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GUIDE TO DEVELOPING NATIONAL MINE ACTION STANDARDS

SECOND EDITION



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LIST OF ABBREVIATIONS AND ACRONYMS

APMBC	Anti-Personnel Mine Ban Convention	NMAC	national mine action centre
CASEVAC	casualty evacuation	NMAS	National Mine Action Standards
CCM	Convention on Cluster Munitions	NPA	Norwegian People's Aid
CCW	Convention on Certain Conventional Weapons	NTS	non-technical survey
CHA	confirmed hazardous area	OHS	occupational health and safety
CRPD	Convention on the Rights of Persons with Disabilities	PPE	personal protective equipment
EO	explosive ordnance	QA	quality assurance
EOD	explosive ordnance disposal	QC	quality control
EORE	explosive ordnance risk education	QM	quality management
ERW	explosive remnants of war	RB	Review Board
GDEI	gender, diversity, equality and inclusion	SOP	standard operating procedure
GICHD	Geneva International Centre for Humanitarian Demining	SHA	suspected hazardous area
IMAS	International Mine Action Standards	T&EP	Test and Evaluation Protocol
IMSMA	information management system for mine action	TNMA	Technical Note for Mine Action
ISO	International Organization for Standardization	TORs	terms of reference
MAC	mine action centre	TS	technical survey
MAO	mine action organization	TWG	Technical Working Group
MAP	mine action programme	UN	United Nations
NGO	non-governmental organization	UNMAS	United Nations Mine Action Service
NMAA	national mine action authority	UXO	unexploded ordnance
		VA	victim assistance

EXECUTIVE SUMMARY

Mine Action Standards are the foundation of safe, efficient, and effective mine action, protecting the lives of both mine action professionals and affected people. At the national level, standards explain how an explosive ordnance (EO)-affected State manages, regulates, and oversees mine action activities. Guided by the International Mine Action Standards (IMAS), which provide the global framework for mine action, governments adapt standards to their own contexts, taking into account terrain, contamination patterns, socio-economic conditions, legislation, institutional capacity, and environmental considerations, as well as the needs of victims, survivors, and affected communities.

National Mine Action Standards (NMAS) set out clear requirements for mine action, including survey and clearance, explosive ordnance risk education (EORE), victim assistance (VA), quality management (QM), information management, and the handover of released land back to the communities. When they are well designed and effectively implemented, national standards reduce risk, promote efficiency and innovation, and build confidence among authorities, operators, donors, and communities.

About the 2026 GICHD Guide to Developing National Mine Action Standards

The GICHD first published its guide on developing National Mine Action Standards in 2016, supporting national mine action programmes around the world in developing and reviewing their NMAS. This revised edition builds on nearly a decade of additional experience and good practice, reflecting changes in operational contexts, technology, and policy. Its aim is to support national mine action authorities (NMAAs) in leading the development and review of their own NMAS with minimal external assistance.

The guide provides NMAAs with:

- ▼ A clear explanation of IMAS as internationally agreed good practice, and guidance on how to use IMAS to develop NMAS tailored to national rules and priorities.
- ▼ Key principles and a recommended structure for NMAS, including guidance on format, language, and levels of detail, and on how NMAS relate to IMAS and standard operating procedures (SOPs).
- ▼ An overview of the main actors involved in NMAS development and the key stages of the process.
- ▼ Practical examples showing how different countries have framed and applied national requirements.

While primarily intended for NMAAs and national programme leadership, the guide is also relevant for:

- ▼ United Nations (UN) agencies and international organizations involved in mine action
- ▼ Mine action operators, donors, affected communities, and project partners
- ▼ Government institutions and policymakers working on land release, risk education, VA, environmental rehabilitation, and development planning in mine-affected areas.

Why strong national standards matter

NMAAs play a central role in ensuring that mine action is safer, more efficient, and effective. They also provide a framework for oversight and accountability, including in contexts where international or United Nations support is present.

Developing and maintaining NMAS requires technical expertise, institutional capacity, and sustained commitment. This guide sets out a clear, inclusive process for developing or revising national standards, involving all relevant stakeholders. Once adopted, NMAS should be formally approved through recognized national institutions to ensure they are legitimate, enforceable, and aligned with national laws and policies.

National standards are not static. To remain relevant, they must be reviewed and updated regularly to reflect evolving contexts, operational realities, and international standards. This includes incorporating new technologies and methodologies, lessons learned from operations, gender and diversity considerations, and improvements in information management. Regular review helps ensure that NMAS continue to support safe operations and sustainable, nationally owned mine action programmes.

