

# LEBANON

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

PROGRAMME PERFORMANCE	2016	2015
Problem understood	5	5
Target date for completion of cluster munition clearance	6	6
Targeted clearance	5	5
Efficient clearance	5	5
National funding of programme	7	7
Timely clearance	5	5
Land release system in place	4	4
National mine action standards	4	4
Reporting on progress	7	7
Improving performance	6	6
<b>PERFORMANCE SCORE: AVERAGE</b>	<b>5.4</b>	<b>5.4</b>

## PERFORMANCE COMMENTARY

Lebanon's performance in survey and clearance of areas affected by cluster munition remnants (CMR) in 2016 was mixed. While a more accurate baseline of CMR contamination is still lacking, the Lebanese Mine Action Centre (LMAC) has been consulting operators on the revision of the national mine action standards (NMAS) that could enhance operational efficiency. It is hoped that a strengthened land release methodology will be embodied in the revised NMAS, based on sound risk management principles, and then applied systematically in CMR tasks on the ground.

## RECOMMENDATIONS FOR ACTION

- LMAC should determine more accurately the baseline contamination from CMR.
- LMAC should improve its land release system to accord with international standards. This includes using survey and clearance techniques that are appropriate for CMR contamination, rather than landmines. Improvements should be reflected in the revised NMAS, which should include standards specific to CMR contamination, and all mine action stakeholders should be consulted before their finalisation.
- Newly discovered cluster strikes should not automatically be recorded in the LMAC database as covering 33,000m<sup>2</sup>. Instead, a more accurate assessment of the size of each contaminated area should be determined through non-technical and technical survey.
- Technical survey should be preferred to full clearance when moving from the perimeter of the task area to the first CMR evidence point.
- LMAC should ensure effective quality assurance (QA) and cross-checking of information entered into the Information Management System for Mine Action (IMSMA) database, to ensure CMR contamination and land release data are being assessed, recorded, extracted accurately, and then analysed.
- LMAC should also aim to engage with the clearance operators with regard to information management, and should provide regular IMSMA reports to operators, as a means to help cross-checking and confirm data integrity.
- Lebanon should mobilise the necessary resources to finish CMR clearance as soon as possible.

## CONTAMINATION

Lebanon reported in its latest CCM Article 7 transparency report (for 2016), that CMR contamination at the end of 2016 stood at almost 20km<sup>2</sup>.<sup>1</sup> At the end of March 2017, Lebanon had 833 areas confirmed to contain CMR, totalling almost 18.2km<sup>2</sup>, as reported to Mine Action Review. Five regions still contain CMR contamination, as set out in Table 1.<sup>2</sup> This compares to 773 areas confirmed or suspected to contain CMR, totalling more than 16.3km<sup>2</sup>, at the end of 2015.<sup>3</sup>

A further 79 “dangerous areas” totalling 5.6km<sup>2</sup> are suspected to contain CMR contamination.<sup>4</sup> There is no comparable figure for 2015, as previously LMAC did not disaggregate areas suspected to contain CMR from areas suspected to contain mine contamination. The designated

“dangerous areas” are mainly the result of accidents having been reported to LMAC by the local community, and for which further investigation/survey is required in order to confirm the type and extent of suspected contamination.<sup>5</sup>

The significant increase in total CMR contamination since the end of 2015 is partly explained by previously unrecorded contamination being discovered by non-technical survey.<sup>6</sup> However, the survey numbers reported do not fully explain the increase in reported baseline contamination. This is because many of the CMR clearance tasks conducted in 2016 needed to clear a larger area than the one recorded in the database, thereby impacting the baseline contamination area.<sup>7</sup>

**Table 1: CMR contamination (as at end March 2017)<sup>8</sup>**

Province	Areas	Area (m <sup>2</sup> )
Beqaa	69	2,186,501
Jabal Loubnan (Mount Lebanon)	29	957,000
Janoub (South)	250	5,645,314
Nabatiyeh	483	9,347,835
North	2	43,000
<b>Totals</b>	<b>833</b>	<b>18,179,650</b>

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>9</sup> In addition, some CMR still remain from earlier conflicts with Israel in 1978 and 1982.<sup>10</sup>

After the 2006 war, contamination was initially estimated to cover 55km<sup>2</sup>. This estimate was later increased, based on surveys conducted, to almost 58km<sup>2</sup> across 1,484 areas, over the three regions of Beqaa, Mount Lebanon, and south Lebanon.<sup>11</sup> In 2016, LMAC claimed original contamination had been more than 60km<sup>2</sup>, with almost 44km<sup>2</sup> having been cleared to date, leaving 16.3km<sup>2</sup> of contamination to release at the beginning of 2016.<sup>12</sup>

The baseline estimate of overall contamination continues to be revised (and indeed significantly increased), in part because previously unrecorded contamination is still being discovered, but also because the 33,000m<sup>2</sup> (per strike) area automatically assigned to CMR tasks by LMAC has been proven in many instances to underestimate the actual task size. For example, based on empirical field data, Mines Advisory Group (MAG) has calculated the average CMR clearance task to be approximately 60,000m<sup>2</sup>,<sup>13</sup> and Norwegian People's Aid (NPA) had previously calculated it to be 65,000m<sup>2</sup> per task.<sup>14</sup> According to LMAC, the 33,000m<sup>2</sup> is the estimated average cluster munition strike footprint, and sometimes many strikes are located within the same area.<sup>15</sup>

