



# Lebanon

LANDMINE IMPACT SURVEY

Certified by the  
United Nations Certification Committee

Implemented by  
Mines Advisory Group and  
Vietnam Veterans of America Foundation's  
Information Management and Mine Action Programs

The Landmine Impact Survey in Lebanon summarizes the results of a nationwide socio-economic survey of the effects of landmines and UXO on communities in Lebanon. This survey was conducted over a 12 month period, ending in August 2003. This document is only one in a series of reports, which collectively constitute the Global Landmine Survey Initiative. This initiative aims to catalog the socio-economic impacts caused by landmines and UXO and to store this data in a manner that supports strategic national planning and resource allocation decisions.

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# Executive Summary

## SUMMARY OF CONCLUSIONS

The Landmine Impact Survey conducted in the Republic of Lebanon from March 2002 until August 2003 identified 306 mine-impacted communities that contain 933 distinct mine and UXO contaminated sites.

Lebanon has an estimated 137 square kilometres of contaminated land, which directly affects the livelihoods and safety of more than one million persons. A thorough verification exercise suggests that the survey was successful in reaching at least 96.9 percent of the affected communities in Lebanon. The data collected afford extensive opportunities for research, analysis, and project planning, and lead to several key conclusions:

- For historical reasons, Lebanon's two southern provinces of Nabatiyah and South Lebanon form a homogenous area and, together, contain some of the most affected areas in the country.
- However, as a province, Nabatiyah is the most affected, containing one quarter of the contaminated land and the majority of highly impacted communities. Nearly half of the recent mine incidents in Lebanon have occurred in this province. Mount Lebanon is also highly affected with one third of the contaminated land and 22 recent victims. The Bekaa Valley contains more than 15 percent of the contaminated land nationwide and 21 recent victims.
- Picnic walking and herding are the most frequently reported activities at the time of a mine incident. Playing and tampering with mines is also a significant contributor to mine incidents.
- Surveyed communities reported that rain-fed cropland and pastureland are contaminated by mines and UXO. The loss of access to this land has the greatest adverse impact on rural communities dependent on agriculture and herding.
- The profile of the average mine incident victim in Lebanon is a working-age male engaged in income-generating or leisure-time activities. The data indicate that 28 recent victims are children under the age of 15.
- Less than one percent of the mined areas in Lebanon are reported to be made up of flat land without any significant vegetation cover. Most of the contaminated land is made up of terrain of high relief and is covered with bushes and trees, presenting particular challenges to clearance teams.
- Communities that have emerged most recently from conflict, notably those communities in the south and in the Bekaa Valley, have the largest number of victims. The magnitude of the contaminated area also influences the victim rate. Interestingly, the size of the population in affected communities does not influence victim rates.

## BACKGROUND AND PROJECT OVERVIEW

Lebanon has not yet signed or ratified the Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and On Their Destruction. The Lebanese authorities, although making it clear that they will not sign the treaty until Israel does so, publicly support its underlying principles and implements all relevant international standards and protocols. In 1998, the Lebanese government established the National Demining Office as the national mine action coordination agency in Lebanon.

The Landmine Impact Survey in Lebanon began in March 2002 when the Mines Advisory Group (MAG), an international mine action NGO based in the UK, signed a grant contract with the European Commission in Brussels. MAG was then able to send an international team made up of the survey manager and deputy to initiate operations to start the survey in-country. MAG implemented the survey in accordance with the principles and operating protocols established by the Survey Working Group (SWG) and the UNMAS Certification Guidelines. The data collection phase started in September 2002 and was completed in May 2003, the office closing in August of that year.

The survey was fully funded by the European Commission with an in-kind donation of survey office space and utilities for the entire period of the survey by the National Demining Office.

MAG executed the survey with two international staff members, one international consultant and technical support from the Vietnam Veterans of America Foundation (VVAFA). Field supervisors, field editors, data collectors and all support staff were Lebanese nationals, totaling more than 50 people. The field staff was organized into four teams that traveled throughout the country. The survey coordination office and database was located in Beirut. Data collected was coded and entered into the Information Management System for Mine Action (IMSMA). In addition to office space and utilities, the NDO provided the MAG team with extensive support during the survey, including consultation, coordination and liaison with military intelligence for security issues and with other stakeholders.

## SCOPE OF THE PROBLEM

The survey conclusively identified five mine-affected provinces out of the total of six provinces in Lebanon. Within these provinces, a total of 306 communities were identified as affected by mines and/or UXO.

Nabatiyah province has 65 affected communities, with 220 contaminated areas and 35 square kilometres affected. Mount Lebanon has 115 affected communities with 359 affected sites and 50 square kilometres contaminated. South Lebanon province has 52 communities, with 181 contaminated areas totaling 19 square kilometres. The Bekaa Valley reported 45 communities affected, with 139 contaminated sites and more than 19 square kilometres of affected land. North Lebanon is the least-affected, with only 29 communities and 81 sites affected,

TABLE 1

**AFFECTED COMMUNITIES BY PROVINCE**

Impact category	Bekaa Valley	North Lebanon	South Lebanon	Mount Lebanon	Nabatiyah	Total
High	4	4	4	6	10	28
Medium	15	19	33	54	43	164
Low	26	6	15	55	12	114
TOTAL	45	29	52	115	65	306

totaling 12 square kilometres. Most of the affected communities in the North lie within the district of Batroun.

