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## Background on the Mine/UXO Problem

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# The Impact of Landmines on Socio-Economic Development in Southern Lebanon

Twenty-two years of conflict have left a significant number of unfenced and unmarked mine fields in southern Lebanon, requiring strong coordination between various organizations in order to meet emergency demands.



by Mohamed Abdulkadir Ahmed, M.Sc., MACC

## Background on the Mine/UXO Problem

The Israeli Defense Forces (IDF) and their de-facto forces (DFF) laid a significant number of landmines throughout the 22-year occupation of southern Lebanon. The majority of these mined areas remains unfenced and unmarked. It is estimated that approximately 150,000 landmines are

currently emplaced in Lebanon, excluding the liberated areas. The Lebanese Army has indicated that there are other mine fields and dangerous areas present in Lebanon. In addition to the number of mines indicated, the known quantity of mines in the liberated area is almost 70,000 AP and AT mines in 191 mine fields. This does not include information on suspected mined or dangerous areas, booby-trapped border mine fields and other DFF-laid mine fields.

Booby-traps and improvised explosive devices currently present a high threat to the population of several localities in southern Lebanon. Two hundred eighty-eight of these devices requiring immediate clearance have been identified and recorded in the United Nations Interim Force in Lebanon Area of Operations (UNIFIL AO). With the vast quantities of UXO littering the area and a residual landmine threat from earlier conflicts, the scope of the problem is significant. Mine fields lie along the entire length

of the international border, booby-traps exist along the former Israeli Controlled Area (ICA), and inland mine fields run along major road networks of the towns Bent Jbeil, Baraachit and Al Qantarah and through Lithani River beyond UNIFIL AO. This information does not include suspected or dangerous areas.

Following the withdrawal of IDF from southern Lebanon in May 2000, a number of deaths and serious accidents occurred in the former ICA. So far, the total number of deaths in southern Lebanon is 16, with 94 seriously injured. Recognizing the serious humanitarian nature of the problem and determined to further strengthen their mine action capacity, the Lebanese authorities asked the United Nations for support.<sup>2</sup> In November 1998, after consulting with other UN agencies and the government of Lebanon (GoL), the United Nations Mine Action Service (UNMAS) offered a multidisciplinary inter-agency mission to assess UN

(R-L) M35 in FINBATT AO. Farming activities along border mine field. Antipersonnel Mines AP-no. 4. c/o UNMACC.



## Socio-Economic Impact of Landmines in Southern Lebanon

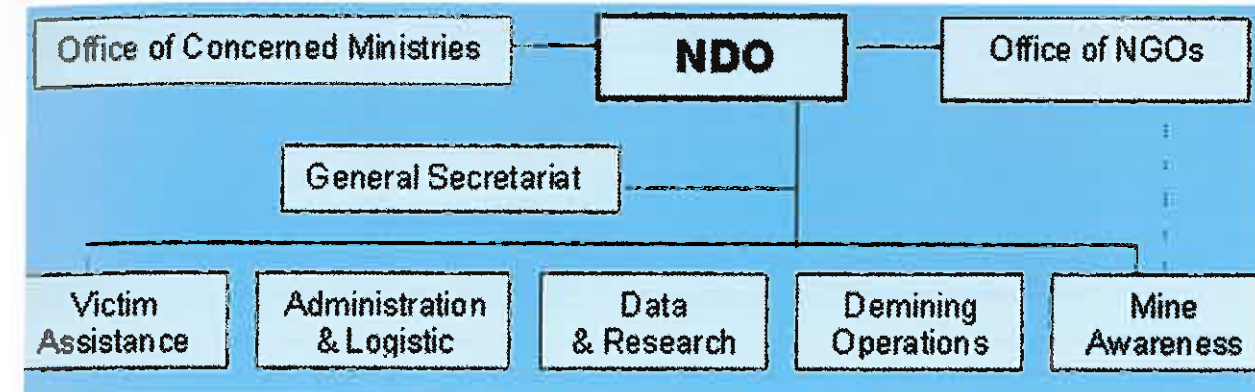


Figure 1: Structure of the National Demining Office. c/o Mohammed Abdulkadir Ahmed

assistance needs. This mission took place from 1 February to 5 February 1999. A further mission assessment was conducted by UNMAS from 26 May to 1 June 2000<sup>3</sup>, and at the request of UNIFIL, the Mine Action Coordination Cell (MACC) was established within UNIFIL in July 2000. The project is managed by the United Nations Office of Project Services (UNOPS) through a Military Operations Area (MOA) with UNMAS.