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

The United Nations (UN) Mine Action Coordination Centre – south Lebanon (MACC-SL) assumed the role of coordinating CMR clearance in 2007, in cooperation with the National Demining Office (now known as LMAC). It contracted out CMR clearance to non-governmental organisations (NGOs), commercial operators, and government groups.<sup>16</sup> However, not all clearance undertaken in the years immediately following 2006 was in accordance with the International Mine Action Standards (IMAS). Some Israeli bombing data has been provided – most recently through the UN Interim Force in Lebanon (UNIFIL) – but has proved to be very inaccurate.<sup>17</sup>

Additional CMR may also exist in the Blue Line minefields in the far south of Lebanon, along the border with Israel.<sup>18</sup> Since late 2015, permission has been granted for clearance to be undertaken of some of the Blue Line minefields. Clearance of the Blue Line minefields commenced in November 2016,<sup>19</sup> and as it proceeds the extent to which these mined areas are also contaminated with CMR will be revealed.<sup>20</sup>

MAG undertook a pre-clearance non-technical survey of 443 CMR clearance tasks between September 2013 and April 2014, with a view to confirming areas of CMR as accurately as possible, informing LMAC's operational planning and prioritisation, and identifying the socio-economic impact of remaining clearance.<sup>21</sup> A national NGO, Peace Generation Organization for Demining (POD), supported MAG in carrying out the survey.<sup>22</sup> The survey resulted in MAG recommending 96 tasks for cancellation, covering an estimated 2.8km<sup>2</sup>.<sup>23</sup> The remaining 347 tasks surveyed by MAG were recommended for clearance.<sup>24</sup>

In September 2014, at the Fifth Meeting of States Parties to the CCM, Lebanon announced it was reviewing MAG's recommendations for task cancellation and that it hoped to use the survey findings to focus clearance on areas with strong evidence of contamination.<sup>25</sup> Lebanon further stated that, as a result of the survey, almost 1.5km<sup>2</sup> out of 14.5km<sup>2</sup> of land had already been released and handed over to the owners.<sup>26</sup>

After reviewing the 96 tasks recommended by MAG for cancellation, LMAC decided to cancel 51, totalling an area of 1.7km<sup>2</sup>.<sup>27</sup> LMAC decided not to cancel the remaining 45 tasks recommended for cancellation, as following a review it believed these areas still contained CMR. These tasks therefore remain in the database, and will be tasked for clearance, depending on their assigned priority.<sup>28</sup> While LMAC has chosen not to cancel these tasks, information from MAG's survey will be used to inform pre-clearance plans.<sup>29</sup>

Furthermore, MAG's pre-clearance survey estimated contaminated areas ranging from between 10,000m<sup>2</sup> to 50,000m<sup>2</sup> in size, and it is believed that LMAC is planning to review this data, which could help to more accurately record the baseline CMR contamination in the surveyed areas, and also assist in the tasking for clearance of more accurately delineated areas.<sup>30</sup>

Previously unrecorded CMR contamination continues to be discovered, predominantly in south Lebanon, and during 2016, 17 CMR-contaminated areas were identified, totalling 469,000m<sup>2</sup> (of which only 8 areas, totalling 264,000m<sup>2</sup>, had been entered into IMSMA and reported in Lebanon's Article 7 report for 2016).<sup>31</sup> Contaminated areas discovered in the south are automatically recorded in the database as covering 33,000m<sup>2</sup>,<sup>32</sup> even though the actual contaminated area may be significantly larger or smaller. The extent of CMR contamination depends on a variety of factors, including the type of cluster munition used and whether it was ground-launched or air-dropped, as well as the terrain onto which it lands.<sup>33</sup> Some areas contain unexploded submunitions resulting from both ground-launched and air-dropped cluster munitions, which can further complicate the picture.<sup>34</sup>

LMAC has also recorded historical CMR tasks in south Lebanon as 33,000m<sup>2</sup> in size. In the Mount Lebanon region, though, cluster strikes have been, and continue to be, recorded as 10,000m<sup>2</sup> per task, as the 1982 cluster munition strikes were not as intense as the 2006 strikes in the south.<sup>35</sup> However, reported CMR-contamination data for Mount Lebanon as at 31 March 2017 (see Table 1), suggests that CMR areas in this region are in fact recorded as 33,000m<sup>2</sup>.

