Sudan National Mine Action Standards – SNMAS 10.01

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Information Management System in Mine Action

Contents

1.   Introduction

Information Management (IM) is an integral part of all activities in mine action. IM refers to the process of continuously specifying information requirements, and the collection, reporting, recording and analysis of data, and provision of timely information to the relevant mine action stakeholders. In addition to mine action sector, IM includes support to humanitarian assistance agencies, donors, government, legal entities, researchers and development agencies and interventions. Proper and efficient IM ensures that mine action managers and stakeholders have access to optimal and required information when making informed decisions.

IM requires the close collaboration of all parties involved in Sudan mine action programme (SMAP). Effective, accurate, well-designed and transparent information management system (IMS) makes mine action aspects easier to manage and promotes accountability. IM enables monitoring, evaluation and comprehensive quality management.

IMS in mine action sector is managed through a specific database called Information Management System for Mine Action (IMSMA). This national mine action standard will assist NMAC, UNMAS and mine action organizations working in Sudan to develop and implement Sudan national information management policy, IMSMA reporting forms and templates and Standard Operating Procedures (SOPs).

2.   Scope

This SNMAS covers specific requirements, standard guideline and general principles for effective information management system for mine action in Sudan.

3.   References

The main reference for this SNMAS is IMAS 05.10.

4.   Terms and Definitions

A complete glossary of all mine action terms and definitions is given in IMAS 04.10, which should be referred to; IMAS 04.10 is inclusive and broader in principle, covering all mine action terms and definition that are used globally including Sudan. The terms related to IMS are covered in SNMAS 10.01.

The term 'Information Management' refers to the on-going specification of information requirements, its collection and analysis followed by the dissemination of relevant information to relevant stakeholders in a timely manner.

 The term 'Information Management System' refers to those procedures, data, software or media that are used to gather, analyze and present information.

The term 'Data' refers to information in raw or unorganized form.

The term 'Information' refers to data that has been processed, organized and presented in a way that makes it useful for decision making.

The term 'Knowledge' refers to the result of combining data, information, training and experience.

The term 'GIS' refers to Geographic Information System. It is an organized collection of computer hardware, software, geographic data and personnel designed to efficiently capture, store, update, manipulate, analyze and display all forms of geographically referenced information. GIS allows a user to view multiple layers of data based on their geographic distribution and association. GIS incorporates powerful tools to analyze the relationships between various layers of information.

The term 'Stakeholder' refers to a person, group, organization or governmental body that has a direct or indirect stake in a mine action programme. A stakeholder can affect or be affected by the mine action activities and policies.

The term 'IMSMA' refers to the Information Management System for Mine Action.

5. Purpose of Information Management in Mine Action

The purpose of Information Management in mine action is to facilitate and support informed and fact-based decision-making. IM involves gathering, reporting, recording and analysis of mine action data, and making it meaningful and valuable information for mine action sector and its stakeholders. IM facilitates and supports informed and fact-based decision-making in strategic, management and operational levels. Proper IM supports SMAP to ensure realization of timely and appropriate planning, prioritization, resource mobilization, monitoring, evaluation and reporting of progress and success, to its national and international stakeholders and interested parties.

6. Information Management Prerequisites

6.1. General

Effective IM requires some prerequisites, which may increase when IM activities are more complex. As a minimum, the following are prerequisites for the establishment and flow of IM in SMAP:

1) Document Management

NMAC shall establish and maintain a document management system with the following features:

a) Digital Structure: A standardized digital structure with relevant file naming guidelines and metadata, capable of managing digital documents related to mine action activities including reports, maps, pictures, photos and videos.
b) Paper Structure: A standardized paper filing structure that mirrors the digital structure.

The document management system shall enable tracking of the version of documents and details about editing; including editor, date of editing and the last or recent version of the documents.

2) Record Management

NMAC shall establish and maintain a record management system that is capable of meeting the following requirements:

a) Managing operational and secondary data;
b) Priority-setting and allocation of operational resources;
c) Producing an overview of the operational progress and resource allocation;
d) Accessible for use by operational and management staff; and
e) Adjustable to the SMAP needs and compatible with other information systems.