The impact of the landmine problem in southern Lebanon also includes issues of internally displaced people, basic services and socio-economic development.<sup>4</sup> After the conflict, all humanitarian and development assistance efforts were hampered by the threat of mines, resulting in a lack of rehabilitation and resettlement areas, a lack of land for agriculture, an increase in costs of development, a deterrent to tourism and, of course, a devastating impact on people. Experience has shown that an integrated approach to a landmine/UXO and social rehabilitation problem in an affected country is necessary to achieve maximum efficiency, to reduce risk, and to achieve increased security. Additionally, an integrated response could address the problems of mine/UXO surveying, marking and clearance; terrain verification; and

mine awareness in a coherent and coordinated manner.<sup>5</sup>

## Organization of Mines/UXO Clearance in Lebanon: The National Demining Office (NDO)

Since Lebanon has a limited national mine action capacity, mine clearance is a slow process. The resources of the country are scarce and the social pressure is very high. The National Demining Office (NDO) of Lebanon was created in 1998 as the only body within the Lebanese Armed Forces legally responsible for coordinating mine action and physically undertaking demining operations in Lebanon.<sup>6</sup> The NDO, staffed by military officers as shown in Figure 1 above, was established with the assistance of the U.S. government.<sup>7</sup>

Mine awareness activities in Lebanon are primarily implemented through NDO with Landmine Resources Center (LMRC), World Rehabilitation Fund (WRF), United Nations International Children's Emergency Fund (UNICEF), United Nations Education, Scientific and Cultural Organization (UNESCO), Save the Children (Sweden) and the Lebanese Red Cross, with the support of International Committee of Red Cross (ICRC). The MACC conducts mine awareness training to the United Nations Truce Supervisory Organization/Lebanese Observer Group (UNTSO/OGL) Team deployed in UNIFIL AO along the

border and to the civilian staff of UNIFIL.

Since 1990, the Engineering Brigade of the Lebanese Army has conducted mine clearance addressing humanitarian and rehabilitation needs, especially in the northern areas of the Lithani River.<sup>8</sup> The army has cleared some 315 mined areas of the 834 they have identified. They have destroyed approximately 4,000 anti-tank mines and 20,000 antipersonnel mines. They have also destroyed some 40,000 UXO and Improvised Explosive Devices (IED).<sup>9</sup>

## The Role of the UNIFIL in Mines/UXO Clearance

UN Resolutions 425, 426 and 511 do not give sufficient guidance to authorize UNIFIL to undertake Humanitarian Demining in the AO. So far, UNIFIL's concern in demining activities has been purely operational in areas where its troops had to be located. As at the end of September 2001, 4,365 mines/UXO of all natures had been neutralized.

Emergency demining undertaken by UNIFIL is usually requested from the local population and involves the clearance of mine fields and clusters to extricate victims or mines/UXO that are clearly identifiable and pose an immediate threat. However, due to the legal implications of accidents in cleared areas, mine clearance in populated areas should be classified as humanitarian demining and therefore

**Table 1:** Mine fields and incidents occurred in each UNIFIL AO. c/o UN MACC IMSMA Database, Tyre, Lebanon: September 2001.

UNIFIL AO	No. of minefields	Size area (m <sup>2</sup> )	Injuries	Deaths	Total
FIJIBATT AO	43	1783979	5	2	7
NEPBATT AO	20	777968	7	0	7
IRISHBATT AO	54	2993251	21	3	24
GHANBATT AO	14	1543583	5	2	7
FINBATT AO	78	4674483	2	0	2
INDBATT AO	86	4186479	8	1	9
<b>Total</b>	<b>295</b>	<b>15948561m<sup>2</sup></b>	<b>48</b>	<b>8</b>	<b>56</b>

conducted by accredited humanitarian mine-clearing NGOs and agencies capable of meeting the International Standards for Humanitarian Mine Clearance Operations.

The UN Security Council Resolution 1337, paragraph 10 allows UNIFIL to expand and undertake emergency demining activities in southern Lebanon. UNIFIL, with an increased capacity (particularly including mechanical mine clearance equipment) could better contribute to clearance efforts within its Area of Operations by carrying out emergency tasks, including mine field marking and fencing, in addition to clearance tasks. This would be implemented through a partnership between the UNIFIL-Ukrainian Engineer Battalion and specialized NGOs.

