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The National Demining Office in Lebanon, 1998–2004

by Brigadier-General George Massaad, *Former Director* and Brigadier-General Salim Raad, *Director, NDO Lebanon* with Colonel Kassem Jammoul, *Operations Section Head* and Colonel (Ret'd) Chip Bowness, *UNDP Chief Technical Advisor, Lebanon*

Background

Mine action in Lebanon only became highlighted internationally since the withdrawal of Israeli forces in May 2000. Wars and occupation during the past 25 years have left hundreds of thousands of mines and UXO scattered throughout Lebanon, including cluster munitions. The draft national Landmine Impact Survey (LIS) indicates that as of September 2003, more than 30 percent of the national population of 3.7 million is affected, and estimates that 1.4 percent of the landmass or about 137 million square metres remains potentially contaminated by mines and/or UXO. This is a significant detriment to socio-economic development.

South Lebanon and Nabatieh provinces are the most affected, followed by Mount Lebanon. As of 31 December 2003, an estimated 75 percent of the more than 400,000 landmines believed to be still in the ground throughout the country were in southern Lebanon. A large portion of the mines in southern Lebanon lie in the immediate area of the UN-delineated "Blue Line" along the Lebanon/Palestine border, affecting more than 90,000 inhabitants. However, minefields and suspected areas containing over 150,000 mines are located throughout the remainder of the country.

Several milestones mark the evolution of mine action in Lebanon. Between 1990, when the country was reunified following the Taif agreement, and 1998, when the National Demining Office (NDO) was established, the Lebanese Armed Forces (LAF) Engineer Regiment cleared mines and UXO from more than 20 square kilometres of land.

In 1998, the Lebanese Council of Ministers established the NDO Lebanon under the Lebanese Army Command and the Ministry of National Defense (MOD) as a coordinating body for demining, mine awareness (now known as mine risk education or MRE) and mine victim assistance activities. Also in 1998, U.S. humanitarian demining support began in the areas of demining training and provision of essential demining equipment.

In 2001, subsequent to the liberation of south Lebanon from Israeli enemy occupation, the United Nations established a Mine Action Coordination Centre (MACC) in the south of Lebanon (an area of about 700 square kilometres in the southern portions of Nabatieh and South Lebanon provinces) to support United Nations Interim Force in Lebanon

(UNIFIL) operations. That year also marked the establishment of the Operation Emirates Solidarity (OES) mine clearance project funded by the United Arab Emirates (UAE). As part of this project, the MACC-South Lebanon (MACC-SL) was established to provide technical support to the OES Project. In 2002, the NDO began using international mine action standards. Brig. Gen. Salim Raad was appointed as the new Director of the National Demining Office on 3 August 2004.

National Demining Office Role

The role of the NDO has expanded since 1998 to include all activities under the term mine action, as defined in the International Mine Action Standards (IMAS). The enabling activities of information management and the regulatory process, including national standards, accreditation and licensing, and quality management, are also included as core functions.

The NDO also implements policies on behalf of the Lebanese Army Command and MOD. The National Mine Action Authority policy decisions and other matters requiring high-level coordination with other government departments (OGD) are made by the MOD/LAF with the advice of the NDO director. The NDO coordinates the work of the organizations and entities that execute humanitarian mine action in Lebanon. This does not include operational mine clearance undertaken by UNIFIL assets; however, information concerning mine clearance is provided to the NDO through the UN MACC.

Mine Action Strategy and Policy Development

In 2001, the LAF/NDO developed a mine action strategic plan (2001-2006) that has been used to guide activities to the end of 2004. This plan describes the problem faced, lists activities, and identifies detailed needs for demining, mine awareness and mine victim assistance. Mine action policy and priorities are formulated with the advice of the NDO Director to the LAF Command and the MOD.

The Lebanon Mine Action Strategic Review Project

On 26 December 2003, the Minister of Defense and the United Nations Development Programme (UNDP) Resident Representative jointly issued an outline project charter requiring the NDO Director to complete an end-state strategic review of mine action in Lebanon. This review project is first intended to identify the desired end-state for mine action (i.e., when the entire problem is fully under control or "solved" and the residual essential elements of mine action such as explosive ordnance disposal (EOD) and information will be appropriately managed within the national military, administrative and governing systems) and second, the strategy, actions and resources required to achieve this end-state. Initial results were identified in July 2004, and implementation of recommendations and selected options should begin in late 2004 or early 2005.