In Table 1 the survey results at the level of the province are presented.

The survey found an estimated 3.47 new victims per year per 100,000 population. Victim rates are unequally distributed across provinces, with the provinces of Nabatiyah, South Lebanon and Mount Lebanon having the highest rates. Along with certain districts in the Bekaa Valley, the south of the country suffers rates several times those reported for Mount Lebanon and the North.

## IMPACT ON COMMUNITIES

The impact survey standard scoring mechanism was used to rank communities in broad categories, which reflect the degree of mine impact. Using this ranking system, Lebanon contains 28 “high-impacted” communities, 164 “medium-impacted” communities, and 114 “low-impacted” communities.

The indicators used to determine this ranking include the number of victims in the past 24 months, blocked access to facilities or livelihood areas, and the nature of the contaminating munitions. In Lebanon, 97,685 people live in highly impacted communities, 615,968 in medium-impacted communities and 373,596 in communities where impact is low.

The affected communities lying along the Blue Line also make a special case. Much of the land owned by these communities' will be opened up for potential agricultural use by the Litani and Wazani water supply projects. However, all of these communities have land blocked by landmines and UXO. These communities form a dense cluster of 21 high and medium-impacted communities that need to be prioritized for mine clearance, if the potential being released by these water supply projects is to be realized.

## IMPACT ON SECTORS

The survey collected extensive information regarding the types of livelihoods that are denied local populations because landmines and UXO are present. Rain-fed cropland is the most frequently reported blocked resource type—82 percent of all communities indicate some loss in this regard. Blocked access to pastureland is the second most commonly reported loss, followed by non-agricultural land (e.g., forest) and then irrigated crop land. In Lebanon, mines and UXO rarely affect roads, housing areas and other major types of infrastructure.

## **MINE INCIDENTS**

The survey identified 108 persons that had come to harm or death due to a mine incident in the 24 months preceding the survey. A further 2,259 victims were recorded from incidents in earlier years. Recent incidents took place in 54 out of the 306 impacted communities in Lebanon, and the highest rates of injury were in Nabatiyah province. At least 94 percent of all recent victims are males, mostly clustered into the prime working years of between 15 to 29 years of age (20 percent), and 30 to 44 years of age (31 percent).

The most frequent activity at the time of injury was reported to be picnic walking (17 percent), followed by herding animals (16 percent). Tampering and playing with munitions caused 15 percent of recent incidents. In the most general terms, the typical profile of an average mine incident victim in Lebanon is a working-age male, herding his animals or out walking or enjoying his leisure time.

## **CAUSALITY**

Statistical analysis of the survey data, particularly that relating to community attributes, allows one to see relationships between a variety of factors and the risks that mines pose to specific communities. In Lebanon, survey teams found that those factors most associated with past conflict, particularly the length of time since conflict ended in a community and the size of the contaminated area, outweigh other factors that might allow the community to adapt to the risk that it faces. Reliance on business or trade also reduces a community's risk factor, taking people away from intense use of land.

## **BUDGET AND EXPENDITURE**

The final international expenditure for the impact survey in Lebanon was 1,360,000 EUR. Of this amount, approximately 160,000 EUR was spent on non-expendable equipment that was provided to the NDO and is now available to support other mine action efforts.

## **CONCLUSION**

The results of the impact survey plainly indicate that Lebanon still suffers adversely from the presence of landmines and UXOs, especially in its southern provinces and Mount Lebanon. Clearly, the extensive contamination that exists in Lebanon's crop and pasture land will pose a hazard for many years to come. The information gained during the impact survey process will allow for the development of an appropriate, well-targeted response that combines marking, area reduction, and large-scale clearance. The results can also further contribute to the development and refinement of planning in mine risk education and victim assistance in a manner that will produce positive and immediate results.



#### **NATIONAL DEMINING OFFICE**

Casern Chourkri Ghanem  
Fayadieh, Baabda, Lebanon  
Email: [ndoleb@dm.net.lb](mailto:ndoleb@dm.net.lb)  
Phone: +961 5 956 193 - 143  
Fax: +961 5 956 192 or 952 637



#### **MINES ADVISORY GROUP**

47 Newton Street  
Manchester M1 1FT, UK  
Phone: +44 161 236 43 11  
Fax: +44 161 236 62 44  
Website: [www.mag.org.uk](http://www.mag.org.uk)



#### **VIETNAM VETERANS OF AMERICA FOUNDATION**

1725 I Street, NW, 4th Floor  
Washington, DC 20006, USA  
Phone: +1 202 483 92 22  
Fax: +1 202 483 93 12  
E-mail: [survey@vi.org](mailto:survey@vi.org)  
Website: [www.vvaf.org](http://www.vvaf.org)



#### **UNITED NATIONS MINE ACTION SERVICE**

304 East 45th Street  
Room FF-360, United Nations  
New York, NY 10017, USA  
Phone: +1 212 963 18 75  
Fax: +1 212 963 24 98  
E-mail: [mineaction@un.org](mailto:mineaction@un.org)  
Website: [www.un.org/depts/dpko/mine](http://www.un.org/depts/dpko/mine)