Benefits for the wider mine action community

All mine action actors—including NMAAs, operators, donors, and international organizations—have a role to play in applying nationally established standards. Integrating NMAS into project planning, SOPs, QM, and reporting helps to harmonize approaches, strengthen coordination, and improve safety and effectiveness on the ground.

Beyond their technical role, NMAS are essential tools for national ownership. When developed through inclusive processes and applied consistently, they support lasting impact for affected communities and help ensure that mine action contributes to broader recovery and development goals.

INTRODUCTION

This guide supports NMAAs in developing and reviewing NMAS. It outlines a structured approach to drafting and updating national standards so they remain relevant, reflect lessons from operations, stay aligned with evolving IMAS, recognized good practice, and other national and international frameworks.

NMAS are nationally issued requirements and recommendations that regulate mine action activities to help ensure they are safer, more effective, and more efficient. Developed by an NMAA—or an organization acting on its behalf—NMAS translate international good practice into rules suited to national conditions. They take into account the nature of EO contamination, national legal frameworks, geographic and environmental factors, and the needs of affected communities and victims.

Although guided by IMAS, NMAS are adapted to national circumstances. They align with relevant international legal instruments, including the Anti-Personnel Mine Ban Convention (APMBC), the Convention on Cluster

Munitions (CCM), the Convention on Certain Conventional Weapons (CCW), and the Convention on the Rights of Persons with Disabilities (CRPD). Their development strengthens national ownership, enabling authorities to protect those at risk, strengthen national capacity, and achieve predictable and credible results.

Because each affected country has different hazards, operating conditions, and legal systems, NMAS vary in structure, chapter selection, and level of detail. While IMAS outline roles and responsibilities at a global level, NMAS describe how these are applied nationally and communicate requirements to NMAAs, mine action organizations, UN agencies, and other partners.

This guide offers practical tools to support the development and review process, including example formats, reference materials, and optional templates for planning, consultation, and drafting. These tools are intended to complement existing national processes and can be adapted to reflect local circumstances.

WHY STANDARDS MATTER IN MINE ACTION

Mine action takes place in hazardous environments, often under time pressure and involving many different actors. In such settings, standards help keep people safe, align expectations, and make results reliable. Because mine action activities carry significant danger and are typically spread across multiple regions and organizations, clear requirements support informed decision making, protect communities and personnel, steward public resources responsibly, and ensure, for example, that land released for use is genuinely safe, EORE messaging encourages people to behave in a safer manner, and access for EO victims to services is facilitated.

Standards provide a common language and set of minimum thresholds for safety, quality, and information management. They guide how risk is assessed and managed; how survey, clearance, and demolition tasks are planned and conducted; how medical support and occupational health are arranged; and how work is verified before areas are released. Without shared rules, approaches vary widely, competences are difficult to assess, and communities may be exposed to preventable harm.

The potential consequences are concrete: inconsistent clearance depths, weak casualty evacuation (CASEVAC) arrangements, or poorly briefed teams can lead directly to injuries, fatalities, and loss of public trust.

Reliable mine action also depends on accurate and comparable data. When reporting formats differ,

authorities struggle to aggregate information, analyse trends, or demonstrate impact. Standardized formats and definitions enable national databases to produce coherent reporting, support prioritization, enable informed tasking, and help programmes learn from experience.

Standards improve interoperability. National mine action programmes (MAPs) often involve government entities, militaries, commercial contractors, national and international non-governmental organizations (NGOs), the UN and other partners. Agreed requirements allow these actors to plan, task, and report under the same framework.

Shared terminology—such as a common understanding of “all reasonable effort”—along with harmonized accreditation procedures and QM systems make it possible to coordinate effectively and move resources when needed. A standardized expected level of quality enables comparison of performance between different methodologies, such as manual clearance, mechanical assets, or animal detection systems. By providing a predictable regulatory environment, NMAS help the NMAA identify and address deviations or poor-quality work, and ensure fair and consistent oversight of all actors.

Why standards matter?



Standards also clarify roles, responsibilities, and accountability. They describe what the NMAA, mine action centre (MAC), and mine action organizations (MAOs) are responsible for, and how quality assurance (QA) and quality control (QC) take place. When land is released against documented requirements, criteria and evidence, responsibilities are clearer. This legal and procedural certainty matters to communities, authorities that issue release decisions, and partners.

A strong national standards framework reinforces national ownership. IMAS reflect international good practice, but each country applies and adapts that guidance to its own legislation, governance structures, terrain, contamination types, and socio-cultural context. NMAS enable national authorities to regulate mine action, oversee operational performance, and align activities with national security, development, and humanitarian priorities. They can promote inclusion by: encouraging sex-, age-, disability-, and displacement-disaggregated data where relevant; ensuring participation is accessible to women and men; and supporting risk education and VA tailored to diverse audiences.