Holistic MRE

MRE continued to play a vital role throughout 2003. Working as the coordinator with partners such as the United Nations Children's Fund (UNICEF), the World Rehabilitation Fund (WRF), Norwegian People's Aid (NPA), local non-governmental organizations (NGOs) and mine clearance organizations, the NDO implemented a holistic MRE campaign designed to target all sectors of the population, in accordance with the associated level of risk. The impact of MRE and clearance work undertaken in 2003 can be seen in the continuing decline in civilian casualties.

During 2003, the MRE programme pursued its aim of raising the mine awareness level of all Lebanese citizens so as to minimize the number of mine/UXO accidents. This was

accomplished by running a nationwide awareness campaign. Elements of the campaign included conferences, lectures, sessions, awareness steps, workshops, shows and displays and the organization of training courses for facilitators as well as special awareness for conscripts in the military service camps. One of the main achievements this year was the production of the facilitator's booklet and new awareness products. All the activities were organized in cooperation and collaboration with the National Awareness Steering Committee and the local authorities of the affected town or village. In 2003, the awareness campaign in South Lebanon was completed and the awareness campaign in the province of Mount Lebanon and the *caza* (county) of Batroun began in May. A refresher campaign was launched in South Lebanon in October 2003.

UNICEF conducted an MRE evaluation in South Lebanon and West Bekaa, which was completed in April 2004. Awareness products were subjected to a pre-test before distribution and a post-test to evaluate and monitor the efficiency of those products. Each affected area was monitored and evaluated to understand the awareness needs assessment for each social category so as to develop and improve future campaigns and activities. Results of the evaluation were positive and recommendations were given for improvement and have been considered by the NDO.

In September 2004, a teachers' training course for the training of 300 teachers was launched by the National Mine Risk Education Committee (NMREC) in the north and Mount Lebanon provinces with funding from the United States European Command (EUCOM) and the WRF. The project is in line with the goals and objectives of the Lebanon End-state Strategy for Mine Action and aims at building an MRE capacity comprised of school teachers at the primary and secondary levels to conduct MRE sessions as part of the school curriculum to students living in mine-affected areas. A second teachers' training course for the training of 400 teachers in the provinces of the south, Nabatieh and West Bekaa will take place ending 2004 and will be funded by NPA.

Mine Victim Assistance

During 2003, mine victim assistance actors continued to provide assistance to mine victims across Lebanon through continuous coordination with the National Mine Victim Assistance Committee (NMVAC). In collaboration with victim assistance organizations in Lebanon, several computer training sessions and technical sessions were provided to the injured. Capacity building programs on the level of both the victims and the organizations that help them were also planned and organized with the aim of improving their capacity for self-sustainment. In addition, prostheses have been provided for the victims who have lost limbs. Work is continuing to provide additional prostheses to injured people. Income-generating programs, which are of great importance for improving the victims' social status, were organized. The programs also provided facilitated loans to a number of victims engaged in self-help activities.

In December 2003, the Minister of Defense sponsored a mine victim assistance (MVA) seminar at the United Nations Educational, Scientific and Cultural Organization (UNESCO), Beirut with the central theme of raising support for MVA. More than 250 people, including many mine victims, attended the event. NPA, the WRF and Human Concern International provided funding and resource personnel. The NDO Director acted as a resource speaker and participant for the activity.

Also, in October 2003, NPA sponsored a training session for 20 MVA actors that focused on strategic and longer-term planning.

Administration and Logistics Section

The NDO Administration and Logistics (Admin and Log) Section continued during 2003 to provide services to NDO partners, including such services as customs clearance for equipment and personnel entering the country. In addition, human resources management, budget and finance, logistics, and transport coordination are provided for LAF personnel on the NDO staff. The Section also maintains records of in-kind and other donations of mine clearance and other equipment, and maintains the security and infrastructure support. The NDO secretariat organization manages files and office functions.

Information Management Section

During 2003, the Information Management (IM) Section continued its essential functional and enabling role by managing the NDO office information system, maintaining and operating the Information Management System for Mine Action Management (IMSMA), and receiving, recording and maintaining the database for Lebanon north of the Litani River. (The MACC-SL performs the same functions for areas south of the Litani River and data is synchronized with the NDO periodically.) The IMSMA database continued to develop during 2003 and provided the following services: storing and displaying field reports (clearance reports, dangerous areas, survey results, and incident and accident reports) together with related supporting data (locations, contacts, provinces, towns, etc.) and data management, sorting reports, and producing maps to assist in prioritizing and planning. The UN MACC/MACC-SL maintains a second IMSMA database and all data is exchanged pending eventual assumption of all data responsibilities by the NDO. In 2003, the MOD agreed to a recommendation by LAF Headquarters to hire a qualified civilian information management officer in 2004 on a 90-day trial basis to assist the NDO IM section head in his duties.

