



GICHD



COMPLETION AND BEYOND: RISK MANAGEMENT IN MINE ACTION

CASE STUDY: LEBANON

GENEVA INTERNATIONAL CENTRE FOR HUMANITARIAN DEMINING

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LIST OF ABBREVIATIONS

APMBC	Anti-Personnel Mine Ban Convention
ARE	All Reasonable Effort
BAC	Battle Area Clearance
CCM	Convention on Cluster Munitions
DAESH/ISIS	Islamic State of Iraq and the Levant
EO	Explosive Ordnance
EOD	Explosive Ordnance Disposal
GICHD	Geneva International Centre for Humanitarian Demining
IED	Improvised Explosive Device
IMAS	International Mine Action Standards
IMSMA	Information Management System for Mine Action
LAF	Lebanon Armed Forces
LAF/ER	Lebanon Armed Forces / Engineering Regiment
LMAA	Lebanon Mine Action Authority
LMAC	Lebanon Mine Action Centre
LR	Land Release
MA	Mine Action
MDD	Mine Detection Dog
NDO	National Demining Office
NGO	Non-Governmental Organisation
NMAA	National Mine Action Authority
NMAS	National Mine Action Standards
QA	Quality Assurance
QC	Quality Control
RMAC	Regional Mine Action Centre (RMAC-N: Nabatiyeh, RMAC-RB: Ras Baalbek)
SOP	Standard Operating Procedure
TNMA	Technical Note for Mine Action
UN	United Nations
UNIFIL	United Nations Interim Force in Lebanon
UNMAS	United Nations Mine Action Service
UXO	Unexploded Ordnance

INTRODUCTION

Lebanon is situated strategically in the Levant on the Mediterranean with Syria to the north and east and Israel to the south. The modern borders of the Lebanese state were defined in 2000, though Lebanon has thrived culturally and economically for thousands of years.¹ Lebanon has suffered extensive explosive ordnance (EO) contamination at various times from 1975 to 2019. The response of Lebanon in addressing the risks, and in generating a risk management approach to dealing with the transition from a proactive to a reactive approach is interesting, and serves as one example of how residual risk is managed before and during transition into the reactive phase. Examples such as Lebanon can be helpful to other countries that emerge from conflict, conduct proactive mine action (MA) – that is intentionally mapping and clearing contaminated land – and then gradually transition to a reactive approach – namely responding to and managing the remaining risks as and when they arise.

Report, structure and methodology

This report investigates the response by Lebanon to EO contamination. It provides a limited background for history and contamination profile. The study is then contextualised in the broader work on residual contamination. An overview of Lebanon’s institutional architecture helps the reader understand the case studies that follow at the end of this report.

The report is a presentation of key findings resulting from desktop research and multiple semi-structured interviews with interlocutors in various aspects of MA in Lebanon. A country visit, representing a significant element to the methodology, was not realised due to the constraints imposed by the COVID Sars-2 pandemic. A further limitation included public office closures, making the consultation of archival material by third parties impossible.

Brief history

Lebanon’s EO contamination is the result of four key events. First, the Lebanese civil war, from 1975-1990, left much general explosive remnants of war (ERW) contamination, as well as anti-personnel landmines. Second, the Israeli occupation, from 1978 to 2000, left a similar spectrum of EO contamination. The conflict with Israel in 2006 was the third event. This period of conflict

¹ Kofi Annan, United Nations 7 June 2000 declaration referencing Security Council Resolution 425 (1978). <https://www.washingtoninstitute.org/policy-analysis/israeli-lebanese-border-dispute-and-resolution-425-recent-declarations-united> (accessed 28 March 2021).

lasted for only 33 days, a brief period by comparison to the previous events. However, this period saw a very large amount of cluster munitions dropped on almost half of the territory of Lebanon. Estimates range between 4 million² and 4.6 million submunitions³, with approximately 90% being dropped in the final 72 hours of the war.⁴ Most recently, spill over from the Syrian conflict has seen Islamic State of Iraq and the Levant (DAESH/ISIS) and al-Nusra fighters planting Improvised Explosive Devices (IEDs) and booby traps in regions in the northeast as these forces retreat.

Contamination profile

The general contamination profile of EO in Lebanon consists of cluster munitions, anti-personnel and anti-tank landmines, IEDs, and various unexploded ordnance (UXO) such as artillery, bombs, grenades, small arms ammunition. Of particular interest in Lebanon are the diversity of munitions and fuzing, as the contamination originates over an extended time. The primary EO contamination in Lebanon remains landmines, clustered in the south along the border, and cluster munitions, spread widely across the territory.

² Author correspondence via email with Lt Col Fadi Wazen, Director of Operations, LMAC. 21 December 2020.

³ HRW <https://www.hrw.org/report/2008/02/16/flooding-south-lebanon/israels-use-cluster-munitions-lebanon-july-and-august-2006> (accessed 19 January 2021).

⁴ UNOCHA Lebanon: Cluster Bomb Fact Sheet <https://reliefweb.int/report/lebanon/lebanon-cluster-bomb-fact-sheet> (accessed 21 December 2020).

