



NMAS 05.11

Guide for the Use of Communications Networks

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Edition 2.1

Lebanon Mine Action Center-LMAC

Chekri Ghanem Casern–Fayadieh

Tel: +961 5 956143, Fax: +961 5 956192

Email: info@lebmac.org

Website: <http://www.lebmac.org/>

Warning

This document has been released on the date shown on the cover page. The National Mine Action Standards (NMAS) of Lebanon are subject to regular review and update, so users are advised to consult the most recent version. To ensure that you have access to the current version, contact the Lebanon Mine Action Center (LMAC) through the www.lebmac.org website or by sending an email to info@lebmac.org.

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Tel: +961 5 956143,

Fax: +961 5 956192

Email: info@lebmac.org

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Foreword

The National Mine Action Standards (NMAS) of Lebanon were first developed in the form of Technical Standards and Guidelines (TSG). These TSG were edited into the first edition of the NMAS in 2010 and were written to comply with the first edition of the International Mine Action Standards (IMAS). Since then, the scope of the IMAS has been expanded to include more components of mine action and amended to mirror the most recent changes to standards as required in today's operations. These changes, as well as changes in the local context of Lebanon, have necessitated a review and update of the NMAS.

As detailed in the National Mine Action Policy of 2007, the Lebanon Mine Action Center (LMAC) has the responsibility to execute and coordinate the Lebanon Mine Action Program (LMAP) on behalf of the Lebanon Mine Action Authority (LMAA), including the development and amendment of standards. Such standards shall be developed in a participatory approach that shall involve international, governmental, and nongovernmental organizations.

The NMAS shall be reviewed as needed to reflect amendments in the IMAS as well as incorporate changes to international obligations and local requirements. Such revisions shall be made available on the LMAC's website www.lebmac.org or can be obtained through contacting the LMAC via the email info@lebmac.org.

Acronyms

CASEVAC	Casualty Evacuation (also MEDEVAC)
GHz	Gigahertz
HMA	Humanitarian Mine Action
Hz	Hertz
IA	Implementing Agency
IMAS	International Mine Action Standards
LAF	Lebanese Armed Forces
LMAA	Lebanon Mine Action Authority
LMAC	Lebanon Mine Action Center
LMAP	Lebanon Mine Action Program
NMAS	National Mine Action Standards
RF	Radio Frequency
SOPs	Standard Operating Procedures
TSG	Standards and Guidelines
VHF	Very High Frequency

Introduction

The need for standards that guide the operations of effective and efficient communications systems during Humanitarian Mine Action (HMA) is indisputable. Efficient command and control of mine action interventions, particularly survey and demining operations requires reliable systems of communication. The absence of at least one functional system would present a significant risk to staff and potentially to the general public because the safety of working procedures would be severely impacted.

The LMAC is the authority responsible for ensuring that everything reasonable is done to ensure safety and efficiency in mine action in Lebanon. To this end, the LMAC is also responsible for establishing the minimum requirements for communications in support of mine action and for ensuring that IAs comply with these requirements. The purpose of this NMAS is to ensure that standards for the use of communications equipment are clear and uniform for all IAs conducting humanitarian demining activities in Lebanon.

Guide for the Use of Communications Networks

1. Scope

This NMAS provides standards and guidelines for the use of communications equipment by Implementing Agencies (IAs) engaged in Humanitarian Mine Action (HMA), especially demining activities.

The LMAC, IAs, and employees engaged in NTS, TS, EOD Spot tasks, or area search and Clearance using demining or BACs procedures shall abide by the standards provided in this NMAS.

2. References

A list of normative and informative references is provided in Annex A.

Normative references provide cross-referencing to other standards referred to in this NMAS, and which form an integral part of the provisions of this standard.

Informative references provide a list of documents that may be consulted for a clearer understanding of this standard.