In April 2004 and through the UNDP Capacity Building for Mine Action Assistance project, a national Information Management Officer was recruited at the NDO. As a follow up step towards building the capacity of the NDO in the area of information management, an international Information Management Technical Adviser was recruited in September 2004 at the NDO as an in-kind contribution by the Swiss government to the UNDP Capacity Building project for an initial period of six months.

Operation Section

Worldwide, implementation of the body of knowledge for mine action management has matured significantly and is in use in varying degrees in over 30 countries and many organizations. This has meant that useful information is available that facilitates the operation of national mine action programs. In the case of the Lebanon NDO, overall capacity grew significantly in 2003 with the assistance of international input and dedicated input from national managers. As the designated national coordinating body for all mine action activities in Lebanon, the NDO markedly increased its capacity to actively coordinate all aspects of mine action and associated activities such as resource mobilization and public relations during 2003, including an active role in the International Support Group for Mine Action in Lebanon. In July 2004, the first Integrated Work Plan (IWP) was published. This IWP contains all mine action plans and enabling corporate plans using a programme control.

2003 Operational Objectives

The following objectives were generated and adjusted according to priorities, available resources and opportunities:

Engineer Regiment demining teams, mine detection dogs, flails and Syrian army engineer detachments.

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2. Clear all mined/dangerous areas in the OES sectors 1–5 in southern Lebanon.
3. Clear all the areas assigned by the NDO to NGOs, namely the International Mine Initiative (IMI) and the Mines Advisory Group (MAG).
4. Conduct quality assurance and control for all tasks cleared by commercial companies and NGOs according to national Technical and Safety Guidelines.
5. Coordinate and conduct MRE campaigns throughout Lebanon.
6. Coordinate assistance to mine victims.
7. Advocate mine action in accordance with IMAS and within the NDO span of control.
8. Increase the national capacity in all areas of mine action, and conduct/continue to apply regulatory measures.

Major Mine Action Projects in 2003

The priority task of mine clearance continued throughout 2003 with significant achievements and the full involvement of four demining entities. Capacity building was also highlighted effectively with the establishment of a new UNDP/NDO office within the NDO and ongoing training of LAF personnel through the U.S. training programs and MACC-SL.

Mine Clearance

The Operation Emirates Solidarity project, funded by the United Arab Emirates, includes a novel approach to mine clearance management, (enabled by adequate funding) through utilization of a tri-partite structure involving the donor, host nation mine clearance organization, and contracted UN, commercial technical, quality management, and clearance resources.

Capacity Building

The U.S. Department of State (DOS)/Department of Defense (DoD) programme to assist humanitarian demining in Lebanon continued to provide mine clearance and EOD training and demining equipment, including a flail, to the NDO. This included development of field standard operating procedures (SOPs) and standards and the handover of 18 RONCO-trained MDDs and handlers to the NDO in late 2003. The MDD project included renovations to a former LAF building in Nabatieh for use as an MDD facility. It is expected that the structure will also eventually accommodate a national mine action operations/coordination centre. In June 2003, through the UNDP capacity-building project Leb/03/M01, a Chief Technical Advisor, a National Mine Action Project Officer, an Information Management Technical Adviser and a national Information Management Officer resident within the NDO were provided in response to a request from the MOD. Training of LAF/NDO survey and quality assurance and control personnel also continued through the MACC-SL.

Demining

The UN standards for mine action define humanitarian demining as having five components as listed below. The 2003 activities in each component area are summarized.

Mine/UXO Survey

The Lebanon LIS, conducted by MAG and the Vietnam Veterans of America Foundation (VVAFA), was completed during 2003. The NDO provided substantial comment on the draft report in late 2003. UN certification of the final report has recently taken place in 2004. The LIS is an internationally recognized decision tool that highlights the impact of mines and UXO on the population and country and assists prioritization and planning of mine action activities. The survey indicates that about 137 square kilometres of suspected and

proven mine-/UXO-contaminated land remain in Lebanon, and that there is a significant socio-economic impact on the country (five of six provinces are impacted).

Technical Survey was carried out prior to each minefield task and to reduce the size of suspected areas. All mine clearance organizations carried out Technical Survey.

Area Reduction is related to Technical Survey. An important opportunity for follow-up in 2004 concerns employment of Technical Survey to achieve area reduction of the many suspected mined areas identified in the LIS. Donor support for this project will be a key factor in enabling this high-productivity effort.