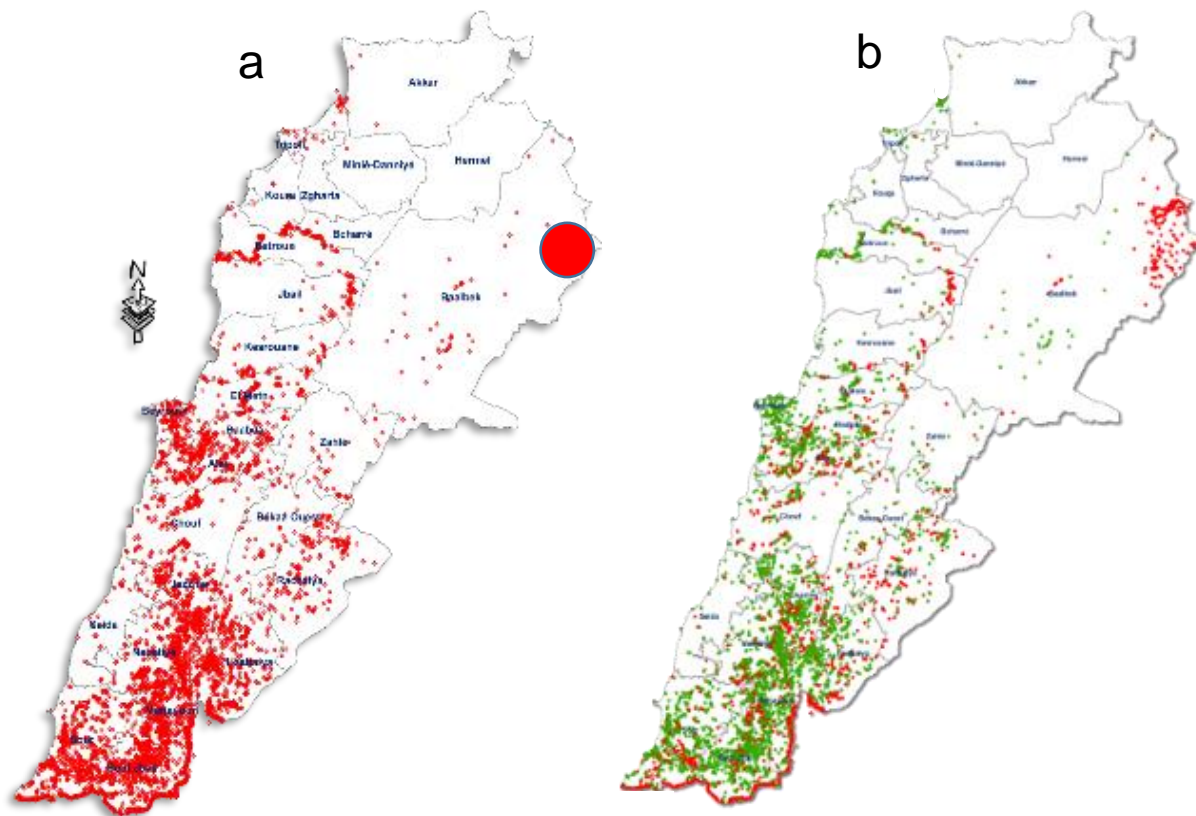


Figure 1a and 1b: Lebanon EO contaminated sites (1a) and status as of December 2020 with green released areas (1b)
Source: LMAC

Figure 1a and 1b, derived from data in the information management system for mine action (IMSMA) Core, shows the work done in Lebanon to clear the EO contamination across the country. An up-to-date information management (IM) system is critical in maintaining good quality management and effectively transitioning from a proactive to a reactive approach. Several salient points are worth addressing. The red dot in the north east of the map in Figure 1a represents the known contamination resulting from spill over from the conflict in Syria, but that had not yet been specifically located at the time the map was generated. In Figure 1b the red dot is replaced by the actual contaminated sites. A large number of these have already been cleared.

On the southern border between Lebanon and Israel is a continuous line of minefields of both anti-personnel and anti-tank landmines. This is also known as the ‘Blue Line’, or line of withdrawal and is the demarcation of the border between Israel and Lebanon published by the United Nations (UN) in 2000, in order to establish if Israel had fully withdrawn from Lebanese

territory.⁵ Work on the Blue Line had stalled due to regional instability, but has resumed since 2016.⁶ The UN Intervention Force in Lebanon (UNIFIL), Lebanon Armed Forces Engineering Regiment (LAF/ER) and three international non-governmental organisations (NGOs) are working in this area.

In the western central part of Figure 1a, is a region with a high concentration of cleared areas: Beirut - The contamination in this area was principally minefields laid during the civil war, as well as cluster strikes from Israel. In this area is also Mount Lebanon, contaminated with minefields laid during the civil war.

A concentration of contaminated areas in the northern central part of Figure 1b shows a particularly difficult area of high-altitude minefields. Difficult terrain exists throughout Lebanon and is constituted primarily of very steep slopes or cliffs, as well as very dense vegetation. Addressing areas of contamination which are inaccessible for various reasons forms part of Lebanon's treaty obligations. All reasonable effort (ARE) must be made to rid these locations of contamination, according to the Anti-Personnel Mine Ban Convention (APMBC). The concept of ARE has remained loosely defined.⁷ A recent Technical Note for Mine Action (TNMA) 07.11/03 on ARE⁸ has addressed this issue and brought increased clarity by clearly situating ARE within the context of land release (LR).

Lebanon has asked for support from the Geneva International Centre for Humanitarian Demining (GICHD) in addressing difficult to reach areas. The contamination which may remain after ARE has been applied can be termed residual, yet the idea of a residual state for MA is more complex than this simplistic definition. International Mine Action Standards (IMAS) have begun to address the concept of residual risk management, and consequently residual contamination, in the TNMA 07.14/01 on Residual Risk Management.⁹

⁵ The line was originally established in 1978 by Security Council resolution 425. <https://digitallibrary.un.org/record/71622?ln=en> (accessed 11 March 2021).

⁶ Author conversation with Lt Col Fadi Wazen, Director of Operations, LMAC. 11 March 2021.

⁷ IMAS 04.10 All Reasonable Effort: *“describes what is considered a minimum acceptable level of effort to identify and document contaminated areas or to remove the presence or suspicion of explosive ordnance. All reasonable effort has been applied when the commitment of additional resources is considered to be unreasonable in relation to the results expected”*.

⁸ TNMA 07.11/ 03 All Reasonable Effort https://www.mineactionstandards.org/fileadmin/user_upload/TNMA_07.11_03_All_Reasonable_Effort_03.pdf (accessed 01 May 2021).