A credible NMAS framework also helps fulfil obligations under instruments, such as the APMBC, CCM, CCW,

and CRPD, and supports transparent reporting against national law and international commitments.

Well-established standards strengthen confidence among national stakeholders and international partners. They demonstrate that work is systematic and auditable. This helps attract technical and financial resources and supports long-term planning and capacity development.

Finally, standards help programmes adapt over time. Mine action evolves as new hazards emerge, new technologies become available, and operations shift from large-scale clearance to managing residual risk. A regularly reviewed standards framework makes it easier to integrate lessons learned, codify innovations, and maintain coherence across the full set of chapters. This continuity allows programmes to respond effectively as priorities change, ensuring that people remain safe, data remain comparable, and decisions remain evidence-based.

Taken together, standards transform expert knowledge, international and national norms into clear national requirements, enable coordination among diverse actors, reinforce national stewardship, and sustain the public confidence needed to return land to productive use.

Accreditation of the Norwegian People's Aid (NPA) mine detection dog team against established standards in Angola (2022)



OVERVIEW OF THE INTERNATIONAL MINE ACTION STANDARDS

WHAT IMAS ARE

The first set of international standards for humanitarian mine clearance was issued by the UN in 1997. As mine action evolved, these standards kept being revised to reflect changes in clearance practice and to cover additional pillars of mine action, including survey, risk education, training, and stockpile destruction. To reflect this wider scope, they became known as the IMAS.



The purpose of IMAS is to support safer, more effective and efficient mine action, and to promote a consistent approach across programmes and organizations. IMAS are arranged in thematic series covering the full range of mine action activities, including management, survey, clearance, occupational health and safety (OHS), stockpile destruction, risk education, and monitoring and evaluation. They are reviewed regularly, and new chapters are developed when required.

The IMAS framework is made up of three types of documents.

- 1. IMAS** provide guidance, establish principles, and, in some cases, define international requirements and specifications.
- 2. Technical Notes for Mine Action (TNMA)** provide advisory guidance that complements IMAS. They offer additional principles, technical information, and clarification on specific topics, helping programmes to interpret and apply IMAS.
- 3. Test and Evaluation Protocols (T&EP)** are technical reference documents that support IMAS by defining standard methods for testing and evaluating mine action equipment and procedures. They originated as Workshop Agreements developed by the European Committee for Standardization (CEN) and contribute to consistent and reliable evaluation of equipment performance.

IMAS have no legal standing except (in rare cases) where they have been adopted by an NMAA as national standards, or where one or more specified IMAS chapters are included in a contract or any other legal document.

IMAS can serve as interim national standards where a UN or other international body temporarily assumes the role of an NMAA. In practice, these actors often produce context-specific national technical standards and guidelines (NTSGs) to address local conditions more directly.

IMAS as interim national standard

In accordance with UN Security Council resolution 1590 (2005) and the following Security Council resolution 1996 (2011), the United Nations Mine Action Service South Sudan (UNMAS-SS) has been appointed by the NMAA of South Sudan (which represents the Government of the Republic of South Sudan) to coordinate and facilitate all mine action activities in South Sudan. This includes the establishment of the NTSG for mine action activities, accreditation and monitoring of mine action organizations and the QC of tasks completed by such organizations.¹

Operating without contextualized guidance should generally be kept to a minimum, as it may affect the solving of future liability issues and the management of residual contamination.

IMAS serve three main functions:

- ▼ providing guidance to the mine action community on acceptable safety criteria and quality of work;
- ▼ offering a framework from which NMAA can be developed or revised to better reflect country-specific needs and circumstances;
- ▼ acting as a normative reference in contractual arrangements between donors and mine action organizations.