Mapping

The IMSMA system was used extensively to provide planning data for clearance task dossiers and other tools, particularly maps. The overall geographical information system (GIS) used in Lebanon and the relationship to that used in the IMSMA system requires maintenance or conversion from system to system.

Marking

Most of the 2500 remaining minefields in Lebanon are not marked to the level of international standards due to lack of funding. More than 100 mine-/UXO-contaminated fortifications remain in the south and are marked with wire and minefield signs. Marking remains as a required task. Funding for marking will be sought during 2004, taking into consideration the Strategic Review conclusions.

Mine Clearance

More than 140 individual task dossiers—each containing full data on one or more minefields that enable a mine clearance entity to start work—were prepared by the operations staffs of the NDO and MACC-SL during 2003. Over 400 individual completion reports were processed and entered in to the IMSMA database. More than five million square metres of land were cleared between 2002 and 2003 by four mine clearance organizations.

Community Liaison

Community liaison at the operations level involves daily contact with local people during implementation of demining and MRE. Community liaison teams were deployed throughout 2003 as required for demining and MRE activities.

Post-Clearance Activities

In September 2003, the MACC SL was requested to begin the process of enhancing the measurement of mine action impact in the OES areas cleared. This involves the completion of a Post-Clearance Review conducted collaboratively by MACC-SL and UNDP socio-economic project personnel with full LAF participation. The intention of the review is to confirm that the landowners feel confident in the mine clearance that has taken place and are using their land. The general findings from this first post-clearance assessment, which was conducted in the OES project-cleared lands (OES 1–5), have confirmed that the landowners of the cleared areas were confident in the clearance process and were using their land.

Quality Assurance

The NDO and MACC-SL conduct quality assurance of the entities that they supervise as a component of quality management. This function focuses on confirming that management practices and operational procedures (such as SOPs) for demining as proposed by the entities are appropriate and will achieve the stated requirement in a safe, effective and efficient manner that is consistent with national technical and safety guidelines.

Quality control is carried out by the NDO sampling team and the quality control section of the MACC-SL. This function involves actual inspection of cleared land. During 2003, resources were available to conduct quality control checks on approximately 30 percent of cleared land.

Planning

Discussions were held with the respective clearance organizations and their donors to ensure the necessary preparations were completed prior to the start of the 2004 work season. The 2004 Operational Clearance Plan details tasks to the various clearance organizations as they confirm the capacities that they will be returning with. The mine clearance success that was achieved in 2003 led to a reorientation towards cluster bomb unit (CBU) clearance in some areas.

LAF Engineer Regiment Operations

The Engineer Regiment demining component continues to be the backbone of the national mine clearance capability. During 2003, four 75-man demining teams were deployed throughout the country, carrying out manual humanitarian demining in Kfar-Falous, Nabatieh, West Bekaa and Mount Lebanon, clearing some 1,500,000 square metres of land. Three engineer detachments from the Syrian army supported the humanitarian companies in 2003. See Table 1 for clearance results achieved during 2003.

Mine Action Core Assets

Between January 2002 and December 2003, mine action core assets included the LAF Engineer Regiment demining teams (300 personnel plus Syrian engineer detachments), the OES project, which includes the MACC-SL and commercial companies, the mine clearance NGOs MAG and IMI, plus UN, national and international NGOs which also service MRE and MVA needs. Mine action programme assets also include mechanical adjuncts to demining, MDDs and other mine action enabling equipment such as metal detectors, personal protective equipment and vehicles.

Area cleared	1,500,000 sq m
AP mines	2,200
AT mines	250
Pieces of UXO	8,000
Minefields and dangerous areas cleared	70
Table 1: Lebanese Army Engineer Regiment, 2003 statistics.	

General LAF/NDO Activities

Capacity Building

In 2000, the government of Lebanon elected to pursue the opportunities offered through the UNDP capacity development initiatives, with a

	NGO					
	UN-UKR Mine Clr Team	LAF Sampling Team	HMC	Survey	NGO - IMI	OES Project
AP Mines	1900	14	479	372	313	56,000
AT Mines	73	2	33	15	490	1,600
Pieces of UXO	510,000	18	360	18	86	4,007
Minefields	N/A	10	6	3	8	340
Table 2: Clearance statistics—non-indigenous mine clearance assets.						

view to the NDO assuming full control of mine action as soon as practicable. Following the liberation of the south of Lebanon and West Bekaa, projects have been offered for capacity building in mine action and other areas. During 2003, the UNDP mine action capacity-building project focused on assistance with developing a strategic review process to enable design or redesign of the longer-term plans and structures needed to support an end state mine action strategy. This will see the mine problem in Lebanon solved, and

those essential elements of mine action such as EOD and information will be appropriately managed within the national military, administrative and governing systems. A mine action planning system including the first NDO annual report has been produced. The Five Year Strategic Plan 2005–2009 will be produced in November 2004.