3. Key Terms and Definitions

The following terms and definitions relate to Communications Systems and recur through this NMAS:

- *Base Station*: a fixed location at which central wired and wireless communications networks are located to facilitate communications for the purpose of HMA, especially demining activities. Also referred to as the *Communications Room*.
- *Call Sign*: a unique combination of letters or numbers used to identify someone or something during radio communications.
- *Cellular phone*: a wireless telephone that allows the transmission and reception of verbal or written messages over the cellular radio network covering a wide area.
- *Landline*: a telephone communication line which is laid across (above or below) land and which travels through either optical fiber or metal wire.
- *Brevity*: conveying complex information with few words over radio transmission.
- *Radio Frequency (RF)*: a rate of oscillation within the range of about 3 Hz to 300 GHz, corresponding to frequency of alternating current electrical signals used to produce and detect radio waves. Since the bigger part of this range falls beyond the vibration rate that most mechanical systems can respond to, RF usually refers to oscillations in

electrical circuits. Radio Frequencies used in humanitarian demining require prior authorization from the Lebanese Armed Forces (LAF)/LMAC.

- *Radio*: a wireless device that allows the transmission and reception of electromagnetic waves of radio frequencies and permits the sending and receiving of verbal calls.

In addition to the above terms, NMAS 04.10 provides a glossary of terms and definitions used across all standards.

As in the IMAS, the terms 'shall', 'should' and 'may' are used across all standards to indicate the required degree of compliance. For any organization working in Lebanon, the use of 'shall' indicates a compulsory requirement. The term 'should' indicates the national preference which may be varied with LMAC approval. The term 'may' indicates a suggestion that is not obligatory.

4. General Requirements

To ensure smooth communications, a Base Station/Communications Room has been established at the Lebanon Mine Action Center (LMAC). Base stations linked to the LMAC Communications room are established at the LMAC's regional centers (RMACs). All IAs engaged in demining operations shall establish and maintain reliable communications with the Base Station in their area of operations and with their own national offices.

The IA's Communications base station should manage:

- communications inside worksites;
- communications between worksites and IA's operations rooms;
- communications between IA's operations room and LMAC operations room.

When communicating with the LMAC and internally, the following guidelines shall be maintained by IAs to ensure the network's reliability and effectiveness:

- all users should keep communications brief, clear, audible, and in line with the standards laid out in this NMAS;
- IAs shall pre-authorize the radios, frequencies, and satellite phones in use and report the placement and positioning of persons issued with such devices;
- IAs shall include a description of all call signs and frequencies used by them in their Standard Operating Procedures (SOPs), which shall be submitted for approval by the LMAC before use;
- radio operators shall be trained to adjust the frequency of radios and the positions of antennae when necessary to optimize communications coverage;
- all IA staff operating in the field should be aware of the frequencies, call signs, and channels of other IAs. Staff shall use assigned call sign letters and frequencies responsibly;

- monthly checks of Casualty Evacuation (CASEVAC) radio procedures shall be conducted by all IAs, including practice drills with the evacuation ambulances which shall be equipped with radio communications systems;
- at least two means of communication between the IAs and the LMAC Communications Room/ Base Station should be available at all times;
- Radio communications between task-sites assigned to IAs and the LMAC Communications Room should be checked and confirmed at least once every two hours while work in any hazardous area is in progress. Internal IA radio communications between teams at task sites and their respective offices should be checked every hour. In case reliable lines of communication are found to be unavailable, all survey and demining activities shall be suspended until reliable communications can be established;
- all field staff shall be trained in the use of emergency frequency channels;
- emergency communications shall be given priority over every other form of communication;
- the type and frequency of radios used shall be subject to the Lebanese laws; and
- IAs shall include in their SOPs strict safety regulations regarding the use of communications systems on worksites. All relevant safety precautions should be taken at worksites in order to avoid accidents during inclement weather and designated periods of radio silence.

5. Communications Systems

Depending on coverage, the communications systems for HMA in Lebanon include:

- Very High Frequency (VHF) Radios;
- the mobile telephone network(s);
- satellite telephones; and
- the landline telephone network.

6. Communication Structure

There are three levels of network required for the full coordination and control of HMA operations in Lebanon. These are the IA's internal network, the regional network and the national network.

Adherence to this communications structure should ensure that the LMAC and IAs are able to maintain proper communications at all times and so manage routine and unusual events in a way that promotes efficiency and minimizes risk.