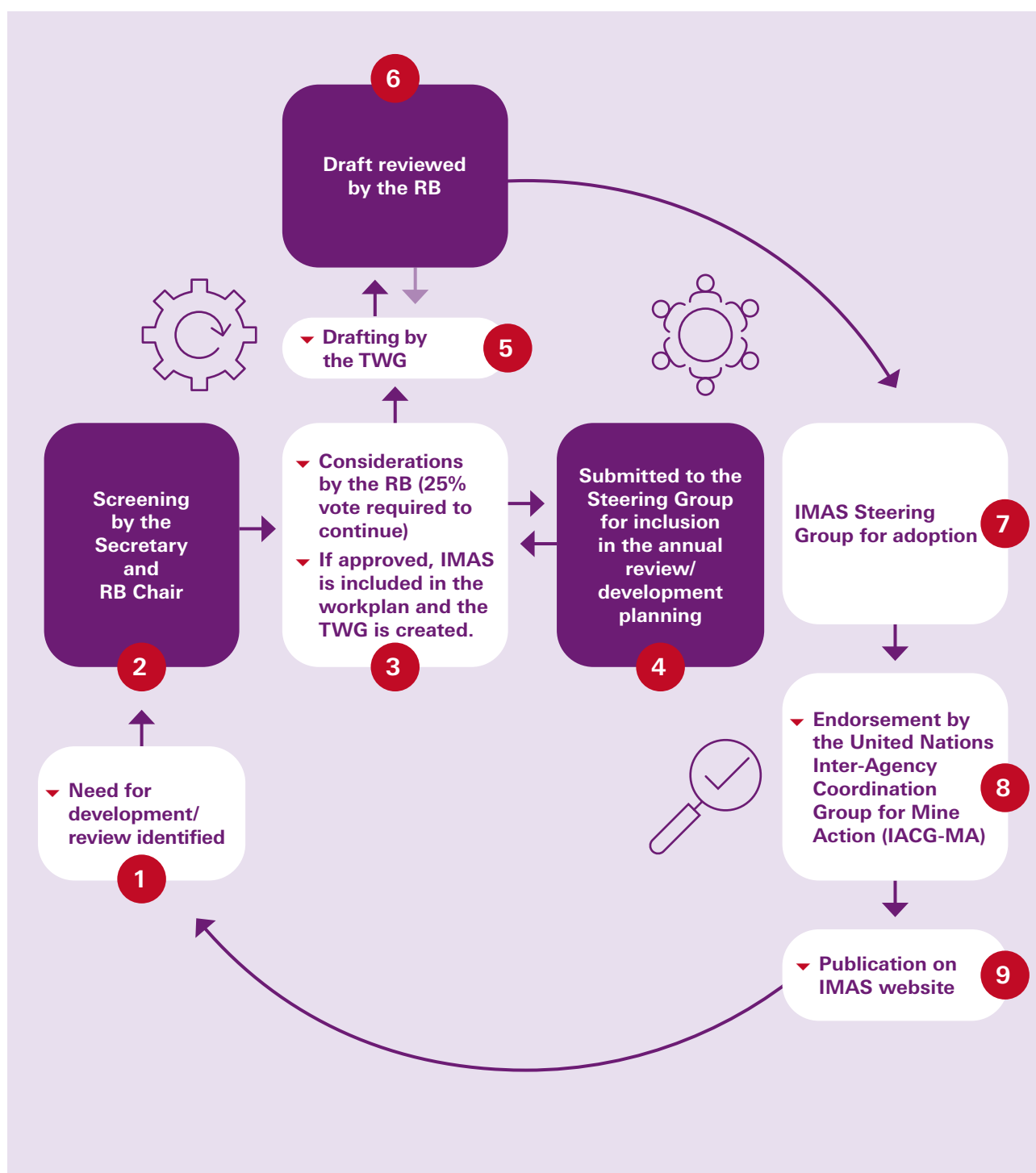
The IMAS framework is divided into several series, each of which deals with a different aspect of mine action. There are currently 14 series. This structure enables IMAS to guide global good practice while giving national authorities flexibility to adapt standards to their context. The most up-to-date versions of IMAS documents are available at: www.mineactionstandards.org.

HOW IMAS ARE DEVELOPED

IMAS are produced, periodically reviewed, and updated through a structured consultative process to ensure they remain relevant and responsive to developments in mine action. New standards may be created when emerging needs are identified, and existing standards can be amended or replaced. Existing IMAS chapters are reviewed every five years, or earlier if necessary. The preparation, review, and revision of IMAS is conducted by the IMAS Review Board (RB).

If any organization identifies a need to develop, withdraw, or review an IMAS, it can submit a proposal to the IMAS Review Board. If the proposal is accepted, the Review Board forms a technical working group (TWG) of subject matter experts. Either an organization or an individual may lead the drafting by the TWG. The draft is then submitted to the RB for review.

IMAS development/review process



The **IMAS RB** reviews the draft, considers technical input using TWGs, and oversees the process until the text is ready for approval. Once the RB agrees, the draft proceeds to the IMAS Steering Group for strategic oversight. Following Steering Group agreement, the document is endorsed at the principal level by the UN Inter-Agency Coordination Group on Mine Action (IACG-MA). Once endorsed, the new or revised IMAS is considered current and is published on the IMAS website. IMAS 01.10:2025, Clause 12 provides the structures and membership of the RB, the Steering Group, and the UN IACG-MA.