NMAC shall define the scope and responsibilities of the IMS through information management and communications policy to achieve optimum operational efficiency.

3) Web Management

The NMAC shall ensure that there are policies and methodologies in place that enable the presentation of SMAP activities via web technologies including internet, intranet, and social networks.

4) Human Resources

The NMAC shall ensure that there are the following staff positions as a minimum:

  a) IM Officer: Responsible for IM activities;
  b) System Administrator: ICT and communication infrastructure;
  c) GIS Officer: Responsible for GIS activities.

5) IM Equipment

NMAC shall ensure that:

  a) Computer systems used by IM staff meet the minimum specifications of the IM software;
  b) Software is licensed and there are appropriate peripheral systems such as printers and scanners;
  c) ICT equipment is protected from power spikes, dust and other damage;
  d) A data storage infrastructure is established and protected with appropriate policies and procedures for data security, backup and disaster recovery;
  e) Staff have access to means of communication including internet and e-mail; and
  f) The staff working environment meets basic ergonomic principles.

6) IM Knowledge

NMAC shall ensure that IM staff are given the opportunity for professional development and that they receive adequate training in:

  a) Information systems used in the programme, including system administration;
  b) Data analysis and statistics;
  c) GIS; and
  d) Mine action operations.

7) GIS Management

NMAC shall ensure that:

  a) GIS software is available to the IM staff. The software should be either integrated in the record management system or work as a stand-alone application;
  b) Geospatial data is available and accessible; either locally or through the internet;
  c) Spatial data standards are established regarding coordinate and measurement units and symbology; and
  d) Data collection forms contain the spatial data required to produce the expected output.

8) Quality Management

NMAC shall ensure that:

a) Standardized data collection forms are established;
b) Fields on the data collection forms are properly defined, and there is established policy for data and information exchange and communication within the programme and with mine action stakeholders and interested parties;
c) The data quality is maintained and improved at all phases of IM from source to the final receivers;
d) The data quality check process is established within mine action organizations and NMAC; and
e) Operational and IM processes are properly mapped and documented.

7. **Information Management Process**

7.1. **Information Management Cycle**

The IM cycle ensures a proactive approach to IM activities by defining programme's requirements and anticipating stakeholders' needs and planning to address them. The IM cycle is the process of:

1) Information Needs Assessment;
2) Data Collection;
3) Data Entry;
4) Data Analysis; and
5) Information Dissemination.

The IM cycle shall be based on the following:

a) Transformation:

Continual transformation of data to information and information to knowledge for decision-making.

b) Efficiency:

The management of data and information is done with a proactive approach in which, the IM staff based on their experience, foresee the requirements and are ready to address them in a timely manner.

c) Inclusiveness:

Successful implementation of the IM cycle depends on the active involvement of operations, top management and the stakeholders.

d) Quality:

Data is checked and verified for accuracy and for timeliness and organized for analysis.

e) Consistency:

Disaggregated data collection, in combination with agreed technical definitions of key terms and requirements, will ensure objective and repeatable results to analytical queries. This will enable the formulation of informed decisions that are transparent and accountable.

f) Communication:

Information is disseminated to the stakeholders, within and outside the mine action programme, in a standard form and with defined contents.

7.2. Information Needs Assessment

The analysis of information shall involve recurring assessment of the needs and requirements of the mine action information users and shall include discussion with each of the stakeholders about their requirements. The discussion should result in agreement on the:

1) Output of information required by each stakeholder for their current and future use;
2) Data that needs to be collected;
3) The frequency, the format and medium of data collection;
4) Process for ensuring the quality of data collection activity and that of the incoming data;
5) The ways for analysis of incoming data to ensure consistency in the output information;
6) Formats and means of internal and external information dissemination and reports; and
7) IM process map and qualitative and quantitative key performance indicators that are used for the map.

7.3. Data Collection

The data collection phase identifies where, how and in which form to collect required data, and how to validate it. Data collection shall be designed to meet the intended use of the data, and consideration shall be given to ethical principles such as maintaining confidentiality and privacy.