⁹ TNMA 07.14/01 Residual Risk Management https://www.mineactionstandards.org/fileadmin/user_upload/TNMA_07-14_01_Ed1.pdf (accessed 28 March 2021).

Context for the study

Several GICHD studies, as well as the above mentioned TNMA 07.14/01 on Residual Risk Management have addressed a country's mine action programme general progression from immediate post conflict response to sustained demining effort to a residual state. Figure 2 illustrates the evolution in general terms.

Accompanying the transitions shown in Figure 2 are commensurate changes in international involvement, such as with support from international NGOs, donor countries, and the UN. As assisted development approaches the residual phase, NGOs, UN operations, and specialised companies wind down operations and hand over assets and knowledge to the national authority.

In fact, the residual phase begins operating organically much before a transition to a reactive approach is fully reached. Lebanon is a clear example of this. While international support is still quite active, there is a simultaneous approach to dealing with spot tasks and areas that are hard to reach. It is worth noting that, in the words of one MA operator:

*“hard to reach doesn't mean it's not doable at all. It means that with current, conventional clearance equipment and training it is undoable. Clearance of the “hard to reach” areas is of course doable but requires different equipment and training. Clearance capacity for such areas is currently not available in Lebanon.”*¹⁰

¹⁰ Author conversation with Ivica Stilin, MAG International. 12 March 2021.

PROGRAMME LIFE CYCLE FOR MINE ACTION PLANNING FOR LONGTERM RISK MANAGEMENT

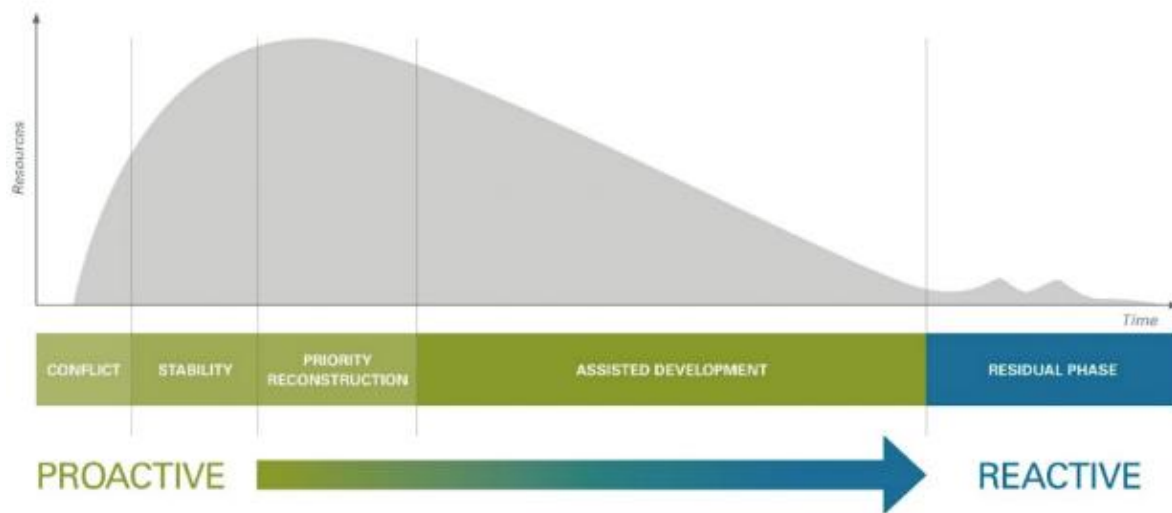


Figure 2: Evolution of risk management response
Source: GICHD

For the time being, hard to reach easily fits into a reactive phase category and could be termed residual risk. However, it should be emphatically noted, that known contamination areas, simply by virtue of being difficult to clear, do not remove the treaty obligation to clear them. The difficulty of access does provide a justification of reducing the priority level. According to the TNMA on ARE¹¹:

“Situations where access is hindered by topography, or the complexity of the items of EO make work difficult (such as in the case of complex devices), would not be considered valid reasons for stopping LR efforts. These concerns may, however, play a justifiable role in the prioritisation of resources on the part of NMAAs. In such a case, a National Mine Action Strategy and corresponding work plans may prioritise resources to accessible areas first and highlight that areas that are inaccessible, will be dealt with as soon as possible“.

This is potentially a new residual risk option, where the contamination is known, but clearance activities are exceeding reasonable effort for the clearance capacity currently available in

¹¹ TNMA 07.11/ 03 All Reasonable Effort https://www.mineactionstandards.org/fileadmin/user_upload/TNMA_07.11_03_All_Reasonable_Effort_03.pdf (accessed 01 May 2021).

country. In this scenario the Lebanon Mine Action Centre (LMAC) begins utilising the residual risk category as part of a comprehensive risk management strategy, but before declaring completion with respect to treaty obligations. In other scenarios where countries have not acceded to the convention, residual risk categories may be utilised more freely as part of a well-defined risk management programme subject to comprehensive quality management procedures. Residual risk, therefore, is purely a category utilised in the prioritisation of resources in an effort to meet convention compliance and assure the safety of populations and economic viability of land.

Recognising that this transition does not just happen at the end of a country's treaty obligation, for example, once all landmines and cluster munitions are cleared, but well before, is important to appropriately plan a transition to the residual state. Defining what an acceptable residual state might look like is a key part of establishing a country-specific roadmap for transition from proactive survey and clearance to a reactive phase.

Inherent in these discussions is ARE and the relative cost of survey and clearance compared to the opportunity costs of resources that need to be made available. Countries planning for a residual phase are balancing a decreasing threat level posed by EO with other national priorities such as healthcare, security, infrastructure investment, and education. It is therefore imperative for a mine action programme to be able to defend itself by demonstrating that the resources are fit for purpose, that the problem is adequately mapped and understood, and that risks are appropriately identified, and where necessary, mitigated. The return on investment for risk management evolves as land use changes, as shown in the following figure as well as in the case study later.