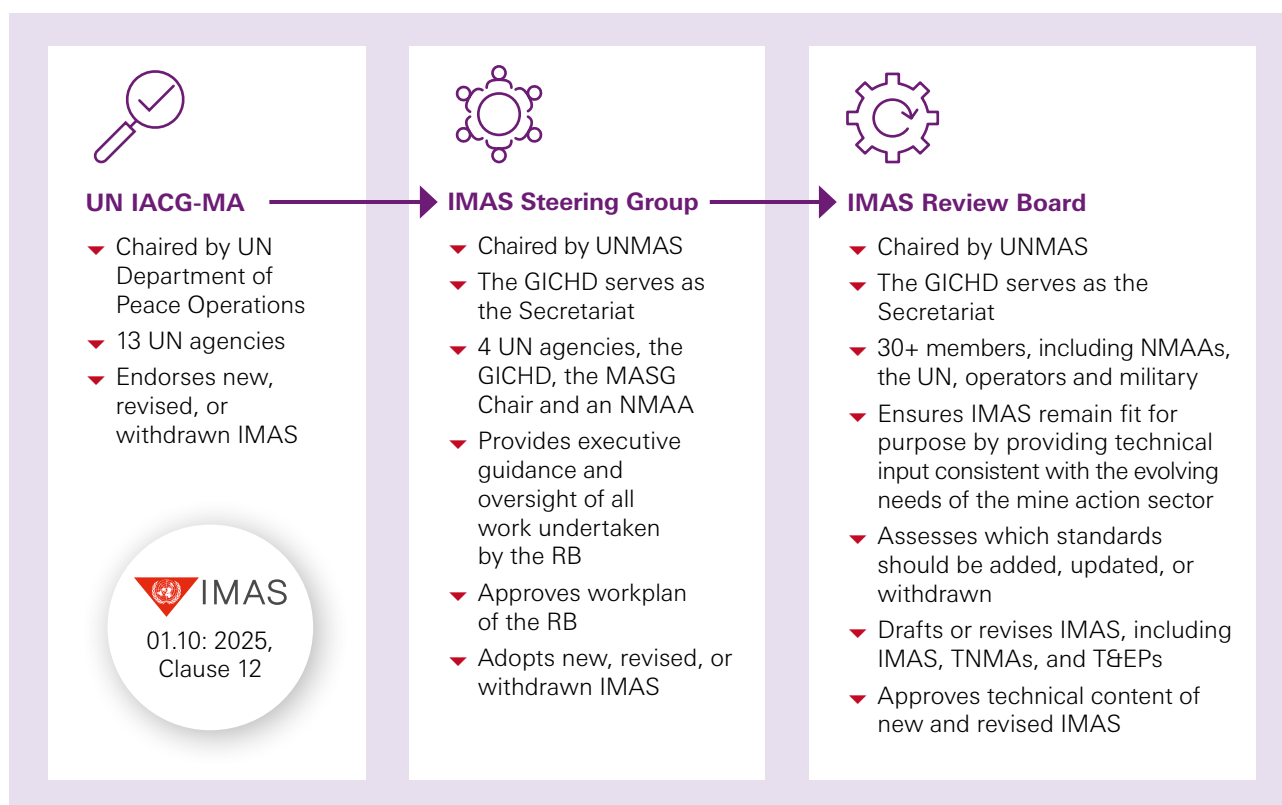
The **IMAS RB** is the principal forum for technical debate on draft IMAS. It oversees the IMAS portfolio, including preparation, revision, withdrawal, and related technical work. The RB is chaired by the United Nations Mine Action Service (UNMAS). The GICHD serves as Secretary of the Board. Membership reflects the mine action community, including UN agencies, donors, NMAAs, commercial companies, NGOs, research and development institutions, regional bodies, and subject specialists.

The **IMAS Steering Group** provides executive guidance and oversight of all work undertaken by the RB. It is responsible for providing strategic direction and policy guidance to ensure the ongoing coherence and utility of IMAS is in line with the evolving needs of the sector. It is chaired by the Director of UNMAS and includes representatives from the UNDP, UNICEF, UNOPS, the GICHD, the Chair of the Mine Action Support Group (MASG), and one NMAA (rotating every two years). The group meets annually or as needed.

At the highest level, IMAS are endorsed by the **UN IACG-MA** at the principal level. Endorsement is noted in the biennial report of the Secretary-General on Assistance in Mine Action and authorizes publication as a current IMAS document. Below is the flow diagram of the IMAS development/review process.

Further information on IMAS governance can be found at: <https://www.mineactionstandards.org/imas-governance/>.