At present, clearance tasks assigned to operators by LMAC are deemed to already reflect survey data, and LMAC does not formally permit operators to conduct additional survey other than pre-clearance assessments. As at April 2017, clearance operators had not been permitted to conduct technical survey on BAC tasks.<sup>36</sup> That said, in a positive development in 2016, MAG and Norwegian People's Aid (NPA) were permitted to conduct pre-clearance non-technical survey on some CMR tasks.<sup>37</sup>

Furthermore, in November 2016 a workshop on implementation of CCM Article 4, was held in Lebanon, convened by Norway and the Netherlands in their capacity as Convention Co-ordinators on clearance. The workshop, which was facilitated by the Geneva International Centre for Humanitarian Demining (GICHD), brought together the LMAC and the Regional Mine Action Centre (RMAC, a body that is part of LMAC), with national and international clearance operators, donors, and the UN Development Programme (UNDP). The main topics of discussion were CMR land release methodology and whether operational efficiencies can be increased through better use of non-technical and technical survey; and how a more accurate CMR baseline can be determined.<sup>38</sup>

Lebanon has set three levels of priority regarding mine action. The first is to address infrastructure to allow those displaced by the 2006 conflict to return home; the second is to release agricultural land; and the third

is to release land for activities other than agriculture. The first priority goal was met in 2009, and clearance of agricultural areas and development areas are now the priority targets.<sup>39</sup> Indeed, CMR continue to affect the agricultural community, particularly in Beqaa and south Lebanon. MAG's pre-clearance survey of 347 tasks recommended for clearance revealed that in four-fifths, contamination had made access to resources unsafe or had blocked access altogether.<sup>40</sup> Nonetheless, many landowners and workers still enter CMR-contaminated areas, declaring they have no alternative.<sup>41</sup>

LMAC has reported that around 85% of cleared land has been used for socio-economic purposes, such as by farmers to generate a source of income.<sup>42</sup> Post-clearance surveys concerning cluster strike areas, carried out by LMAC in collaboration with clearance operators, have revealed that, of the cleared land which was subsequently exploited, 78% was used for agriculture, 15% for pasture, and the remainder for residential and infrastructure development.<sup>43</sup> NPA has reported that its impact assessments, which are conducted three to six months after the release of land from the threat of CMR, indicate that cleared land is mainly used for agriculture.<sup>44</sup> LMAC aims to enhance monitoring and recording of post-clearance activities and of how land release affects livelihoods and socio-economic development.<sup>45</sup> Comprehensive implementation of pre- and post-impact surveys by operators, using an agreed format, could support the achievement of this aim.<sup>46</sup>

In 2016, one adult was injured by a submunition detonation.<sup>47</sup>

## Other Explosive Remnants of War and Landmines

Lebanon is also contaminated by other unexploded ordnance (UXO), booby-traps, and anti-personnel mines.

## PROGRAMME MANAGEMENT

Established in 1998 by the Council of Ministers, the Lebanon Mine Action Authority (LMAA) is the responsibility of the Ministry of Defence and is chaired by the Minister of Defence himself. The LMAA has overall responsibility for Lebanon's mine action programme. In 2007, a national mine action policy outlined the structure, roles, and responsibilities within the programme, and LMAC was tasked to execute and coordinate the programme on behalf of the LMAA.<sup>48</sup>

LMAC, part of the LAF,<sup>49</sup> is based in Beirut. Since 2009, the RMAC, based in Nabatiye, which is a part of LMAC, has overseen operations in south Lebanon and western Beqaa, under LMAC supervision.<sup>50</sup> The Director of LMAC is typically rotated every couple of years, and in recent years there has been a high turnover of the colonels who have run the RMAC. Both factors have the potential to negatively affect the management of the two mine action centres. A new director of LMAC started in early 2017, while a new director of RMAC started in May.<sup>51</sup>

There is said to be generally good coordination and collaboration between LMAC/RMAC and clearance operators. In south Lebanon, coordination meetings between RMAC and operators take place at least monthly, during which clearance operations, quality assurance (QA), and other operational issues are openly discussed.<sup>52</sup> LMAC also manages risk education and victim assistance.<sup>53</sup>

A donor support group meeting is convened annually, which brings together donors, operators, and the national authorities.<sup>54</sup> UNDP personnel, funded by the European Union (EU), are also seconded to LMAC and RMAC, providing support towards capacity building, including transparency reporting, strategic reviews, and IMSMA database entry, community liaison officers, and QA. UNDP does not provide technical assistance on operational decisions.<sup>55</sup>

In 2015, the Ministry of Defence, represented by LMAC, signed a Memorandum of Understanding with the GICHD to manage and coordinate the Arab Regional Cooperation Programme (formerly known as the Arabic-Language Outreach Programme) for Mine Action.<sup>56</sup> Planning, management, and coordination of the Programme were due to be handed over to LMAC at the beginning of 2017,<sup>57</sup> and LMAC, through the Regional School for Humanitarian Demining in Lebanon (RSHDL), will serve as a regional centre for the Programme's activities.<sup>58</sup> As at April 2017, the buildings of the RSHDL in Hammana were being renovated, with completion due by the end of July 2017. Lebanon plans to offer explosive ordnance disposal (EOD) courses, among others, at the RSHDL.<sup>59</sup>

## Strategic Planning

In September 2011, LMAC adopted a strategic mine action plan for 2011–20.<sup>60</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 are dependent on capacity, but progress has fallen well short of planning targets.<sup>61</sup>