DECREASED RISK MANAGEMENT RETURN ON MONEY SPENT

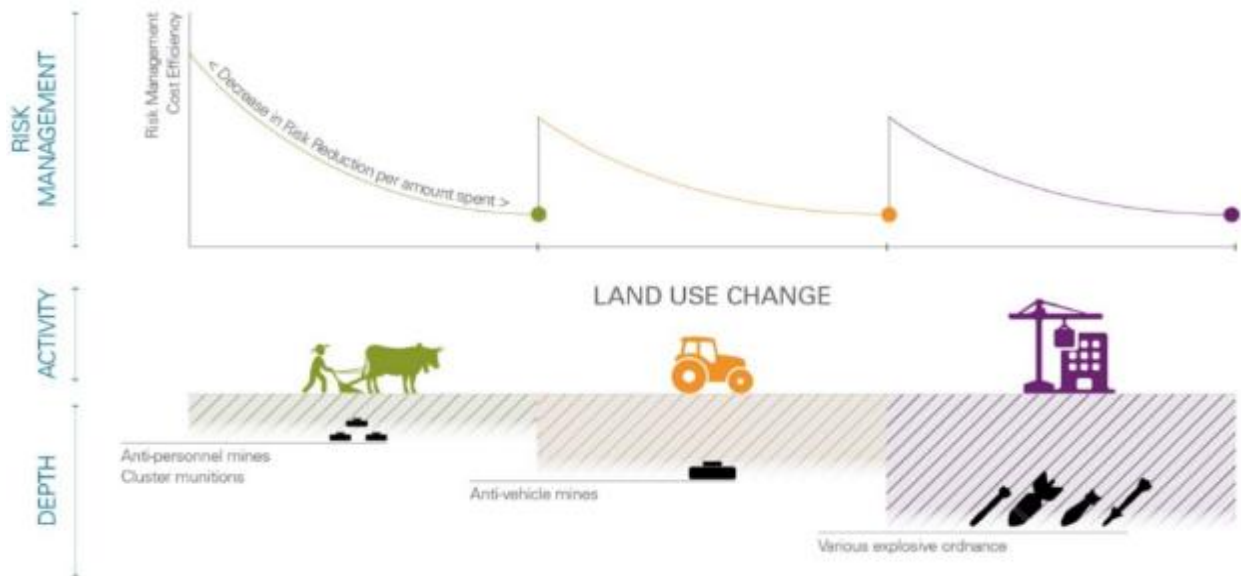


Figure 3: Evolution of risk management cost efficiency with land use change
Source: GICHD

In order to provide the best possible service in the residual phase, mine action programmes should look to consolidate MA capacity in nationally owned institutions. This often means that the capacity resources, knowledge, and sometimes personnel move from international NGOs to the police, military, or emergency response service. In the case of Lebanon, the capacity has been institutionalised as described below.

PART I: INSTITUTIONAL SETTING

Responsibility and chain of command

In Lebanon, EO clearance operations are broken down into MA (characterised by a planned response) and spot tasks (characterised as ad-hoc or emergency response). LMAC is responsible for managing and coordinating both activities, regardless of the MA operator doing the work.

The chain of command for MA in Lebanon begins with the Lebanese Council of Ministers. In 1998, the Council of Ministers created the Lebanon Mine Action Authority (LMAA) as a legislative body and appointed the Minister of Defence as chair. LMAA is tasked with planning and setting the strategy for MA, also known as the national mine action programme. Additionally, LMAA is tasked with enhancing and facilitating coordination among the various ministries in matters relating to MA. LMAA established LMAC, formerly the National Demining Office (NDO), to implement the national mine action plan.¹²

LMAC received its mandate with the Government of Lebanon Decree of National Mine Action Policy in March 2007.¹³ The government “takes full responsibility for the humanitarian, socio-economic and environmental impact caused by [landmines and ERW] and shall rid Lebanon from the impact.”

Mine action operators

LMAC manages and coordinates MA and spot tasks by several MA operators, including LAF/ER demining units and all LAF/ER spot task responses, several international NGOs including DCA, HI, MAG, and NPA, and national NGOs POD and LAMINDA.¹⁴ Due to economic constraints related to the inflation of the Lebanese Pound and inability to secure spare parts and cover costs of logistics, LAMINDA has ceased operations as of 2020.¹⁵ In addition, the UN provides support with

¹² Lebanon Mine Action Centre. About LMAC. <https://lebmac.org/en/index.php/about-lmac> (accessed 11 March 2021).

¹³ National Mine Action Policy, government of Lebanon. 2007. Last modified by government of Lebanon decree number 28 on 5/29/2019. Reference Number: 6:279/MS - 18/9/2019

¹⁴ Landmine Monitor. Lebanon. Mine Action <http://www.the-monitor.org/en-gb/reports/2019/lebanon/mine-action.aspx> (accessed 19 December 2020).

DCA: Danish Church Aid, HI: Humanity and Inclusion, MAG: Mines Advisory Group, NPA: Norwegian People's Aid, POD: Peace Generation Organization for Demining, LAMINDA: Lebanese Association for Mines and Natural Disaster Action

¹⁵ Author correspondence via email with Lt Col Fadi Wazen, Director of Operations, LMAC. 21 December 2020.

the UN Interim Force in Lebanon (UNIFIL). UNIFIL operates with the UN Mine Action Service (UNMAS) via a special Memorandum of Understanding.¹⁶

The Lebanon Armed Forces (LAF) have four demining units. In addition, the LAF provide mechanical clearance capacity with four teams and seven mine detection dogs (MDDs) units. All LAF/ER units have explosive ordnance disposal (EOD)-trained personnel – anyone can respond to a spot task.¹⁷ LAF units follow Standard Operating Procedures (SOPs) which meet National Mine Action Standards (NMAS) set by LMAC. Military units report progresses up the military chain of command, and then the headquarters-level provides the information to LMAC.