The MACC in Naqoura, UNIFIL HQ and Tyre have created an appreciable database for known and suspected mine fields, booby-trapped areas, areas cleared of mines, and recent incidents as shown in Table 1 above. Map 1 below represents the UNIFIL areas of operation subdivided into six battalions: Fijibatt AO, Nepbatt AO, Irishbatt AO, Ghanbatt

AO, Finbatt AO and Indbatt AO, with a total strength of 4,500 troops to be reduced to 3,600. The reduction of troops will reflect on the whole activities of UNIFIL, reducing the areas of operation to three: Fijibatt AO, Ghanbatt AO and Indbatt AO. The proposed UNIFIL reduction and deployment will be effective at the end of October 2001 when Irish and Finnish will complete their departure.

### The United Arab Emirates Support for Demining Southern Lebanon

The United Arab Emirates (UAE) confirmed their intention to contribute \$50 million (U.S.) in mine action support to southern Lebanon.

The UN strategy highlighted in the "International High Level Workshop for Demining Lebanon – Beginning with the Southern, 21–22 May 2001" is designed to assist the government, and in particular the NDO, to build on the capacity that has so far been established, utilizing means already available to the UN system within Lebanon. This will entail the coordination of support

provided by various UN agencies (UNDP, UNIFIL, UNMAS, UNOPS, MACC, UNICEF, UNESCO, WHO and UNOCHA) under the guidance of the Personal Representative of the United Nations Secretary General (PRSG), the UN Resident Coordinator and the FC of UNIFIL. Under this strategy and with the financial support of UAE and other donor communities, the demining goals could be realistically achieved in the short term to accelerate mine action on the ground and to enhance the national capacity for a sustainable response in the short and long terms.

The MACC, which has been established as part of the UNIFIL since June 2000, is playing a key role in coordinating activities, gathering and disseminating information and prioritizing within the UNIFIL AO. It is important to sustain this mine action coordination capacity in the South in order to assist the NDO in additional demining activities. In particular, the MACC will facilitate cooperation and implementation of joint operations with UNIFIL, the Lebanese Army and other partners.

The ongoing exchange of information and collaboration between MACC and NDO will closely examine areas of operation between UAE and the Lebanese government. From this perspective, Map 1 on the previous page shows the proposed zones of operation where NGOs and commercial companies could work and where, for security reasons, the NDO will focus.

### The Role of UNMACC and IMSMA

A critical first step for any mine action response is establishing an effective mechanism for coordinating various activities of the host government, aid agencies, various international and local NGOs and bilateral aid missions. UNMACC's role is to coordinate UNIFIL's operational demining activities, to liaise with all actors involved in mine action in southern Lebanon and to gather, collate and input information from the UNIFIL AO into the IMSMA database, working closely with the NDO. Also, MACC has recently opened an office in Tyre that is accessible to all mine action programs. It will maintain a central mine/UXO database and will function as the focal point for all mine/UXO-related activities in southern Lebanon.

### Planning and Implementation

The absence of sufficient information on the landmine situation in Lebanon is putting logical constraints on the overall planning and management activities required in the humanitarian demining process.

Planning a humanitarian demining action requires the development of a common understanding of the concept. Prioritization and strategic decisions for mine action and operations should be based on reliable information. This requires coordination, harmonization and integration of information systems. In Lebanon, the lack of coordination in humanitarian demining operations is explained by the lack of institutional capacity and resources necessary in decision-making.

Under the umbrella of the United Nations International Standards for Humanitarian Mine Clearance Operations, agreement could be reached on the required referenced data and reference information that satisfy the needs of humanitarian demining programs. Interoperability between the stakeholders in Lebanon could be achieved if they define and adopt the same approach and standard. The use of IMSMA-GIS development would ensure the availability of consistent and reliable information for strategic decision-making, achievement of interoperability among information systems for humanitarian demining operations and the best use of quality control and standards.