A first mid-term review to the strategy was conducted in January–March 2014 to assess progress towards the 2013 milestone, and to adjust the 2016 and 2020 milestones accordingly. The review revealed that in 2011–13 CMR clearance was slow, suffered from underfunding (with consequently fewer operating teams), while previously unreported contaminated areas were also identified.<sup>62</sup> A second mid-term assessment was being undertaken in 2016, which was due to be completed in early 2017.<sup>63</sup> The assessment had not yet been completed as at June 2017, but LMAC expected it to be finished "very soon".<sup>64</sup>

In 2017, LMAC planned to focus CMR survey on dangerous areas where the presence of CMR is most expected; and to conduct clearance across Lebanon, including at the Blue Line.<sup>65</sup>

## Standards

Lebanon developed its first set of NMAS in 2010.<sup>66</sup> Over the last two years LMAC has been working with UNDP and other partners, under a project funded by the European Union, to revise the standards.<sup>67</sup> The revision is taking place with a view to enhancing efficiency while respecting IMAS, as well as to "add new modules that were not present in our NMAS version one, as well as relevant modules that are not present in the IMAS such as mine victim assistance".<sup>68</sup> Once finalised, the revised NMAS will then need to be officially approved by the Ministry of Defence.<sup>69</sup>

Humanitarian demining operators who were consulted submitted recommendations for the NMAS revision.<sup>70</sup> In March 2017, LMAC distributed a revised draft NMAS to all partners, including clearance operators, for comment.<sup>71</sup> LMAC's consultative approach regarding the revision of the NMAS is welcome, and it is hoped that key recommendations concerning land release for both CMR and landmines are reflected in the final version. According to LMAC, the revised NMAS will include separate sections for CMR and landmine survey; and will permit and facilitate the reporting of land release in accordance with IMAS.<sup>72</sup>

At present, clearance operators do have an opportunity to discuss with LMAC/RMAC specific land release considerations for assigned clearance tasks that arise during the pre-clearance assessment stage of operations. This may result in the refining of the task size or approved land release specifications.<sup>73</sup> However, this approach is contingent on the decision of individual LMAC/RMAC officials and the process would benefit from a more systematic approach using objective land release principles, including prioritising use of non-technical and technical survey. This could usefully be set out in the revised NMAS.

It should be noted that in Lebanon it is not permitted for anyone other than a BAC team with personnel wearing personal protective equipment (PPE) to enter the area of a cluster strike footprint, largely due to the presence and threat posed by the potential explosive volatility of M-series submunitions. This, combined with the lack of flexibility for clearance operators to conduct survey on assigned tasks prior to clearance, means that operators sometimes find themselves clearing access lanes from perimeters of tasks, at distances which are sometimes a long way out from the actual CMR.

Following November 2016's CCM Article 4 workshop, in a positive development, LMAC clarified that clearance operators could cut lanes directly into the confirmed hazardous area (CHA) and not from the Universal Transverse Mercator (UTM)/coordinates from the original non-technical survey, which in some cases is as far as 300 metres from the contaminated area.<sup>74</sup> As at April 2017, LMAC was continuing discussions on non-technical and technical survey with the clearance operators, prior to making necessary revisions to the NMAS.<sup>75</sup>

## Operators

In 2016, CMR clearance was conducted by international operators DanChurchAid (DCA), MAG, and NPA; national operator POD; and the Engineering Regiment of the LAF.<sup>76</sup> Capacity fluctuated throughout 2016, but the total collective CMR survey and clearance capacity in Lebanon as at December 2016 comprised 22 BAC teams and 2 non-technical survey teams.<sup>77</sup>

The capacity of the LAF Engineering Regiment in 2016 comprised two battle area clearance (BAC) teams,<sup>78</sup> and LMAC deployed two non-technical survey teams.<sup>79</sup>

MAG deployed seven BAC clearance teams in 2016,<sup>80</sup> up from the five deployed in 2015. MAG is the only international operator in Lebanon with mechanical assets to support manual clearance operations, and these assets can be used by other organisations upon request of LMAC.<sup>81</sup>

NPA operated five BAC teams from February 2016 and four from June 2016, a reduced capacity compared to 2015, due to reduced funding.<sup>82</sup> NPA expected to maintain four BAC teams in 2017.<sup>83</sup>

DCA deployed three BAC teams in 2016, and one additional team in partnership with LAMINDA (Lebanese Association for Mine and Natural Disaster Action), a national NGO founded in 2014.<sup>84</sup> DCA's partnership with LAMINDA is also aimed at strengthening LAMINDA capacity in humanitarian mine action.<sup>85</sup>

POD deployed five BAC teams in 2016.<sup>86</sup>

LMAC has consistently raised concerns over the lack of survey and clearance capacity to address mine and CMR contamination, which it ascribes to inadequate funding.<sup>87</sup>

## Quality Management

Between 10% and 40% sampling is conducted during clearance operations by the organisation site supervisor and QA officer; 10% sampling is conducted by the LMAC QA/QC (quality control) officer during work. Up to 30% sampling is conducted by LMAC's sampling team at the end of the task, but the decision to conduct sampling is decided on a case-by-case basis, and not all released areas are sampled.<sup>88</sup>