The NMAC shall ensure that data collection meets agreed policies on:

1) Disaggregated data is collected which includes sex and age, when relevant;
2) The uniformity and standardization of the data collection process;
3) Inventory of information management sources including details on the type of data, collection methods, and the format and means of data provision;
4) Quality management during the data collection process, including the use of standard forms and data entry fields, as well as the active involvement of operational staff during the data reconciliation and approval process;
5) Ensuring consistency during data gathering by implementing methodologies and relevant criteria for data collection standards, including measurement units, equipment, means of recording, language and input method;
6) The validation and verification of data to ensure data accuracy, completeness, consistency and links to other existing information; and
7) The classification of information sources and the reliability of information.

7.4. Data Entry

Data entry is part of the IM process and shall take place with suitably qualified data entry staff. The up to date version of mine action database (IMSMA) shall be used for data entry and IM.

7.5. Data Analysis

Objective and timely data analysis relies on IM policy and standard that reduce the subjectivity and increase the consistency of the output information.

The NMAC shall ensure that policy and procedure for data analysis include:

1) Technical definitions of key mine action terms including but not limited to victim, survival, area reduced, cancelled, released, cleared; in square meters.
2) Methodology with relevant criteria for managing low quality information such as duplicate, incomplete, out-of-date information;
3) Methodology for grouping and structuring data by using summarized statistical reports and maps;
4) Procedures for cross-referencing information from mine action and from other sources;
5) Methodology and relevant criteria for identifying trends based on established indicators; and
6) Methodology involving relevant stakeholders during the process of analyzing the information, in order to take advantage of their experience and personal interpretation.

7.6. Information Dissemination

Dissemination of mine action information in Sudan involves releasing of monthly IMSMS information to internal and external users and stakeholders, so that it can be readily and easily used by them. In addition to monthly IMSMA information, certain user may request NMAC for provision of specific information. Such information should be provided by NMAC IMSMA section after permission by NMAC Director and Chief of Operations. The confidentiality of certain information shall be always be maintained by NMAC IMSMA section. As minimum the monthly IMSMA information shall include but not limited to the following:

1) Mine action achievements;
2) Ongoing operations; and
3) Challenges.

The achievement shall at minimum cover the following aspects:

1) Survey and Land Release;
2) Number, length and size of roads and routes opened;
3) Number of EO destroyed;
4) Number of land release beneficiaries;
5) Number of Mine and ERW Risk Education interventions;
6) Number of MRE beneficiaries;
7) Victim Assistance services;
8) Number of VA beneficiaries;
9) Advocacy effort made during the month;
10) Number of QA monitoring visits and the size of area sampled (QC);
11) Number of mine action organizations accredited;
12) Number of mine action teams operationally accredited.

The ongoing operations shall at minimum cover:

1) The number of teams operational;
2) The number of mine and or ERW contaminated areas under operations;
3) Current locations of the mine action teams;
4) Types of mine action activities.

The challenge shall at minimum cover the following:

1) Seasonal limitations;

2) Shortage of tools and equipment;
3) Civilians mine or ERW accidents/incidents;
4) Demining incident/accident;
5) Accessibility of the areas for mine action teams;
6) Safety and security.

Information sharing as part of the Sudan Mine Action Programme (SMAP) activities, shall be based on a specific policy for communications that is developed, approved and issued by NMAC with technical support of UNMAS.

As a minimum, the following should be taken into consideration when planning for information dissemination:

1) To which stakeholders the information should be distributed;
2) The types of information each stakeholder will receive;
3) How the information is disaggregated, as a summary, statistics and or maps.

The following aspects shall be considered when disseminating mine action information:

1) Relevance: Level of details and specifications to stakeholders' needs;
2) Security: Data discretion policy of the programme and that of the stakeholder; and
3) Sensitivity: Security issues relevant to data disclosure.

8.   Reporting

Reporting in mine action is the process of providing documentary evidence of related activities performed and completed, the results achieved and or events occurred. Mine Action activities are being recorded in standard formats, recorded, managed and maintained in IMSMA database. Accurate, quality and timely information requires accurate, quality and timely reports or documented information as input to IMSMA.