IMAS governance structure



The GICHD has produced an informative e-learning course on IMAS which is accessible on the GICHD Training Platform at: <https://www.gichd.org/training/course-catalogue/course/understanding-the-international-mine-action-standards-imas-e-learning-course-new6724eac20c745487902501/>.

IMAS TECHNICAL LANGUAGE AND COMPLIANCE

To support consistent understanding, IMAS include a comprehensive glossary (IMAS 04.10, *Glossary of mine action terms, definitions and abbreviations*). The same terminology and principles apply when developing NMAS.

IMAS use three key terms to express levels of provisions.

Verbal forms used in IMAS

SHALL	requirement, method, or specification that is to be applied	for consistency and alignment with IMAS, NMAs should use the same terminology to express the expected level of compliance in the national guidance
SHOULD	preferred requirement , method, or specification	
MAY	possible method or course of action	

Examples of the use of such terminology in IMAS

IMAS 09.10, *Clearance requirements*:

"The specified depth of clearance **shall** be determined by a technical survey, or from other reliable information, which establishes the anticipated depth of the mine and ERW hazards, and an assessment of the intended land use. When there is no reliable information on the depth of the local mine and ERW hazards, the NMAA **should** consider adopting a default depth".

IMAS 12.10, *Explosive ordnance risk education in mine action*:

"Community liaison **should** ensure that community members are aware of the existing threat and are involved in identifying their own risks and determining their own priorities for mine action assistance. It **may** also support communities to develop locally appropriate solutions to reduce the risk in their communities".

IMAS 07.30, *Accreditation of mine action organizations*:

"Accreditation **may** be revoked if monitoring shows that the mine action organization is no longer meeting the terms of the accreditation agreement and is not implementing effective remedial actions".

Different documents in the IMAS hierarchy serve different purposes and indicate different levels of intended compliance. Thus, the term "shall", which expresses a mandatory requirement, is only used in IMAS but not in TNMAs or T&EPs.

▼ TNMAs provide guidance, clarification, or good practice advice on how to interpret or implement IMAS. The term "shall" is not used in TNMAs, as their content is purely advisory. This avoids implying a strict obligation that could conflict with national legislation, while still conveying the intended level of commitment. TNMAs are not normative.

▼ T&EPs are supporting or reference documents, often describing procedures for testing equipment, methods, or performance. They are technical and procedural, intended for consistency and transparency, and to provide best-practice recommendations rather than imposing obligations

on national authorities or organizations. As such, they use softer verbs (“should”, “may”) to signal that the measures are optional or context-dependent. Using “shall” would give them a prescriptive tone that does not suit their advisory purpose.

RELATIONSHIP BETWEEN IMAS, NMAS AND SOPs

IMAS, NMAS, and SOPs form a connected hierarchy. Together, they guide mine action to be safer, more effective, and more efficient. They are intended to be aligned; differences between them relate primarily to the level of detail. While each serves a distinct function, where possible, contradictions between them should be avoided.

IMAS provide the global framework. NMAS interpret and adapt that framework to national realities. SOPs provide the organizational detail for how work is carried out to meet national requirements.

Typically, IMAS guide the development of NMAS and NMAS guide the development of SOPs.

Where NMAS do not yet exist, SOPs may be based directly on IMAS. In some cases, new practices captured in SOPs may later be incorporated into NMAS and with time possibly inform revision of IMAS. This feedback pathway reflects how innovations or context-specific solutions can flow upward through the system.

IMAS AND NMAS

IMAS are developed through international consultation and endorsed by the UN. They provide a universal reference outlining globally accepted principles across the sector. Because they are general in nature, IMAS often use “should” or “may” to indicate flexibility, while using “shall” where compliance is expected and safety is non-negotiable.

NMAS set out country-specific requirements that reflect national laws, terrain, contamination profile, operational context, and institutional arrangements. They are more prescriptive, typically using “shall” and “should” to establish clear national expectations. NMAS govern mine action and become mandatory at the national level.

National authorities convey the national requirements for mine action to MAOs through NMAS. In so doing, they need to strike a balance between being too loose (which may compromise consistency and quality) and being too descriptive (which may hinder innovation and efficiency).

Since NMAS are normally guided by IMAS, there should be limited cases of non-alignment. However, it is possible for NMAS to outline national requirements independent of IMAS minimum requirements. Aligning NMAS with IMAS supports the implementation of international treaty obligations and strengthens credibility with partners.

Contextualization of IMAS to NMAS

IMAS provide a global baseline, but national standards must translate the IMAS principles into requirements that reflect local realities. This contextualization ensures that NMAS remain achievable, relevant, and safe given the country's threat profile, terrain, legislation, operational

capacities, and available assets. In a few cases, NMAS may adopt IMAS directly or national authorities simply expand or refine IMAS provisions to address context specific risks or preferred methods.

