported reducing 25,224m<sup>2</sup> in Beqaa and 5,419m<sup>2</sup> in Ras Baalbeck (email from Hiba Ghandour, MAG, 7 April 2022). The differences between LMAC and operator data may be due to LMAC only reporting land release after full completion and hand over.

148 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

149 Ibid.

150 Article 7 Report (covering 2020), Form F; and email from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021.

151 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022. DCA reported destroying two submunitions during spot tasks in 2021 (email from Mouhamed Chour, DCA, 4 April 2022). MAG reported destroying 3 submunitions during spot tasks in 2021 (email from Hiba Ghandour, MAG, 7 April 2022). NPA reported destroying 1 submunition during spot tasks in 2021 (email from Southern Craib, NPA, 28 March 2022).

152 Email from Mouhamed Chour, DCA, 4 April 2022.

153 Article 7 Report (covering 2021), Form F.

154 Ibid.; LMAC, "2021 Annual Report Lebanon Mine Action Centre", pp. 12 and 14; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022. Operator clearance data reported to Mine Action Review differed from LMAC's data in some instances. DCA reported clearing 181,530m<sup>2</sup> of CMR-contaminated area with the destruction of 526 submunitions (email from Mouhamed Chour, DCA, 4 April 2022). MAG reported clearing 509,014m<sup>2</sup> of cluster munition-contaminated area with the destruction of 59 submunitions (email from Hiba Ghandour, MAG, 7 April 2022). NPA reported clearing 109,734m<sup>2</sup> with the destruction of 954 submunitions (email from Southern Craib, NPA, 28 March 2022). The difference between LMAC and NPA data may have been because LMAC included a small amount of confirmation clearance (ground that has already been cleared), which NPA did not include.

While the area MAG cleared in 2021 was a decrease on the previous year, in part because of increased area released through technical survey rather than clearance thanks to the changes to the NMAS, but also because MAG's CMR teams in the north-east were redeployed to minefield and improvised explosive device (IED) clearance tasks. In addition, MAG lost FCDO funding for operations in the south and EU funding in the north-east, also impacting BAC outputs.<sup>155</sup> MAG reported that 26 CMR tasks totalling 287,757m<sup>2</sup>, proved to contain no cluster munition remnants.<sup>156</sup> These tasks had reportedly been created due to items found and destroyed by the LAF or else prior to the approval of the use of technical survey in BAC tasks.<sup>157</sup>

The amount of cluster munition-contaminated area cleared by NPA in 2021 was a decrease on the previous year, due to a reduction in funding and loss of four teams in the north-east of Lebanon and one in the south from the beginning of May 2021. NPA reported clearing three tasks in 2021 which did not contain CMR: with two completed tasks which totalled 13,400m<sup>2</sup>, and a third task which was suspended when NPA closed its operations in north-east Lebanon. A further two tasks which did not contain submunitions were reduced through technical survey.<sup>158</sup> The tasks in the North were completed or suspended prior to the approval of the use of technical survey in BAC tasks. The task in the south in which no submunitions were found was a task that was previously

disclaimed (i.e. the landowner had refused clearance). Items had been found in both adjacent tasks, and the task size was small, so NPA elected to conduct clearance.<sup>159</sup>

In 2020, LMAC developed new guidelines and safety measures with respect to COVID-19, which allowed implementing partners to remain fully operational.<sup>160</sup> The SOP for safe behaviour continued to be applied and monitored by QA officers in 2021, but COVID-19 cases continued to result in the need for self-isolate, reducing operational output.<sup>161</sup> In 2021, operations were stood down for four weeks during the countrywide COVID-19 lockdown in January–February 2021.<sup>162</sup> DCA said COVID-19 impacted its land release operations due to operations personnel being off work sick or in quarantine awaiting negative test results.<sup>163</sup> According to MAG, there were 86 positive cases of COVID-19 among its deminers during 2021, resulting in the loss of 272 working days.<sup>164</sup> NPA reported 242 operational days lost due to personnel testing positive to COVID-19 or precautionary isolation prior to testing following direct exposure.<sup>165</sup>

As in the previous year, roadblocks due to civil unrest prevented or delayed DCA teams from getting to their site on some instances in 2021, although the disruption was less than in 2020.<sup>166</sup> MAG reported that the political unrest did not, however, affect its CMR operations in 2021.<sup>167</sup>

#### ARTICLE 4 DEADLINE AND COMPLIANCE



<sup>155</sup> Email from Hiba Ghandour, MAG, 7 April 2022.

<sup>156</sup> Ibid.

<sup>157</sup> Email from Hiba Ghandour, MAG, 3 June 2022.

<sup>158</sup> Email from Southern Craib, NPA, 28 March 2022.

<sup>159</sup> Email from Southern Craib, NPA, 20 May 2022.