6.1 IA Network/Site Network

The IA network refers to the internal communications network used by individual IAs. The network enables and facilitates communications between members of the IA, such as the Site Supervisors, Team Leaders, Medical Coordinators, Ambulances, and other staff at worksites or in the IA's national office. IA networks may include VHF connections as well as connections over mobile telephones, landlines, and radios. The IA's network(s) should be pre-outlined in the IA's SOPs and authorized by the LMAC before use during field operations. The LMAC should be formally informed of all IA Network frequencies and call signs, with these details kept updated at all times.

6.2 Regional Network

The Regional Network refers to the networks that use assigned regional centers as their Communications Base Station. IAs may contact the assigned regional Communications Rooms via VHF, landlines, mobile, or radios, as appropriate and agreed.

6.3 National Level Network

The National Level Network refers to the network that uses the LMAC Communications Room as its Base Station. IAs may contact the LMAC's Communications Room via landlines, mobile, or radio communications, as appropriate and agreed.

7. Frequencies and Call Signs

The following standards should be applied in relation to frequencies and call signs:

- the LMAC should assign VHF frequencies to IAs for the purpose of IA Level Network communications and for the purpose of communicating with the regional or national Base Station, as appropriate.
- the IAs shall gain approval for their Communications SOPs from the LMAC and make a copy available to the LMAC Communications room. The IA shall also provide the LMAC Communications Room with their internal call signs, frequencies, and the telephone numbers of key personnel. The list should be updated whenever changes occurs.

8. Training

All relevant IA staff shall be trained in the use of the relevant communications systems, including:

- the standards outlined in this NMAS;
- methods of operating the communications systems;
- correct maintenance of the communications systems;

- accident reporting and emergency communication procedures;
- necessary call signs; and
- safe communications procedures.

9. Quality Control

IAs shall seek to ensure that quality control standards are maintained at all times during communications and use of communications networks. For further information on quality control, NMAS 07.40 may be consulted.

10. Roles and Responsibilities

10.1 Role of the LMAC

The LMAC shall:

- maintain a Communications Room/base station able to maintain communication with all base stations established by the IAs.
- whenever possible, ensure that at least two means of communication between the IAs and the LMAC Communications Room/Base Station are available at all times.
- specify or approve the frequencies that are used by each IA;
- establish a monitoring system and evaluate the Communications SOP of each IA before approving its use;
- provide IAs with relevant authorizations for the use of approved communications networks; and
- establish and maintain reliable communications with all regional communications base centers operated by the LMAC. Each regional communications base center shall establish reliable communications with its own team(s) and the communications base of all IAs operating within its area.

10.2 Role of the IA

The Implementing Agency shall:

- develop communications SOPs and submit them for LMAC approval before use;
- ensure that it has a communications base and a functioning network connecting it to the LMAC's Base Station;
- ensure that its communications base has reliable contact with all teams in the field;
- secure reliable communications between team members working in the field; and
- obtain authorization from the LMAC for the frequencies it will use.

	LEBANON NATIONAL MINE ACTION STANDARDS		Edition 2.1	NMAS 05.11
ANNEX A: Normative and Informative References				
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The documents listed below constitute normative references and form an integral part of the provisions of this standard:

- Current LMAC and IMSMA reporting formats (request copies from the LMAC);
- NMAS 07.40 Monitoring Mine Action Organizations and Operations; and
- NMAS 04.10 Glossary of Mine Action Terms, Definitions, and Abbreviations used in the Second Edition of the NMAS.

In addition to the normative references listed above, the following informative reference may be consulted:

- National Mine Action Policy 2007.

NMAS 05.11, Edition 2.1: Amendment Record

The NMAS are subject to a comprehensive or partial review by the Review Board periodically. Changes in the context as well as safety requirements and efficiency considerations may necessitate amendments to individual NMAS standards more frequently. If this occurs, such amendments shall be given a number, dated, and detailed in the table below. The amendment should also be indicated on the header under the NMAS edition number.

Whenever the formal review of the NMAS is completed, a new edition shall be issued. Amendments that have taken place before the review date shall be incorporated in the new edition and the amendment record table cleared. Consequently, the recording of amendments shall start again until the next review.

The most recent revisions of the NMAS shall be posted on the Lebanon Mine Action Center (LMAC) website on www.lebmac.org.

Number	Date	Amendment Details
1	March 2020	Minor revisions throughout.