Standardized surveys will help identify priorities through ranking criteria and weighting systems. They will also identify the type of impact: humanitarian (risk, incident/accident data, behavioral change before and after), political (peace consolidation in the area and integration of isolated areas), social (settlement, shelter,

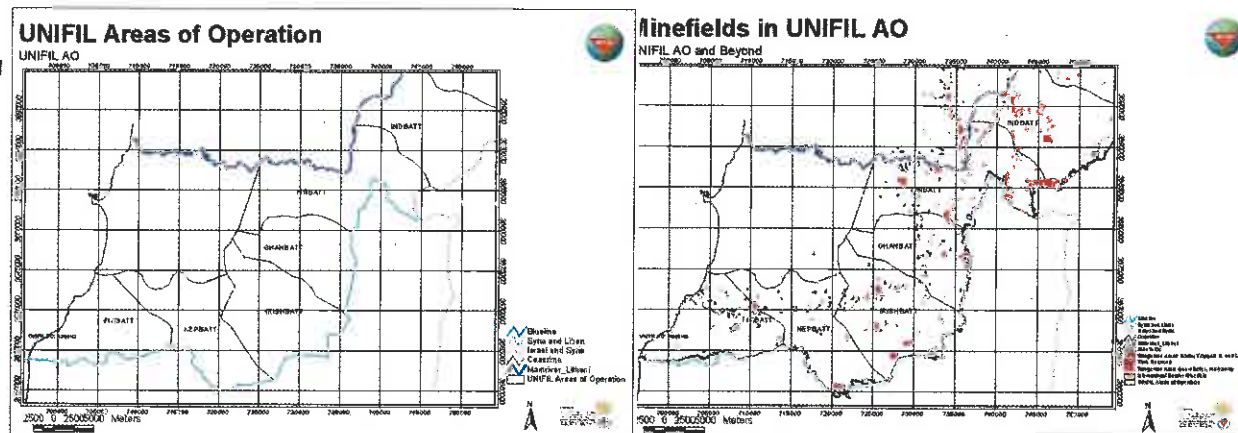
water, health and education) and economic (agriculture, rural livelihoods, infrastructure, trade, industry and mining). These findings could provide useful input to the Five Years Development Plan of the Lebanese Government for Southern Lebanon, speeding up its implementation in the affected areas.

### Level One Impact Survey, Technical Survey and Impact Factor/Score Variables in UNIFIL AO's Mine-Affected Communities

The Level One Impact Survey of Lebanon is part of the international community's effort with EU funding to obtain standardized core baseline data on mine contamination, thus setting priorities for intervention. It is likely to be undertaken throughout Lebanon by Mines Advisory Group (MAG) in close cooperation with NDO and other national agencies. The Survey Action Center (SAC) will technically assist the Level One Impact Survey by collecting all relevant data required to support a follow-up on mine action activities in the areas of technical survey, clearance, mine awareness education and victim assistance. It will provide data for the development of clear priorities, improved planning and resource allocation. The survey will be certified by the United Nations and used for development of the IMSMA. Assessment of the completed report will give national authorities, as well as donors, a tool to support well-designed projects that serve the greatest socio-economic needs of the population.

(R-L) Finbatt demining activities near border mine fields. Raisu at work. Ukraine Battalion demining activities. c/o UNMACC

(R-L) Map 1: UNIFIL Areas of Operation  
Map 2: Mine fields and Incidents in UNIFIL AO c/o UNMACC



So far, the Level One Impact Survey (for all of Lebanon) and the Technical Survey planned for UNIFILAO in order to undertake emergency demining activities are still in policy-preparatory phase. In the absence of the Level One Impact Survey, MACC has started using various documents to prioritize its own impact factor variables. This will provide an approximation of the degree of impact on communities, based primarily on victims' data, presence of mines and data from field reconnaissance.

Scoring and classifying mine-affected communities according to the severity of impacts are a central element of the Level One Impact Survey. The score is indifferent to the number and size of mined areas and community needs. The pattern of mine fields, dangerous areas and booby-trapped zones follows the former ICA security zones, making it easily identifiable. The methodology reflects the elements of factors-scoring mechanism and variables normally used to set responses to the country conditions within the guidelines that the SWG and SAC have set in the interest of international consistency. The variables indicate a primary presence of mines/UXO (10 total) and mine victims in the last 24 months.

For this study, acquiring data is an ongoing effort. From the sources listed and the MACC IMSMA-GIS database, analyses were derived by buffering the "livelihood space," correlating socio-economic activity and geographic space of contaminated areas by town using GIS, correlating incidents to mine fields/dangerous areas and agricultural and grazing land, as well as identifying types of water sources from UNIFIL AO digital maps and ArcLEB Data. The "livelihood space" is advised and

explored by SAC. The peculiarity of southern Lebanon makes this space a 500m x a 1000m radius circle around town centers, 200m on both sides of main roads excluding other roads. Types of factors/blockages to be considered in UNIFIL AO are: farmland and pasture, water (wadi and small rivers), housing, roads and other infrastructures (religious sites and outdoor areas around small rivers).