<sup>160</sup> Emails from Lt.-Col. Fadi Wazen, LMAC, 22 July 2022; Sylvain Lefort, MAG, 23 June 2020; and Brig.-Gen. (ret.) Badwi El Sakkal, LAMINDA, 22 June 2020.

<sup>161</sup> Emails from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021 and 29 March 2022.

<sup>162</sup> Email from Southern Craib, NPA, 28 March 2022.

<sup>163</sup> Email from Mouhamed Chour, DCA, 4 April 2022.

<sup>164</sup> Email from Hiba Ghandour, MAG, 7 April 2022.

<sup>165</sup> Email from Southern Craib, NPA, 28 March 2022.

<sup>166</sup> Email from Mouhamed Chour, DCA, 4 April 2022.

<sup>167</sup> Email from Hiba Ghandour, MAG, 7 April 2022.

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 2026, having been granted a five-year extension in 2021 (the maximum that can be requested per extension request under the CCM). It looks highly unlikely LMAC will be able to meet its extended deadline based on current CMR capacity and funding. There is potential for improvements in operational efficiency through increased use of technical survey, now permitted in the NMAS, and which, if routinely applied, will help increase annual land release output. However, the CMR funding and clearance capacity planned for in the extension request decreased significantly in 2021, which puts achievement of LMAC's clearance targets in serious doubt. At the CCM Intersessional Meetings in May 2022 and in its annual report, LMAC has said that based on the average land release over the last two years, it would currently need an additional year on top of its current Article 4 deadline in which to complete clearance.<sup>168</sup>

Clearance of CMR-contaminated land had previously been expected to be completed by the end of 2016, in accordance with the 2011–20 national strategy.<sup>169</sup> However, meeting this target was contingent on securing the number of BAC teams needed, which did not happen, and progress against the strategy fell well behind schedule.<sup>170</sup> Progress was also hindered by the historical lack of non-technical survey and technical survey, which often resulted in inefficient land release and unnecessary clearance of uncontaminated land.

LMAC still aims to complete clearance by the end of 2025, in line with objective 4 of Lebanon's Mine Action Strategy 2020–25.<sup>171</sup> In its Article 4 deadline extension request, Lebanon used the same average clearance rates as in the three previous years, despite the fact that new methodologies (most notably technical survey and new detectors) should increase this average. This is intended to compensate for the difficult terrain in many of the remaining area, which will slow down the rate of clearance.<sup>172</sup>

Lebanon's annual clearance totals are however, contingent on LMAC securing the same level of international funding it had received over the three years preceding its extension request submission and on the Government of Lebanon contributing the envisaged US\$3 million of annual national clearance funding for the first three years of the extension period. The extension request also assumes that there will be no additional contamination; that the political and security situation in Lebanon will remain stable; and that operations will not be affected by that or other factors.<sup>173</sup> With national capacity (LAF teams) only, LMAC had calculated in its 2021 extension request that it would take until 2048 to reach Article 4 completion.<sup>174</sup>

However, due to continued political and economic unrest, as well as the COVID-19 pandemic, Lebanon did not contribute any national funding to CMR clearance in either 2020 or 2021. Furthermore, the FCDO ceased its mine action funding to Lebanon at the end of 2020, which represents a US\$2 million (29%) drop in total funding.<sup>175</sup> These funding shortfalls significantly affect LMAC's ability to meet the annual targets, and its 2025 deadline. Inflation has meant that the salaries of LMAC staff have dropped to almost 5% of their original purchasing power, significantly impacting on morale.<sup>176</sup>

As mentioned, the strengthening of Lebanon's NMAS in 2021 to allow for routine use of technical survey for CMR tasks, will help improve operational efficiency, increase productivity, and compensate for some of the funding/capacity shortfalls.<sup>177</sup> LMAC has said that, where possible, technical survey will be applied more systematically in 2022 and that it expected to increase the area reduced through technical survey over the course of the year.<sup>178</sup>

In light of the improvements to the CMR land release methodology in 2021, funding now represents the most significant challenge to Lebanon's Article 4 implementation. In order to meet its 2026 clearance deadline, Lebanon has recognised it must maintain international interest in CMR clearance and secure necessary funds as stated in the extension request plan (US\$6.6 million per year). LMAC has said that it requires additional funds of US\$2 million–3 million per year for the next two years, to compensate for the 22% drop in international funding for CMR in 2021 and the inability of the Government of Lebanon at present to provide financial support for CMR clearance operations due to the ongoing economic crisis.<sup>179</sup>

In addition to the funding challenges, LMAC also lists other challenges in Article 4 implementation, including: discovery of new unreported contaminated areas, and the impact of working in difficult terrains which might slow down clearance at some sites.<sup>180</sup> The economic and political crises have led to hyper-inflation, currency collapse, and problems with already strict and reducing budgets. This has resulted in supplies being more expensive; fuel less readily available; and protests and roadblocks hampering the security situation. The impact of this is particularly challenging in respect to funding from some donors which do not fund the full cost of operations.<sup>181</sup>

Lebanon has cleared approximately 6.1km<sup>2</sup> of cluster munition-contaminated area in the last five years (see Table 8). According to LMAC, results until the beginning of 2022 showed that Lebanon was on track to meet its Article 4 extension request plan targets. However, the drop in funds in 2021 and the corresponding drop in the number of CMR survey and

168 Presentation of Lebanon, CCM Intersessional meetings, Geneva, 16 May 2022; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 31.