Socio-Economic Development and Mine Action

Globally, the emphasis on the relationships between socio-economic development and mine action is increasing. This is also the case in Lebanon. During 2003, NDO involvement with support to socio-economic development continued to increase as such projects as water pipeline rights of way required clearance. Post-clearance surveys were conducted as a joint task between the MACC-SL and the UNDP Socio-Economic Development Project in December 2003. The post-clearance survey reports were issued in June 2004.

NDO Lebanon Representation at International Mine Action Events

In 2002, the NDO director and operations section head visited the U.S. Department of State in Washington, D.C., and were hosted by the Jordanian Mine Action Programme. The NDO director attended the annual meeting of the UNMAS National Mine Action Directors and UN Advisors with the UN Programme Manager UN MACC/MACC-SL in March 2003. Also in 2003, the NDO director and operations section head traveled to Oslo, where they were received by the Norwegian Minister of Foreign Operations and observed mechanical demining equipment development and function.

International Standards

The NDO adopted International Mine Action Standards (IMAS) in 2001 and developed, with the assistance of the MACC-SL, national Technical and Safety Guidelines (TSG) based on IMAS. With the updated copy of IMAS issued in 2003, the NDO/MACC-SL amended the Lebanon TSG to accommodate new standards and amendments. Under the U.S. assistance to humanitarian mine action, the Engineer Regiment humanitarian demining field SOPs were also developed, which incorporated appropriate aspects of national Technical Safety Guidelines in accordance with IMAS.

Resource Mobilization

Lebanon benefits from support for mine action provided through international, regional Arab and UN sources. The International Support Group (ISG) for Mine Action in Lebanon chaired by the Minister of Defense met twice during 2003, in May and December. Responsibility for management of the ISG process lies with the Defense Ministry, supported by a UNDP Secretariat based in the UNDP/NDO Technical Advisory Office located at the NDO. Bilateral donor support accounts for approximately 75 percent of the total Lebanon humanitarian demining programme, with the remaining support and demining effort provided in kind by Lebanon.

Regulatory Function

The NDO implements the regulatory function, but remains dependent upon LAF, UN and other specialist legal, technical and other institutional support to enable this.

National In-kind Support

The government of Lebanon provides substantial resources (in 2003, about 25 percent of the total effort) to the national mine action programme. This contribution is centered on the LAF working in harmony with the Lebanese army role of supporting national development (in addition to national defense and security). The army provides more than 500 personnel within the NDO, Engineer Regiment and headquarters. The Engineer regiment demining capacity includes a regimental planning and management function, human resources management, and required administrative and support services.

The NDO policy is to avoid technical development projects or field trials of experimental equipment, since this work is principally and more effectively undertaken by centralized agencies such as the Geneva International Center for Humanitarian Demining and can too often turn in to a resource- and time-consuming venture without clear benefits to the local programme.

Management Training and Development

During 2003, a total of three NDO officers received training: one in advanced mine action management and two in middle mine action management. In June 2003, a mine action practitioner safety course was sponsored by the NDO and conducted under the auspices of Handicap International with more than 15 NDO, NGO and UN participants. One UNDP Mine Action Exchange (MEX) visit from Azerbaijan was hosted by the NDO and MACC-SL. It is anticipated that the overall training requirement will be examined during the Landmine Action Strategic Review (LMASR) process. In May 2004, the NDO Head of Operations Officer was assigned by Cranfield University to conduct training sessions for the Middle Management training course for mine action held at the University of Amman in Jordan.

Infrastructure Development

In June 2003, the NDO relocated to new quarters constructed by the LAF at the Shukri Ghanem Caserne located in Fiyadieh on the Damascus Highway near the Ministry of National Defense. Under the U.S. DOS/DoD assistance to humanitarian demining project, a building in Nabatieh province is being renovated to house a mine dog facility and a future mine action operations/coordination centre.

Summary

While great progress in most areas of mine action management, operations and capacity building has been made, the national capacity in several aspects of mine action management is not yet sufficiently robust. However, momentum and will for success exist and will require continued support if this advanced mine action programme is to meet its potential. Its success will unquestionably benefit Lebanon as it develops and also will encourage others. In July 2004, Lebanon became the first programme in the world to have achieved an end-state strategy to a serious mine/UXO problem that has based its success on using international mine action standards and integrating military, UN, NGO and commercial mine action resources into a national integrated action plan. Continued support from mine action partners is essential to this success.

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