## Information Management

IMSMA is used by LMAC and RMAC to record land release in Lebanon. LMAC has reported that the system for database entry now more accurately reflects operational data, especially in instances where the task size/area of CMR-contamination exceeds the original task size in the database.<sup>89</sup> Previously, any area cleared in excess of the original task size was entered into the database as a new task. Now, while the contaminated area and area cleared are both recorded, area in excess of the original task size is not recorded as additional tasks in the database.<sup>90</sup>

However, as discussed further below, newly discovered CMR-contaminated areas in the south of Lebanon continue to be entered into the IMSMA database as a standardised 33,000m<sup>2</sup> for each new area/task. This is thought to be impacting the accuracy of the baseline of CMR contamination in Lebanon.

Furthermore, during clearance, a single task may not always be completed in a single assignment, as clearance of separate sections of the task, such as the "fade-out" area or the "disclaimed" area (area for which permission is not granted for clearance, and which requires signed release papers), may be postponed in favour of higher priority/high-impact tasks elsewhere, and returned to at a later date. In such instances, the fade-out, disclaimed, and/or uncleared areas are marked as separate subtasks in the database, although they are linked through numerical labelling to the original task. This explains, in part, the changing number of hazardous areas between reporting periods.<sup>91</sup> It should be noted that from 2016 disclaimed areas can be cleared without the landowner's permission.<sup>92</sup>

Information management in Lebanon would arguably benefit from objective QA and cross-checking of data entered into IMSMA, in terms of how the size of new CMR contamination is determined and entered, and the entry and extraction of land release data.

## LAND RELEASE

Total CMR-contaminated area released by clearance in 2016 was just over 1.9km<sup>2</sup>,<sup>93</sup> an increase compared to the 1.69km<sup>2</sup> of area cleared in 2015.<sup>94</sup>

No area was reported as reduced by technical survey in 2016, but 0.5km<sup>2</sup> was reported as having been cancelled through non-technical survey.<sup>95</sup>

### Survey in 2016

Lebanon recorded five areas totalling 514,866m<sup>2</sup> cancelled by LMAC/RMAC in 2016.<sup>96</sup> Of this, three were CMR tasks, totalling 14,865m<sup>2</sup>,<sup>97</sup> and the remaining two were dangerous areas suspected to contain CMR.<sup>98</sup> This represents an increase in release on the 17 areas totalling 92,614m<sup>2</sup> cancelled in 2015.<sup>99</sup>

In addition, LMAC confirmed eight areas in 2016, totalling 264,000m<sup>2</sup>, as CMR contaminated, which were recorded in the IMSMA database.<sup>100</sup> A further nine CMR-contaminated areas totalling 205,000m<sup>2</sup> were also discovered in 2016, but were not recorded in IMSMA as their inclusion had not yet been “approved” by the LMAC Director.<sup>101</sup> New CMR-contaminated areas are typically the result of call-outs from the public, alerting LMAC to previously undiscovered explosive remnants of

war (ERW). LMAC community liaison officers visit each call-out, followed by LMAC’s chief of operations when necessary. New hazardous areas are recorded for those call-outs where CMR contamination is confirmed.<sup>102</sup>

### Clearance in 2016

Lebanon reported clearing just over 1.9km<sup>2</sup> of CMR-contaminated land in 2016, across 76 areas, destroying in the process 3,916 submunitions, 256 other items of UXO, and 4 anti-personnel mines (see Table 2).<sup>103</sup> In addition, a further 99,641m<sup>2</sup> was cleared and classified by LMAC as “re-clearance” to avoid double counting,<sup>104</sup> as initial surface clearance had already been undertaken prior to 2009.

Manual clearance is the primary method of clearing CMR in Lebanon, but machines are sometimes deployed to make access lanes and prepare the ground. Mine Detection Dogs (MDDs) are not currently used for CMR clearance.<sup>105</sup> However, NPA reported that it has agreed with LMAC that it can implement a pilot project in 2017/18 using MDDs for technical survey, and that it was in the process of trying to secure funds to initiate the project.<sup>106</sup>

**Table 2: Clearance of CMR-contaminated area in 2016<sup>107</sup>**

Operator	Areas cleared	Area cleared (m <sup>2</sup> )	Submunitions destroyed	Other UXO destroyed	Comment
DCA	6	237,636	1,023	31	
MAG	23	595,380	485	211	MAG cleared an additional 32,241m <sup>2</sup> , classified by LMAC as “re-clearance”. Eleven items of UXO were destroyed by the LAF.
NPA	15	430,145	1,162	9	NPA cleared an additional 66,800m <sup>2</sup> , classified by LMAC as “re-clearance”. An additional 245 submunitions located by NPA, were destroyed by the LAF, but were not reported to LMAC during 2016.
POD	29	549,295	1,181	0	POD also cleared an additional 600m <sup>2</sup> , classified by LMAC as “re-clearance”.
LAMINDA	3	89,311	65	5	
<b>Totals</b>	<b>76</b>	<b>1,901,767</b>	<b>3,916</b>	<b>256</b>	