How different countries have adapted IMAS guidelines

With regards to mechanical land release

As per IMAS 09.50, *Mechanical land release*, ground preparation methods alone do not meet land release requirements. Therefore, they shall always be subject to follow-up by other demining methods. Machines designed to detonate or detect EO, on the other hand, may meet land release requirements.

Sri Lanka's [SLNMAS 04.40:2010, Clause 4, Systems approach to mechanical demining](#), states:

"Demining machines are not mine clearance machines. This is because 'clearance' is defined in the IMAS as the removal of *all* mines and ERW to a specified depth. No currently available demining machine is able to *remove all* the mines and ERW as specified in a mine clearance task. They cannot reliably detonate all pressure-operated devices and stand little chance of detonating devices with pins that must be pulled, or of disrupting common ERW other than mines. On uneven ground, all demining machines can fail to process the ground to a constant depth, and so may miss mines or ERW altogether. They can also leave mines and ERW damaged and in a more sensitive condition than they were before the machine was used".

Lebanon's [NMAS 09.50:2023, Clause 4, General principles of mechanical demining operations](#), states:

"The general principle of operations adopted in Lebanon when clearing recorded military laid patterned minefields permits the use of approved mechanical assets to assist in area reduction outside the cleared mine rows and to prepare access routes to the minefield perimeter, which is usually marked with visible minefield fences. The mine rows inside the minefields shall always be searched and cleared manually. [...] Mechanical flails and rotary tiller assets shall never be used as the only search and clearance tool in any [suspected or confirmed hazardous area] SHA or CHA. Mechanical assets shall always be followed by systematically applied manual or mine detection dogs search and clearance before the area processed can be declared 'cleared'".

Section 8.2.2 a) of **South Sudan's** [National Technical Standards and Guidelines](#), states that:

"When machines are used for mine clearance operations, follow up assets will always be used, before the area is released as cleared. During mechanical clearance where the machine cannot be employed due to the ground conditions, these shall be referred to as 'skip areas'. All skip areas shall be marked and follow up clearance shall be conducted before the area is considered cleared".

The National Standards on the process for mechanical land release in **Ukraine** (DSTU 8820-4:2025, 5.4 e), state that:

"The use of follow-up activities within the framework of the technical survey should confirm the absence or presence of explosive ordnance (EO). Follow-up activities within the framework of mine clearance should confirm the removal of EO placed at a certain depth in a specific area. Follow-up activities are part of an integrated approach to mine action and, therefore, the MAO's SOPs should include detailed information on the use of comprehensive approaches in the work plan".

It specifically states that follow-up activities are always conducted after any work involving the use of demining machines for soil treatment (preparation) and detonation (disposal/destruction) of EO (for example, cultivators, flails).

Liability considerations

IMAS 07.11 requires NMAs to ensure that liability considerations are clearly embedded in NMAS, contractual frameworks, and operational procedures, in line with existing legal and regulatory systems.

The **Lao People's Democratic Republic (PDR)**'s national unexploded ordnance (UXO) and mine action standards contextualize this requirement as follows:

"In the Lao PDR, no liability is to be apportioned to a clearance organization unless an incident has been formally investigated in accordance with Chapter 23 of national standards, Reporting and Investigation of UXO/Mine Action Incidents, and the investigation concluded that clearance requirements were not achieved. Any further liability will only be determined by following the due legal processes in accordance with the applicable national legislation of Lao PDR. For UXO clearance carried out under contract or some other formal agreement, the degree of residual liability should be specified in the contract or agreement. When a formal investigation identifies that a clearance organization failed to achieve clearance requirements, or in the case of land released through the survey process, apply a sufficient level of diligence, the NRA may, under the provisions of these national standards, conduct further external QM checks on the organization concerned and if necessary, suspend an organization's accreditation agreement until any deficiencies are rectified".

Lebanon's NMAS 07.11:2023, Clause 8, requires an independent investigation to be done to determine liability issues after injuries or EO is found in released land. If the investigation does not find any negligence or willful misconduct by the operator during non-technical survey (NTS), technical survey (TS), or clearance, then both Lebanese Mine Action Centre (LMAC) and implementing agency will be relieved of legal liability. The liability will rest with the Government. Subclause 8.2 also goes on to say:

'When determining liability, the following criteria apply:

- ▼ An IA (implementing agency) may be held legally responsible for errors if it is found to have been conducting HMA activities without the required accreditation from LMAC. Any IA found to have been conducting HMA activities without the required accreditation from LMAC shall also be subject to the laws of Lebanon regarding that omission.
- ▼ An IA may be held legally liable for injuries or losses caused by missed EO contamination when an independent investigation finds that the staff of the IA deliberately concealed a failure to conduct work by recording it as having been completed and/or willfully misled the LMAC by knowingly making false performance claims or submitting false/misleading reports.
- ▼ No organization or individual shall be held liable for injuries or losses caused by missed EO contamination when an independent investigation of the accident/incident determines that the parties have applied "all reasonable effort" to achieve an end in which a level of residual risk is known to be inevitable and so "tolerable".