9.   Requirement of Mine Action Reports and Reporting Forms

Use of mine action reporting forms are intended for recording the minimum set of required data. In order to ensure entry of accurate, quality and timely data to IMSMA and management of information; each reporting form shall be used for its appropriate intended use. The filled reporting forms shall be quality checked internally by mine action organization and then by NMAC Sub Office, the reporting forms shall then be submitted NMAC Operations and IMSMA departments after verification by Sub Office.

As minimum the following standard reporting forms shall be used by mine action organizations in Sudan; that are related to their activities and accreditation fields:

9.1   Hazardous Area Report (Non-Technical Survey Report)

The Hazardous Area Report is used for recording newly found mine and or ERW hazardous areas, which shall at minimum include:

1) Description of geographical location;
2) Perimeters and corresponding control markers;
3) Type (s) of hazards, type of land, ground profile, obstacles and terrain category;
4) Impact of hazardous areas on the communities;
5) Number of beneficiaries when the area is cleared;
6) Recommendation for further land release activities.

Hazardous Area Report shall also be used to record new data on previously recorded hazardous areas with accurate technical information required for the new areas. See Annex A to this SNMAS.

9.2 Village Survey Form

The village survey form is essential for collecting socio-economic, demographic, and location reference information that forms the core of the IMSMA pre-requisite information for the data entry of the various forms. The village survey is essential for impact scoring and priority setting during the non-technical survey operation and forms. See Annex B to this SNMAS.

9.3 Task Data Sheet

The Task Data Sheet shall be used for recording tasking data of the mine actions activities. A unique IMSMA Task ID is generated per Task Data Sheet and consequently task order is issued to mine action organizations where all future progress reporting is done against this Task ID. This form shall be filled by all mine action organizations and EOD operators working in Sudan. See Annex C to this SNMAS.

9.4 Hazardous Area Cancellation Report

As per SNMAS 05.02 Non-Technical Survey, the cancellation process allows mine action organizations to change the status of or parts of a recorded Suspected Hazardous Area (SHA) and may be Confirmed Hazardous Area (CHA) which have been found not to represent any risk from mines and ERW. Once the cancellation criteria are met, the organization shall:

1) Fill the cancellation form;
2) Recommend to NMAC Sub Office the cancellation of area; and
3) To verify the cancellation form.

The form shall then be submitted to NMAC HQ for approval and updating IMSMA database. Once approved, the recorded hazardous area status shall be changed to "Closed" in IMSMA. The form should be scanned and linked to related hazardous area report in IMSMA for future reference. See Annex D to this SNMAS.

9.5 Hazardous Area Technical Survey Report

Hazardous Area Technical Survey Report is used to record the findings of technical survey activities. This report shall at minimum include:

1) Reference to the "Hazardous Area (NTS) Report";
2) Recommendation for succeeding course of action;
3) The detailed map of the area; and
4) Reference to "Hazardous Area Completion Report", if the area is entirely released.

See Annex E to this SNMAS.

9.6 Hazardous Area Completion Report

The Hazardous Area Completion Report shall be filled out by mine action organization for each hazardous area that has been completed and released from mine and or ERW hazards. This report shall cover the entire area in terms of the size of:

1) Area cancelled without any demining activities;
2) Area reduced at the result of technical survey; and

3) The area cleared through clearance assets to the specified depth.

See Annex F to this SNMAS

9.7 Monthly Progress Report

The monthly progress report form shall be used to report progress of land release ongoing operations on monthly basis.

The Progress Report shall be prepared by the mine action organizations on a monthly basis and submitted to NMAC sub office and HQ for recording into IMSMA database. See Annex G to this SNMAS.

Mine Action organizations shall also report daily progress of operations to the NMAC sub offices. Sub offices can then send the report to IMSMA section for entry and operations department for information.

9.8 Mine/ERW Risk Education Report

M/ERW RE Monthly Report shall be used by all MRE teams in the field. All mine action organizations undertaking MRE activities, shall report their achievements on monthly basis to NMAC sub offices for verification and then to NMAC MRE department and IMSMA for approval and data entry to IMSMA database. The MRE monthly report should include the data about MRE audience, their gender, location of MRE activities and sessions. See Annex H to this SNMAS.