All MA operators (LAF, UNIFIL, and NGOs) receive their tasks from LMAC in accordance with the national mine action programme, who respond appropriately through non-technical survey (NTS), technical survey (TS), or clearance operations (known as LR), and report back to LMAC.

Regional mine action centres

MA operators are tasked by – and report to – one of two Regional Mine Action Centres (RMACs).¹⁸ In Nabatiyeh in the south of Lebanon, RMAC-N deals mainly with MA operators, UNIFIL and LAF/ER who conduct LR, including TS and clearance on the extensive minefields on the border between Israel and Lebanon. In addition, MA operators conduct LR activities, including Battle Area Clearance (BAC) on cluster munition strike zones and UXO in West Bekka and the Nabatiyeh areas. In Ras Baalbek in the north, RMAC-RB has a focus on IEDs based on the regional contamination profile, as well as conducting BAC on cluster munition strike zones. Both regional centres report back to LMAC, based centrally in Fayadiyeh outside of Beirut. Regional centres improve efficiency by bringing command and control 2 hours closer to the engagement areas.¹⁹ LMAC itself deals directly with the work in and around Beirut and Mount Lebanon, conducting TS and clearance.

¹⁶ Ibid.

¹⁷ Author conversation with Lt Col Fadi Wazen, Director of Operations, LMAC. 23 December 2020.

¹⁸ Lebanese Mine Action Center. “History.” <https://lebmac.org/en/index.php/about-lmac> (accessed 10 December 2020).

¹⁹ Author conversation with Lt Col Fadi Wazen, Director of Operations, LMAC. 23 December 2020.

Operational responsibility

With no clear law defining liability for damages in MA in Lebanon, the government of Lebanon, in its decree in 2007, assumed full responsibility of clearing EO and protecting its people.²⁰ While during demining each NGO or agency bears responsibility for its own safety and quality but it is LMAC that ultimately bears responsibility for ensuring operations are conducted safely and effectively. Any party, whether a demining NGO or agency, can be held liable for damages if negligence on the part of the NGO or agency is found to have contributed to an accident. Ultimate responsibility for ensuring that MA operators or agencies are not negligent lies with the government of Lebanon.

It is to this end that LMAC develops and sets NMAS in compliance with the IMAS to guide the sector. International NGOs and the LAF/ER set their own SOPs which comply with the NMAS. Violations of the SOPs would open up the NGO or agency to legal suit. But adherence to the SOPs means that responsibility for the safety of the Lebanese people resides with the government of Lebanon.

The NGO or agency assigned to clear a contaminated area bears operational responsibility for safety during clearance work, as well as responsibility for the quality of the work. Liability for a site either before it is assigned to an NGO or after it has been returned to LMAC remains with the government of Lebanon. More detail is included in the section below on liability.

Prioritising tasks

LMAC maintains an evolving list of tasks to address the land contaminated with EO. Tasks are prioritised based on their proximity to population centres, infrastructure, land use and the nature of contamination. The prioritisation process has also been recently updated. Previously, tasks were categorised as high, medium and low priority (1, 2, and 3). In 2020, LMAC was left with only tasks in priority category 3. Below is an excerpt of the latest draft prioritisation matrix used in Lebanon:

²⁰ Government of Lebanon. "National Mine Action Policy." March 2007.

Ser	Strategic priority	Category	Ranking criteria for prioritisation	Remarks	
(a)	(b)	(c)	(d)	(e)	
1	Safety	A. Casualties within 5 years	Most recent first		
2		B. Proximity <100m	Proximity (closest first)	Distance to be discussed	
3	Economy	C. Funded infrastructure project	Value of project	See discussions on funding of clearance	
4		D. Funded development project	Value of project		
5		E. Agricultural use ¹	Max of 2 Ha per household*		* Size to be confirmed by relevant national institution
6		F. New housing			
7		G. New small business			
8		H. Non-funded infrastructure project	Potential value of project		
9		I. Non-funded development project	Potential value of project		
10		J. Other private investments	N/A: To be by commercial means if unwilling to wait for clearance under ser 10-11		
11	Treaty compliance	K. Oslo	Logistic convenience (as resources allow)		
12		L. Ottawa	Logistic convenience (as resources allow)	Not a signatory	

Note: See discussions on ‘impact free’ and cost benefit analysis in the main body of the report

Figure 5: LMAC draft prioritisation matrix 2020

Source: LMAC

Prioritisation, as per the above matrix, is a separate process to planning. In planning, resources are allocated to the prioritised tasks. This is a more dynamic process and is also at times donor dependent:

“Sometimes donors request to conduct the work in a certain region. LMAC will explain to them the priorities, the strategy, and the annual plan objectives. If donors insist, then sites in that specific region will be cleared according to their priorities. This means that sometimes there will be sites cleared with lower priority before others with higher priority.”²¹

Organising the planning and prioritisation of clearance operations requires balancing many competing priorities, and LMAC is charged with both.

Liability and claims

Legal obligation in Lebanon arises, among other sources, due to the Government Decree in 2007 and the Convention on Cluster Munitions (CCM), to which Lebanon became party in 2011.²² MA operators retain liability for up to two months from the date of acceptance of the completion report, during which period LMAC sampling teams conduct quality control (QC) and quality assurance (QA). The liability which MA operators maintain is for the quality of the work. That is, if LMAC finds the site to be inadequately cleared, the NGO must re-clear the area. The site must remain adequately marked as dangerous until LMAC has conducted QC and QA. At this point the land is handed over to the owner, along with a certificate. LMAC retains documentation on the specific work done. The LAF/ER units operate on behalf of the government, and so liability is already borne by the government of Lebanon.²³

The courts handle all eventual claims of liability. A claimant can sue LMAC or an MA operator, depending on who maintained responsibility at the time of the incident, in the civil courts. LMAC or the MA operator must then demonstrate having made ARE in relation to the specific site in question. However, laws in Lebanon remain unclear on MA, and do not explicitly define the rights of injured parties, the remedies, or the standard process of appeal. To date, only one victim has raised a suit in court, but LMAC was found not liable.²⁴ Nonetheless, LMAC tasked the NGO to clear the area in question. In this instance the accident was determined to have occurred outside the area previously known as contaminated. The accident, while regrettable, was determined to be not due to negligence. There is another case where the family members of a mine victim are looking to recover damages from LMAC. The legal claim has been dismissed

²¹ Author correspondence with Lt Col Fadi Wazen, Director of Operations, LMAC. 15 January 2021 (email).