In addition, during rapid response call-outs the Engineering Regiment and the LAF collectively cleared 108,420m<sup>2</sup>, across 748 tasks, during which 133 submunitions, 794 other items of UXO, 59 anti-personnel mines, and 28 anti-vehicle mines were destroyed.<sup>108</sup>

Of the CMR clearance tasks undertaken in 2016, MAG reported one where no contamination was discovered.<sup>109</sup> NPA reported working for 17 days on one BAC task, and 3 days on another, without discovering evidence of CMR contamination. After discussions between NPA and RMAC, it was decided to suspend these tasks. Had a system for formal non-technical survey been in place and permitted, prior to clearance, deployment of clearance teams to these tasks may have been avoided.<sup>110</sup>

## ARTICLE 4 COMPLIANCE

Under Article 4 of the CCM, Lebanon is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 May 2021. Lebanon is not on track to meet this deadline.

LMAC has asserted that the results of the second mid-term review of the strategic mine action plan for 2011–20, conducted in 2016 and due to be completed in 2017, will help reflect more accurately Lebanon's expected CMR completion date.<sup>111</sup> However, fewer BAC teams, discovery of previously unrecorded CMR-contaminated areas, and the impact of working in difficult terrain, have all been identified as obstacles to meeting this deadline.<sup>112</sup>

Clearance of CMR-contaminated land had been expected to be completed by the end of 2016, in accordance with the 2011–20 national strategy.<sup>113</sup> However, meeting this target was contingent on maintaining the number of BAC teams needed.<sup>114</sup> In May 2012, stakeholders believed the 2016 target date was reasonable if both funding and the number of teams stabilised or increased, and if contamination estimates proved accurate. The first review of the 2011–20 strategy in early 2014 confirmed that with existing capacity it would not be possible to finish CMR clearance before 2020 at the earliest.<sup>115</sup>

Lebanon's most recent CCM Article 7 report (for 2016) estimates that an additional 24 teams would be needed to support Lebanon complete CMR clearance by 2020.<sup>116</sup> A more accurate estimate of the required capacity will be made during the second mid-term assessment of the strategic plan that is currently under way.<sup>117</sup>

Annual clearance of CMR-contaminated land had decreased successively since 2012, but 2016 recorded an increase in clearance, as illustrated in Table 3.

**Table 3: Five-year summary of clearance<sup>118</sup>**

Year	Area cleared (km <sup>2</sup> )
2016	1.90*
2015	1.69
2014	2.10
2013	2.47
2012	2.98
<b>Total</b>	<b>11.14</b>

\* In addition, a further 99,641m<sup>2</sup> of re-clearance was conducted.

Lebanon has reported contributing US\$9 million annually towards mine action in Lebanon, to support the activities of LMAC, including CMR and mine clearance.<sup>119</sup> Lack of international funding continues to pose a challenge to demining operations.<sup>120</sup> However, while operators agree that lack of capacity is certainly holding back CMR clearance, it is also believed that swifter progress could come from improved land release.<sup>121</sup> This warrants further attention from LMAC as well as other mine action stakeholders in Lebanon.