9.9 Victim Assistance Monthly Activity Report

Victim Assistance monthly activities report shall be used by all VA organizations undertaking VA activities. This report shall be submitted on monthly basis to NMAC sub office for verification and then to NMAC VA and IMSMA departments for approval and entry to IMSMA database. The report shall include related components that the organizations is implementing as part of their VA projects. See Annex I to this SNMAS.

9.10 Demining Accident/Incident Report Form

The Demining Accident/incident Report shall be filled out and reported by mine action organizations to record any single demining accident/incidents in demining worksite. This form should only be used to record information on accidents/incidents encountering individuals involved in land release activities in hazardous areas; including team members, supervisors, internal and external QA monitors and mine action visitors. Once the demining accident data is entered into IMSMA the IMSMA ID shall be used in all related references. See Annex J to this SNMAS.

9.11 Mine and ERW Accident Report

This format shall be used to record information on mine or ERW accidents encountering civilians and individuals away from a demining workplace, in a known or unknown hazardous area. See Annex K to this AMAS

9.12 Monthly Quality Assurance and Quality Control Summary Report

"Monthly QA and QC Summary Report" shall be submitted by all mine action organizations and NMAC sub offices to NMAC Quality Management department, on monthly basis covering internal and external QA Monitoring and QC sampling activities and results.

NMAC QM department shall check and verify the reports and then submit them to IMSMA for entry to database. See Annex L to this SNMAS. The hard copies of detailed QA and QC forms shall be maintained by NMAC sub offices, through a proper filing system.

10. Timelines

As soon as the mine action activities are completed, mine action organizations shall submit their reports to NMAC Sub Offices in a time span of maximum 3 days. All other progress reports shall be submitted on monthly basis, by no later than 3rd of coming month. This reporting timeline will allow NMAC Sub Office to properly check and verify the reports. Any discrepancies and errors shall be communicated with related teams and organizations immediately. Once verified and finalized the reports shall then be submitted to NMAC operations and related departments for checking and approval. The approved reports shall then be submitted to IMSMA section for entry into IMSMA database. This process should be completed before 10th of coming month. The following exceptions are applied about the timelines:

a) Immediate notification of demining accidents and incidents as soon as possible by phone or radio.
b) Initial demining accident or incident report shall be submitted within the same day without waiting for the end of month.
c) Detailed investigation report shall be submitted within 10 days of the event. See SNMAS 08.04 for demining incident investigation and its annexes for more details.

11. Responsibilities and Obligations

11.1. Sudan National Mine Action Centre (NMAC)

It is the responsibility of NMAC to:

1) Develop and implement IM policy, standards, regulations and reporting requirements and forms for the management of mine action information; in compliance with IMAS, and relevant national regulations and needs.
2) Establish information management systems that allow effective, efficient and timely transfers of data and information between mine action organizations, donors, government and stakeholders.
3) Ensure that IM section is staffed with appropriately qualified personnel and equipment.
4) Develop, maintain and ensure implementation of IM process and procedures.
5) Ensure that all mine action information gathering activities are properly coordinated to avoid duplication of effort, and to ensure effective use of resources.
6) Develop reporting formats that clearly define reporting requirements and frequency.
7) Develop the capacity of IM staff both in NMAC and mine action organizations and provide required training to operational and IM personnel.
8) Ensure a streamlined data and information flow by applying IM policy, standards, process procedures and routines.
9) Implement data quality management procedures at all stages of the IM cycle.
10) Regularly review IM system and information needs, identify areas for improvement and take appropriate actions to improve IM system.

11.2. Mine Action Organizations

All mine action organizations accredited and working in Sudan are responsible to:

1) Develop and implement appropriate information management SOPs in accordance with the requirements of this national mine action standard.
2) Utilize the existing IM capacity within the mine action programme in order to plan, implement and follow up on operational activities.
3) Comply with mine action data reporting requirements as outlined in this standard.
4) Participate in reviewing of IM system as requested by NMAC.
5) Ensure the involvement and training of IM staff in operational activities.
6) Provide feedback, verification and correction of information to NMAC whenever notified about any errors or inconsistencies in reporting.