²² Ibid. and <https://www.clusterconvention.org/wp-content/uploads/2018/09/Lebanon-5.pdf> (20 January 2021).

²³ Author correspondence via email with Lt Col Fadi Wazen, Director of Operations, LMAC. 21 December 2020.

²⁴ Ibid.

by the court as the MA operator was only tasked by RMAC-N to respond to the incident, and cleared the area, after the accident.

Staffing and funding

LMAA and LMAC are staffed by the LAF. Salaries come out of the Department of Defence budget, providing financial stability. Some additional support comes in the form of civilian personnel seconded by UNDP. These staff initially provided capacity development and now remain to provide institutional support. Funding for UNDP staff is provided by a champion donor, not by Lebanon.²⁵

All LAF/ER staff are also funded by the LAF. All buildings and vehicles are owned by the LAF, and their maintenance and insurance are the responsibility of the government of Lebanon. Lebanon gratefully receives donations in the form of training, demining equipment, and vehicles.²⁶

Separate to LAF funding, the government of Lebanon authorised 33.3 million USD for the clearance of cluster munitions. This was initially promised in 2017, and the agreement was finalised in 2019. However, due to political unrest and multiple changes in the government, the funds have not yet been released. Once released, these funds will substantially increase cluster munition clearance capacity.²⁷

Information management

LMAC centrally maintains and is responsible for all data and IM processes for MA and spot tasks. RMAC-N and RMAC-RB both use IMSMA to report to LMAC. LAF teams have their own reporting methods, however communiqués to LMAC from LAF HQ are all entered in IMSMA in compliance with NMAS. LMAC is currently transitioning to IMSMA Core.

QA of data entry into IMSMA is managed by different LMAC sections depending on the data involved: explosive ordnance risk education (EORE), mine victim assistance (MVA) or operations. Final responsibility for data quality in IMSMA for Lebanon rests with the LMAC IM Department.

²⁵ Author correspondence via email with Lt Col Fadi Wazen, Director of Operations, LMAC. 21 December 2020.

²⁶ Ibid.

²⁷ Author conversation with Lt Col Fadi Wazen, Director of Operations, LMAC. 23 December 2020.

National mine action standards

LMAC has developed and maintains the NMAS for MA and spot tasks. All MA operators, including the LAF/ER follow the same NMAS. Spot task SOPs of the LAF were developed and accredited according to the standards set by LMAC.

LMAC created a Technical Working Group (TWG) in 2018 which unites all interested MA operators in discussions on potential changes to the NMAS. Changes adopted by the TWG are forwarded to LMAC and introduced into the NMAS at the next revision. The TWG was launched after the first Mine Action Forum (MAF), and now meets four times a year, in coordination with Champion State's embassy which supports the MAF. The TWG can also meet if there is a need to discuss a new or urgent matter and is then convened by LMAC.²⁸

Security

Lebanon has been subject to various security limitations consequent to the occupations of Lebanon's territory. Today the risk of terrorism remains, primarily due to spill over from Syria. Nonetheless the LAF and International NGOs can move freely in the country. Operational safety measures in compliance with the NMAS allow teams to operate with mitigated risk even in areas contaminated with EO. The level of risk due to terrorism is deemed moderate.²⁹ The government of Lebanon has taken an active role in preventing violent extremism through community engagement, refugee management, and reforms to the criminal justice and penal system, among others.³⁰

An additional contribution to insecurity has been the collapse of the Lebanon Central Bank and the subsequent rapid inflation of the Lebanese Pound.³¹ This provides challenges, both as political instability and for LMAC staff, as their salary purchasing power is diminishing. However, a benefit is accrued as donor country contributions (often in USD) now have significantly more impact in terms of labour that can be purchased.³²

²⁸ Author correspondence via email with Lt Col Fadi Wazen, Director of Operations, LMAC. 09 January 2021.

²⁹ US State Department <https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/lebanon-travel-advisory.html> (19 January 2021).

³⁰ Lebanese Center for Policy Studies. Preventing Violent Extremism in Lebanon. Policy Brief 41. https://www.lcps-lebanon.org/publications/1560847937-policy_brief_41.pdf June 2019 (accessed 19 January 2021).

³¹ Reuters. "Lebanon's financial meltdown and how it happened." <https://www.reuters.com/article/uk-lebanon-crisis-financial-explainer-idUKKBN268223> (accessed 10 December 2020).

³² Author conversation with Lt Col Fadi Wazen, Director of Operations, LMAC. 23 December 2020.

PART II: CASE STUDIES

LAF/ER spot task response to call out

The LAF are the ones most often tasked to respond to spot tasks. The following is an excerpt of a typical incident:³³

“A shepherd has found a hazardous item while herding. He reported that to the nearest LAF military post or to a demining team working in the area, who in turn forwards it with haste to LMAC either through LAF HQ or directly in the case of an NGO. LMAC NTS team contacts the shepherd, meets with him, and visits the location. There, the team reports, coordinates and determines if the item is hazardous, takes photos if possible. If the NGO team has collected this information, the LMAC NTS will not be tasked.

The operations section in LMAC check the IMSMA database for information at those coordinates, then contact LAF HQ with all information. LAF HQ directs the engineering unit deployed closest to the area, who in turn deals with the item and reports back to LMAC on results.”