- 1 Convention on Cluster Munitions (CCM) Article 7 Report (for 2016), Form F. The total area of the table detailing the size and location of cluster munition contaminated area correctly sums to 20,031,672m<sup>2</sup>, and not 21,702,781m<sup>2</sup> in the table in Lebanon's Article 7 report. This is reportedly due to a computation error, and LMAC confirmed that the correct total is 20,031,672m<sup>2</sup>. Email from Brig.-Gen. Ziad Nasr, Director, LMAC, 22 June 2017.
- 2 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 3 Email from Brig.-Gen. Elie Nassif, then Director, LMAC, 14 May 2016; presentation by LMAC at the 19th International Meeting of National Mine Action Programme Directors and UN Advisers, Geneva, 18 February 2016; and CCM Article 7 Report (for 2015), Form F.
- 4 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017.
- 5 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, then Head of Operations, LMAC, Beirut, 18 April 2016.
- 6 Presentation by Brig.-Gen. Fakhri, LMAC, Beirut, 16 November 2016.
- 7 Email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.
- 8 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 9 Landmine Action, "Foreseeable Harm: the use and impact of cluster munitions in Lebanon: 2006", 2006.
- 10 Ibid; interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016; and CCM Article 7 Report (for 2016) Form F.
- 11 CCM Article 7 Report (for 2013) Form F; and Statement of Lebanon, CCM Fourth Meeting of States Parties, Lusaka, September 2013.
- 12 Presentation by LMAC at the 19th International Meeting of National Mine Action Programme Directors and UN Advisers, Geneva, 18 February 2016.
- 13 Interview with Bekim Shala, then Programme Manager, MAG, Nabatiyeh, 14 April 2016.
- 14 Email from Eva Veble, then Lebanon Programme Manager, NPA, 8 July 2016.
- 15 Email from Brig.-Gen. Ziad Nasr, LMAC, 22 June 2017.
- 16 Human Rights Watch, "Flooding South Lebanon. Israel's use of cluster munitions in Lebanon in July and August 2006", 16 February 2008.
- 17 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016; and presentation by Brig.-Gen. Fakhri, LMAC, 16 November 2016, Beirut.
- 18 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016.
- 19 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 20 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016.
- 21 MAG, "Cluster Munition Contamination in Lebanon using survey data", September 2014.
- 22 Email from Bekim Shala, MAG, 14 June 2016.
- 23 Ibid. Of the 96 tasks, 3 were recommended for cancellation due to their proximity to others, with a recommendation that multiple tasks be merged in the contamination database. One additional task was recommended for cancellation because of duplication in database coordinates. The remaining 347 tasks surveyed by MAG were recommended for clearance.
- 24 Email from Bekim Shala, MAG, 14 June 2016.
- 25 Statement of Lebanon, CCM Fifth Meeting of States Parties, San José, 2-5 September 2014.
- 26 Ibid.
- 27 Email from Brig.-Gen. Elie Nassif, LMAC, 17 June 2015.
- 28 Interviews with Oussama Merhi, UNDP Mine Action Advisor for LMAC, in Geneva, 26 June 2015; and with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016; and email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016.
- 29 Interview with Bekim Shala, MAG, Nabatiyeh, 14 April 2016.
- 30 Email from Bekim Shala, MAG, 21 June 2016.
- 31 CCM Article 7 Report (for 2016), Form F; and emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017.
- 32 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 33 Interview with Oussama Merhi, UNDP, in Geneva, 26 June 2015; and CCM Article 7 Report (for 2015), Form F.
- 34 Interview with Oussama Merhi, UNDP, in Geneva, 26 June 2015.
- 35 CCM Article 7 Report (for 2015), Form F; interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 May 2016; and email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 36 Email from Dave Willey, Programme Manager, MAG, 25 April 2017.
- 37 Emails from Bekim Shala, MAG, 21 June 2016, and Craig McDiarmid, Programme Manager, NPA, 30 March 2017.
- 38 Expert level workshop under the framework of supporting Lebanon in meeting its CCM Article 4 obligations, attended by Lucy Pinches, Mine Action Review Project Manager and Senior Researcher, Beirut, 17 November 2016.
- 39 LMAC, "Mid-term Review to Strategy 2011-2020, Milestone 2013", August 2014; and email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016.
- 40 MAG, "Cluster Munition Contamination in Lebanon using survey data", September 2014, p. 4.
- 41 Ibid.
- 42 Statement of Lebanon, First CCM Review Conference, Dubrovnik, 7-11 September 2015.
- 43 Statement of Lebanon, CCM Fifth Meeting of States Parties, San José, September 2014.s
- 44 Email from Craig McDiarmid, NPA, 30 March 2017.
- 45 Email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016.
- 46 Email from Craig McDiarmid, NPA, 8 June 2016.
- 47 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 48 LMAC, "Mid-term Review to Strategy 2011-2020, Milestone 2013", August 2014, pp. 4-5.
- 49 LMAC, "2012 Annual Report Lebanon Mine Action Centre", March 2013.
- 50 LMAC, "Lebanon Mine Action Strategy 2011-2020", September 2011, p. 4.
- 51 Email from Brig.-Gen. Ziad Nasr, LMAC, 22 June 2017.
- 52 Interview with Col. Pierre Bou Maroun, Director, RMAC, Nabatiyeh, 16 November 2016.
- 53 UNDP, "Mine Action in Lebanon: A Review of the Lebanon Mine Action Programme and UNDP Support to mine action in Lebanon", Final Report, September 2011, p. 9.
- 54 Interview with Lt.-Col. Henry Edde, then Director, RMAC, Nabatiyeh, 12 April 2016; and interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 18 May 2016.
- 55 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakhri, LMAC, Beirut, 11 April 2016.
- 56 Email from Anna-Lena Schluchter, containing data from Rana Elias, focal point for Lebanon, GICHD, 21 June 2017.
- 57 Ibid.
- 58 Statement of Lebanon, CCM Fifth Meeting of States Parties, San José, 2-5 September 2015.
- 59 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 60 LMAC, "Lebanon Mine Action Strategy 2011-2020", September 2011, p. 4.