The MACC approach to envisaged clearance activities without the Level One Impact Survey or Technical Survey is to prepare task folders containing all available records with maps detailing all necessary GIS themes for each high-impact mine-affected community. In the immediate future, tasking the Ukraine Battalion for survey and marking operations is possible. Such an event involves MACC's coordination through meetings and fieldwork in order to achieve coherent and consistent data to set priorities.

### Linking Landmines to Social Rehabilitation in Southern Lebanon

#### Issues, Constraints and Opportunities

The liberation of southern Lebanon has provided an historic opportunity to further strengthen the national reconciliation and to build a broad national consensus on a political, developmental and livelihood rehabilitation agenda. The integrated development program for the liberated areas in southern Lebanon coordinates with the Council of Ministers' decision No. 2/79, dated 23 May 2000. The

plan sets the framework for identifying the needs of liberated areas and defining necessary steps for sustainable livelihoods. However, in its key summary budget, Mine Action Assistance is the last category ("C") in terms of priority with only one percent of the planned budget, while it is one of the major backbones for the category "A: Basic Services and Socio-economic Development," which accounts for 88 percent of the total budget.<sup>10</sup>

The economic and development policies that have taken place in Lebanon since its independence in 1943 have focused on Beirut as a major economic center.<sup>11</sup> This led to unequal growth and aggravated social tensions along sectarian lines. In addition, the situation became more traumatic for the South during the IDF occupation. The 22 years of Israeli occupation produced internally displaced people and a massive rural-urban migration to the North, aggravating and increasing previous inequalities. The dramatic change in demographic characteristics of the current population poses challenges for developmental planning. The level of the population is estimated at approximately one-third of pre-occupation levels.<sup>12</sup> When one considers that the displaced population is likely to return to the area in the near future, the scope and potential impact of the landmine problem worsens.

The endurance of the country through unbalanced economic development and political instability has led to a new configuration in the post-war period. The requirements for

balanced development are essential elements for national reconciliation.<sup>13</sup> Overall, distributional equity cannot be given a lower priority than economic growth in the process of peace consolidation in Lebanon. The failure of mainstream planning is fully highlighted by past experiences, and no state is capable of satisfying its own people's legitimate needs. Therefore, the challenge for Lebanese policy-makers, intellectuals and planners is to capture the historical event of southern Lebanon's liberation and to recover the political community as a central guiding vision for social reconstruction in the South.<sup>14</sup>

### Conclusions and Recommendations

The significant presence of landmines and UXO from years of conflict and occupation continues to cause slow economic development and infrastructure rehabilitation in Lebanon. The proliferation of landmines in southern Lebanon is the outcome of the IDF and de-facto forces. This presence of mines/UXO ties up valuable resources, thus blocking development in most post-conflict societies. The social and economic destruction, as well as the human cost of landmines in terms of lives and disabilities, dictates the need for prompt and effective actions against mines. Generating mine action programs in post-war countries poses particular challenges, especially in the Middle East, where the political situation remains fluid and dynamic. The growing need for mine action programs and the difficulty of coordinating effective institutional and technical capacities illustrate the importance of considering appropriate policies in planning and managing demining activities.

The use of IMSMA-GIS in the planning process will help introduce a common language, coordinate

demining activities, reduce duplication of effort and information, identify lacking data to improve and support decision-making, and promote the involvement of NDO, UNIFIL, UN MACC, LMRC, MAG and other supporters. This process will also unify methodologies and approaches to demining with comparable output results and equitable distribution of humanitarian services and rehabilitation of infrastructure. In the meantime, MACC has prioritized communities to assist in developing immediate work plans for clearing mines, subject to the expected outcome of Impact/Technical Survey/Field Reconnaissance.

Mine action in southern Lebanon should be part of a wider mine action plan for Lebanon supported by international assistance. The scope of the landmine problem in southern Lebanon calls for strong coordination mechanisms. While the NDO has a clear mandate to organize all mine action activities throughout Lebanon, it may not be prepared to meet the emergency requirements of the South. Political considerations may impact the deployment of the Lebanese Army in the South and therefore, the work of the NDO in the area. The role of MACC in this case will be vital for coordinating between NDO, UNIFIL, UN agencies, NGOs and international donor communities. ■

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