NOTE: the whole process is executed on the same day, or maximum the next day. Formal reporting back to LMAC takes a longer time.

Lebanon has already benefited from wide-reaching EORE. It is typical that found explosive items are reported either to the police, the nearest military post, or via the LMAC hotline. Spot tasks, regardless of how they are reported, has a team dispatched on the same day. LMAC sends an NTS team to identify and classify the threat. However, LMAC does not issue orders for clearance teams, these are tasked by the LAF HQ. The LAF HQ decides which unit is best suited to respond based on location and current task loads. Every LAF infantry brigade has a combat engineering company and is competent to respond. Certain instances allow for an NGO to complete the spot task. NGOs are only permitted to deal with cluster munitions and landmines. If an NGO is contacted, LMAC is not required to send a NTS team to identify and classify the threat, as the NGO is qualified for this task. Any other type of munition will require an LAF/ER unit to respond. This is a matter of LAF security policy to prevent the diversion of explosive materials.

LMAC also receives a copy of the tasking order for the LAF/ER unit. The engineering units report back to the LAF HQ, who then file a report. These reports are collected and delivered to LMAC monthly. Regardless of who responds (NGO or LAF/ER), the tasking is urgent and is completed on the same day. Once the completion report is received, either from the NGO or from the LAF

³³ Author Conversation with Lt Col Fadi Wazen. Director of Operations, LMAC. 15 January 2021.

HQ, the data are input by the LMAC operations section, verified by the Operations Officer, and saved into IMSMA by the IM section.

When several spot tasks arise from the same area LMAC declares the area as contaminated, which generates a BAC task, as in the following case.

Cluster munition strike near Blate, in Marjeyoun district

Cluster Munition Strike CBU 838, as recorded in IMSMA, is an active example of Lebanon's approach to ARE, while acknowledging the existence – and need to cope with – a residual threat. Much of Lebanon's cluster munition contamination is proactively surveyed, cleared and released according to the SOPs. New discoveries of cluster strikes are entered into the system, prioritised, and resources mobilised to clear the area in accordance with the national strategy. Sometimes, though, it would take more than ARE to clear the contaminated area.

CBU 838 is located near the village of Blate in the Marjeyoun district of Lebanon. Mainly grazing lands and olive groves, the area has been contaminated by cluster munitions since the Israeli strike in 2006. Despite the contamination, the land has remained in active use to this date, making the area particularly hazardous.

The area was first reported as contaminated shortly after the Israeli strikes in 2006, and the LAF responded to a callout on 29 December 2006 and destroyed one submunition. Over the coming years, repeated discoveries caused the LAF/ER to return multiple times. In total, more than 37 submunitions (M 42 and M 46) were destroyed by the LAF. Local members of the population, including the owner Mr. Hasan Noura as well as neighbours, would report any new discoveries of the submunitions to the local municipality members. These would then forward the request through to the police, who inform LMAC. LMAC would then send the information to the LAF HQ to task the LAF/ER for a spot task.

LMAC eventually assigned the task of survey and clearance of the entire area to MAG, who was already active in the area. MAG developed a clearance plan in October of 2016. MAG followed its own set of protocols, which comply with LMAC's NMAS, in defining the area, consulting the local population as part of NTS, and then proceeding with clearance as required. Each additional cluster munition sub-unit required an additional fade-out, searching the 50 meters out in each direction, or 10'000 square meters, for any further evidence. This method gradually

enlarges the footprint of the strike, until no additional contamination is found. The MA operator is then reasonably certain that all munitions have been identified and removed. MAG began operations in October 2018 and completed operations in September 2019. The total amount of time spent was 1326 hours.³⁴

In the case of CBU 838, the strike footprint approached and then went over a steep incline into a deep ravine. Clearance operations, including mechanical and manual assets, proceeded with clearing terrain which was accessible. To clear for cluster munitions on the cliff face and in the ravine would require specific mountaineering equipment, as well as training for deminers. The TS would require personnel wearing protective equipment to additionally wear a harness and rappel down the cliff face while continuing with the rigorous adherence to the area required for survey, and then identifying and removing explosive hazards. This was deemed beyond the scope of ARE, as the time and resources required to train for and conduct these operations would come at a cost of not clearing other areas with higher exposure to the civilian population, posing a higher risk, and bearing a higher priority.