- 61 Response to Cluster Munition Monitor questionnaire by Brig.-Gen. Imad Odiemi, LMAC, 2 May 2014.
- 62 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.
- 63 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016; and email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 64 Email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.
- 65 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 66 Email from Brig.-Gen. Elie Nassif, LMAC, 17 June 2015.
- 67 Emails from Brig.-Gen. Elie Nassif, LMAC, 7 July 2015; and Rory Logan, Programme Manager, NPA, 20 April 2015; Statement of Lebanon, First CCM Review Conference, Dubrovnik, 7–11 September 2015.
- 68 Emails from Brig.-Gen. Elie Nassif, LMAC, 7 July 2015; and Rory Logan, NPA, 20 April 2015.
- 69 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016.
- 70 Interviews with Bekim Shala, MAG, Nabatiyeh, 14 April 2016; and Craig McDiarmid, NPA, Tyre, 12 April 2016.
- 71 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 72 Ibid.
- 73 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016.
- 74 Email from Craig McDiarmid, NPA, 30 March 2017.
- 75 Ibid.
- 76 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 77 Ibid.
- 78 Ibid.
- 79 Ibid.
- 80 Ibid.
- 81 Emails from Bekim Shala, MAG, 3 April 2016 and Dave Willey, MAG, 25 April 2017.
- 82 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017, and Craig McDiarmid, NPA, 30 March 2017.
- 83 Email from Craig McDiarmid, NPA, 30 March 2017.
- 84 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017; and LAMINDA website, accessed 31 May 2017, at: <http://www.laminda.org/>.
- 85 LAMINDA website, accessed 31 May 2017, at: <http://www.laminda.org/our-partner>.
- 86 Ibid.
- 87 Statements of Lebanon, CCM First Meeting of States Parties, Vientiane, September 2010; CCM Fourth Meeting of States Parties, Lusaka, September 2013; CCM Fifth Meeting of States Parties, San José, September 2014; First CCM Review Conference, Dubrovnik, 7–11 September 2015; Mine Action Support Group meeting, 18 October 2013; CCM intersessional meetings, 9 April 2014; and CCM Article 7 Report (for 2013), Form F.
- 88 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 89 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 April 2016.
- 90 Interview with Bekim Shala, MAG, Nabatiyeh, 14 April 2016.
- 91 Interview with Brig.-Gen. Elie Nassif and Brig.-Gen. Fakih, LMAC, Beirut, 11 May 2016.
- 92 Email from Brig.-Gen. Elie Nassif, LMAC, 5 July 2016.
- 93 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 94 Ibid.
- 95 Email from Brig.-Gen. Elie Nassif, LMAC, 5 July 2016.
- 96 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017.
- 97 CCM Article 7 Report (for 2016), Form F; and email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.
- 98 Email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.
- 99 CCM Article 7 Report (for 2015), Form F; and email from Brig.-Gen. Elie Nassif, LMAC, 5 July 2016.
- 100 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017; and CCM Article 7 Report (for 2016), Form F. In addition, NPA reported confirming 496,945m<sup>2</sup> as CMR-contaminated during pre-impact assessments on its tasks, before clearance teams were deployed, but this is not classified as formal non-technical survey and is therefore not included in the survey data reported by LMAC.
- 101 Email from Brig.-Gen. Ziad Nasr, LMAC, 9 June 2017.
- 102 CCM Article 7 Report (for 2015), Form F; and email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016.
- 103 Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 9 June 2017; and CCM Article 7 Report (for 2016), Form F. The clearance table in Lebanon's Article 7 report, totalling just over 2km<sup>2</sup>, is the sum of 1.9km<sup>2</sup> of clearance and 1km<sup>2</sup> of re-clearance.
- 104 Ibid.
- 105 Ibid.; and email from Dave Willey, Programme Manager, MAG, 25 April 2017.
- 106 Email from Craig McDiarmid, NPA, 30 March 2017.
- 107 In addition, MAG destroyed four anti-personnel mines during BAC. Emails from Brig.-Gen. Ziad Nasr, LMAC, 24 April and 22 June 2017; Dave Willey, MAG, 25 April 2017; and Craig McDiarmid, NPA, 30 March 2017. There was a small discrepancy between the clearance data provided by MAG [630,809m<sup>2</sup>, destroying 486 submunitions, 213 other items of UXO, and 4 anti-personnel mines] and NPA [496,945m<sup>2</sup>, locating 1,407 submunitions, of which 1,162 were destroyed by NPA and 245 (one cluster bomb unit, in which 245 submunitions were still encased) by RMAC; in addition to locating 11 items of UXO, of which 9 were destroyed by NPA and 2 by the LAF] and that of LMAC, explained by the fact that MAG and NPA included "re-clearance" figures in their clearance totals, whereas LMAC reports re-clearance separately, to prevent double counting. Re-clearance refers to tasks where surface clearance was executed initially, prior to 2009. DCA, LAMINDA, and POD did not provide data to Mine Action Review so the accuracy or quality of their clearance outputs is unclear.
- 108 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 109 Email from Dave Willey, MAG, 25 April 2017.
- 110 Email from Craig McDiarmid, NPA, 30 March 2017.
- 111 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 112 Email from Brig.-Gen. Elie Nassif, LMAC, 14 May 2016; and CCM Article 7 Report (for 2015), Form F.
- 113 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.
- 114 LMAC, "Lebanon Mine Action Strategy 2011–2020", September 2011.
- 115 LMAC, "Mid-term Review to Strategy 2011–2020, Milestone 2013", August 2014.
- 116 CCM Article 7 Report (for 2016), Form F.
- 117 CCM Article 7 Report (for 2015), Form F.
- 118 See Cluster Munition Monitor and Mine Action Review reports on clearance in Lebanon covering 2012–16.
- 119 Email from Brig.-Gen. Ziad Nasr, LMAC, 24 April 2017.
- 120 Ibid.
- 121 Interviews with Bekim Shala, MAG, Nabatiyeh, 14 April 2016, and Craig McDiarmid, NPA, Tyre, 12 April 2016.