169 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.

170 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011.

171 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 36; and LMAC, Lebanon Mine Action Strategy 2020–25, p. 4.

172 Revised 2020 Article 4 deadline Extension Request, 25 February 2020, p. 5.

173 *Ibid.*, pp. 28 and 36.

174 2020 Article 4 deadline Extension Request, answers to analysis group, 6 February 2020.

175 Article 7 Report (covering 2020), Form I.

176 LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 34.

177 Article 7 Report (covering 2021), Form I.

178 Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", p. 15.

179 Article 7 Report (covering 2021), Form F; and email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

180 Article 7 Report (covering 2021), Form F.

181 Email from Matthew Benson, DCA, 24 May 2021.

clearance teams will reduce the amount of CMR-contaminated area released. LMAC estimates that if the CMR funding remains at current levels it will need one additional year to achieve completion – something it also recognises as a possibility in its Article 7 report.<sup>182</sup> LMAC has said that it will work hard to try to convince donors to stay committed to the strategy and its implementation plan, in order to avoid the need for an additional Article 4 extension request.<sup>183</sup>

An additional challenge in Lebanon's remaining Article 4 implementation is posed by "difficult terrain" such as deep and very steep canyons and cliffs where survey and clearance are almost impossible to conduct using current methods and assets and represent additional risk to searchers and medical evacuation. LMAC recognises that suspected or confirmed cluster munition-contaminated areas on difficult terrain need to be released in order to comply with its Article 4 obligations.<sup>184</sup>

**Table 8: Five-year summary of CMR clearance**

Year	Area cleared (km <sup>2</sup> )
2021	1.00
2020	1.28
2019	1.26
2018	1.15
2017	1.41
<b>Total</b>	<b>6.10</b>

In partnership with the GICHD, a joint study was launched in November 2020 to find a solution on how to address this terrain and satisfy the requirements of the CCM. Following delays due to the COVID-19 pandemic, a GICHD advisor visited Lebanon for a week in 2021, during which 23 CMR sites (totalling 247,619m<sup>2</sup>) were visited in order to better assess the sites, the conditions, and determine the best solution. The study was expected to be completed in 2022 and will provide recommendations to help complete the release of these sites.<sup>185</sup> LMAC planned to jointly develop an SOP in 2022 to tackle these areas.<sup>186</sup>

## PLANNING FOR MANAGEMENT OF RESIDUAL CONTAMINATION

According to LMAC, a tolerable level of residual risk will remain, as areas not previously identified as containing CMR may be found in the future. LMAC appreciates the importance of the need to start the process to build a sustainable national mine action capacity that can deal with the residual contamination found after fulfilment of Article 4.

LMAC plans to ensure a smooth transition to a fully sustainable and nationally owned, managed, and executed humanitarian mine action programme. With regard to CMR, between 2021 and 2025, Lebanon plans to: determine an end state and elaborate an exit strategy; establish a sustainable structure capable of addressing remaining contamination (including the residual challenge); develop a transition plan; obtain national funding for the sustainable structures identified; establish new structures (if required); and capacity build the new structures, with support from international actors. LMAC has emphasised the importance of the exit strategy being viewed as a living document, which will need to be regularly discussed and updated, according to the situational context and evolution of the programme.<sup>187</sup> LMAC presented a draft exit strategy to all stakeholders including donors at the last Mine Action Forum meeting and will organise a workshop in 2022 for all stakeholders to finalise this strategy.<sup>188</sup>

<sup>182</sup> Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022; and Article 7 Report (covering 2021), Form F.

<sup>183</sup> Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.

<sup>184</sup> 2020 Article 4 deadline Extension Request, answers to analysis group, 6 February 2020; revised 2020 Article 4 deadline Extension Request, 25 February 2020, pp. 40–42; and LMAC, "2021 Annual Report Lebanon Mine Action Centre", pp. 30 and 33.

<sup>185</sup> Emails from Lt.-Col. Fadi Wazen, LMAC, 15 March 2021, and 29 March and 7 July 2022; and GICHD, 14 May 2021; and Article 7 Report (covering 2021), Form F; and presentation of Lebanon, CCM Intersessional meetings, Geneva, 16 May 2022.

<sup>186</sup> Ibid.

<sup>187</sup> LMAC, "Annual Report 2020", p. 31.

<sup>188</sup> Email from Lt.-Col. Fadi Wazen, LMAC, 29 March 2022.