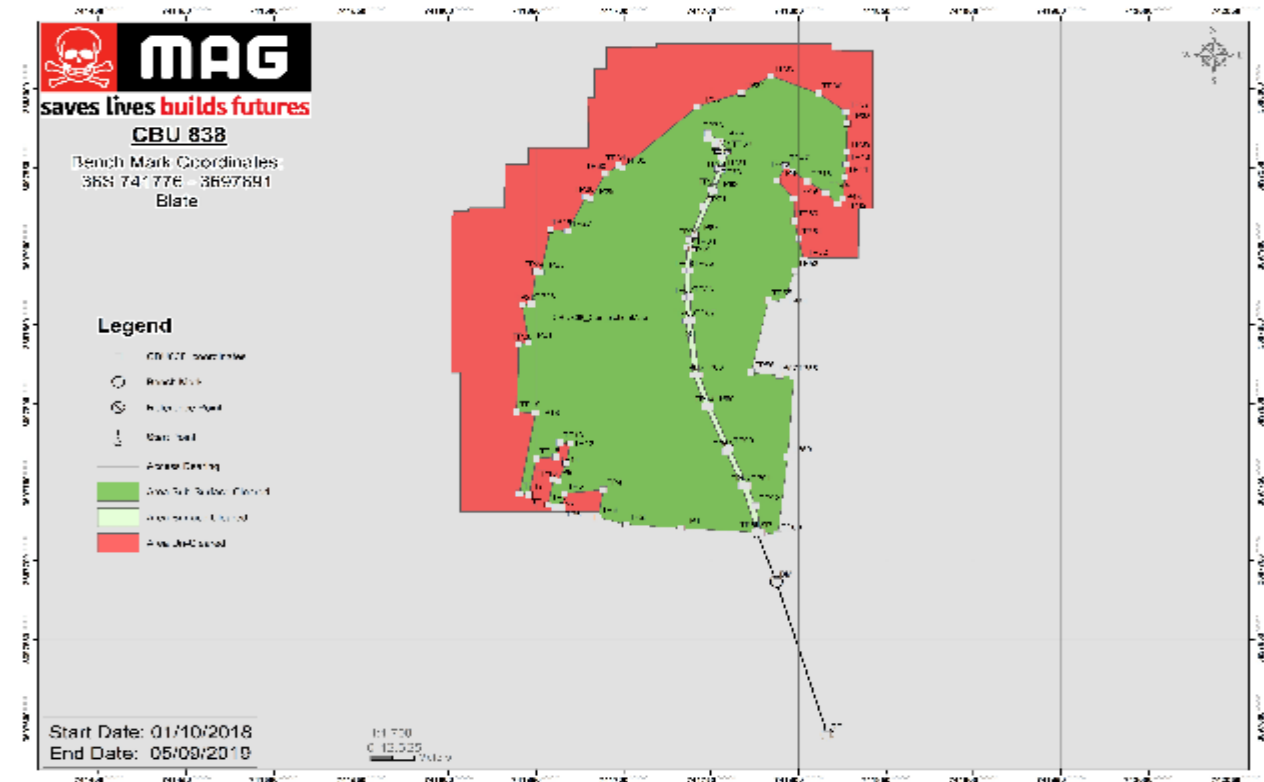


Figure 6: Cleared and residual land of CBU 838
Source: MAG

³⁴ MAG CBU 838 Completion Report. Courtesy of MAG International, 2021.

The Technical Operations Manager for MAG, Ivica Stillin, passed this finding to LMAC, along with the recommendation to move on to another location. Having coordinated with LMAC, MAG cleared the accessible area, making sure to mark the areas (both physically on the ground, as well as specifically on the maps and in the report) remaining as contaminated (see Figure 6). The site was considered as completed. The area cleared was released back to the landowner, and the remaining area was assigned to a new, low-priority residual risk task. While the residual risk category remains undefined, in practice it is clearly understood and applied. The completion report was delivered to LMAC, where in December 2020 the data was entered into IMSMA.

CBU 838 is clearly an example of applying ARE to remove contamination, while consciously leaving a certain level of potential threat remaining. This approach, perhaps not termed “residual risk management” in every case, is a response which is not just appropriate, but one where further effort would almost be negligent until land use changes. TNMA 07.12/02 states:

“where required, it is also important that the re-classification of land and the redefinition of the boundaries of SHA and CHA polygons can be justified by clear decision-making criteria, as the LR process moves forward.”³⁵

This evolution of response in Lebanon from immediate post-conflict to proactive survey and clearance to a residual state is seen in many other countries which have had more time of post-conflict to recover. As LMAC sees additional instances of cases like this arising, they have begun to address this issue of “residual threat” directly. In this case, a special study of “hard to reach areas” has been commissioned to help generate specific criteria as to what constitutes “hard to reach,” to ensure that all credible threats are removed, and that actual residual threats remain low.³⁶

CONCLUSION

Lebanon is a good example of how the evolution of policy is catching up with reality on the ground. For example, the TNMA 07.14/01 on Residual Risk Management was released in January 2020 as a first step in beginning to solidify guidance on dealing with residual contamination and

³⁵ TNMA 07.11/ 03 All Reasonable Effort https://www.mineactionstandards.org/fileadmin/user_upload/TNMA_07.11_03_All_Reasonable_Effort_03.pdf (accessed 01 May 2021).

³⁶ Author phone conversation with Ivica Stillin, MAG International. 12 March 2021.

providing guidance for each country to define its own requirements for achieving and adequately responding to a residual state. Yet the current situation in Lebanon shows that instances of “residual response,” whether LAF/ER spot tasks or MAG leaving inaccessible terrain for later work, are already taking place.

Several restraints in this case study precluded a more in-depth analysis. As per Ministry of Defence policy, members of the Engineering Regiment are not permitted to discuss their work with outside agencies, and this report relied exclusively on information relayed through third parties. This restriction is not uncommon, but nonetheless reduces transparency in a sector which seeks improved quality management as a hallmark of ARE.

The limited legislation on liability is notable as well. Two instances of claims brought against MA operators, LMAC, or the government of Lebanon were raised, yet detailed information of these cases was still not available at time of publishing. While legislative obligations form one part of understanding liability, it is when these laws are tested in courts that the liability landscape is more clearly identified. In the absence of these guideposts the civilian sector often turns to guidelines from external sources. Further research on commercial development projects, particularly insurance requirements for professional and public liability, could identify sources for mitigating liability which are not codified nationally, but exist practically. In any case it is essential that

“a reliable, transparent, and well documented Quality Management System (QMS) is established at the national and operator level, to ensure that mine action organisations conduct their operations in compliance with approved NMAS and SOPs.”³⁷

The institutional framework in Lebanon for handling residual tasks has not evolved haphazardly. LMAC has taken an active role in defining processes and establishing responsibility since LMAC was founded in 2007. While LMAC will be the first to point out the need for continued improvement, it is important to recognise that the architecture in Lebanon takes advantage of International NGOs and funds from donor countries, while having clearly established national responsibility and capacity in LMAC and the LAF. As Lebanon looks toward a future where the hazards of cluster munitions and landmines are no longer a significant threat, it will remain poised to respond quickly and efficiently to instances of explosive ordnance which may continue to arise.

³⁷ TNMA 07.11/ 03 All Reasonable Effort https://www.mineactionstandards.org/fileadmin/user_upload/TNMA_07.11_03_All_Reasonable_Effort_03.pdf (accessed 01 May 2021).