The **Cambodia** National Mine Action Standards (CMAS) state that mines / explosive remnants of war (ERW) are primarily and ultimately a national responsibility and, as such, the Royal Government of Cambodia has a responsibility to accept accountability and liability for victims in all areas affected by mines/ERW. Liability to operators is only linked to non-compliance with an agreed policy or procedure

An organization will in principle be liable in cases of accidents caused by missed mines/ERW if investigation shows that:

- ▼ the accident was caused by wilful or criminal misconduct, gross negligence;
- ▼ the organization was not licensed, certified or authorized to carry out acts leading to the erroneous land release decision;
- ▼ the organization has conducted gross procedural errors or grossly deviated from the agreed CMAS.

Failure to comply with the conditions stated in CMAS may result in the suspension of accreditation. Any resulting liability or compensation claims as a result of a missed mine as described in paragraph 12c shall be the responsibility of the organization involved. (12c refers to applying the national standards for land release).

Contextualized competencies

While IMAS set minimum explosive ordnance disposal (EOD) qualifications and competencies, the Lao PDR's standards prescribe localized competencies, levels, and responsibilities. The national authority recognized the country's complex contamination (including landmines, cluster munitions, air-dropped bombs, and UXOs) and identified limitations in workflow if IMAS EOD competencies were to be applied.

To address this, they developed contextualized competencies and context-specific responsibilities to manage EOD disposal efficiently. For example, while IMAS Level 2 allows the holder to make decisions on whether the item is safe to move, in the Lao PDR level 2 cannot move EO and can only destroy in situ, as highlighted in Chapter 8, *Explosive Ordnance Disposal*:

"A level 2 EOD qualification enables a clearance technician to supervise a UXO clearance task and carry out the 'in situ' disposal of UXO up to 89 mm, including white phosphorus. This level of EOD qualification applies to national clearance technicians at the lowest UXO clearance task supervisor level. Note: This level would typically apply to a section commander".

Adapting IMAS provisions to local conditions

Tajikistan's MAP developed a **Guide on conducting non-technical survey with entry into a hazardous area**, which, to some extent, combines the conduct of these two activities. The rationale behind this was the realization that the NTS data gathered without entering the suspected hazardous area was of poor quality. There were a lot of minefield records (recorded as SHAs) which required establishing the perimeters as well as evidence points to be re-designated as CHAs. In addition, this solution allows Tajikistan to maintain some efficiency despite the local climatic conditions, which shorten the period during which operations can be conducted as well as the remoteness of the areas to be surveyed.

These examples illustrate how NMAS can remain aligned with IMAS principles and guidelines, while defining national conditions on the use of mechanical assets, including requirements for follow-up procedures, tasking limitations, and national terminology.

NMAS AND SOPs

Mine action organizations, including national authorities, develop SOPs to describe how specific tasks are carried out safely and consistently. SOPs translate requirements into step-by-step instructions—for example, how to conduct manual clearance, handle demolitions, or implement animal detection systems or risk education activities. The MAC, where present, is normally responsible for accrediting and approving organizational SOPs, using NMAS as the main reference to accredit organizations.

Where NMAS require, for example, that a mined area be cleared to a certain minimum depth, SOPs set out how that depth will be achieved using the organization's personnel, methods, and equipment. Different approaches may be used, but they must meet NMAS requirements.

In few cases, SOPs may overlap with NMAS or may be applicable nationally. In that case, they may be an integral part of NMAS (as an annex). For example, a relevant annex could outline procedures for reporting, thus ensuring all operators send reports in the same format and at the same frequency. Otherwise, detailed procedures (such as how to conduct an EORE session, how to use a prodder, or how to prepare explosive charges for demolitions) should not be in NMAS.

Various countries pursue different levels of detail in their NMAS. For example, in Croatia, the sector is regulated by a "Mine Action Law", adopted in 2015, which provides detailed procedures for the implementation of mine action. Certain clauses of the law (for example, documentation needed for accreditation, task implementation and setting requirements for 5-per-cent physical sampling as part of QC) are more typically found in national standards or even SOPs.

CONTINUOUS IMPROVEMENT AND FEEDBACK LOOPS

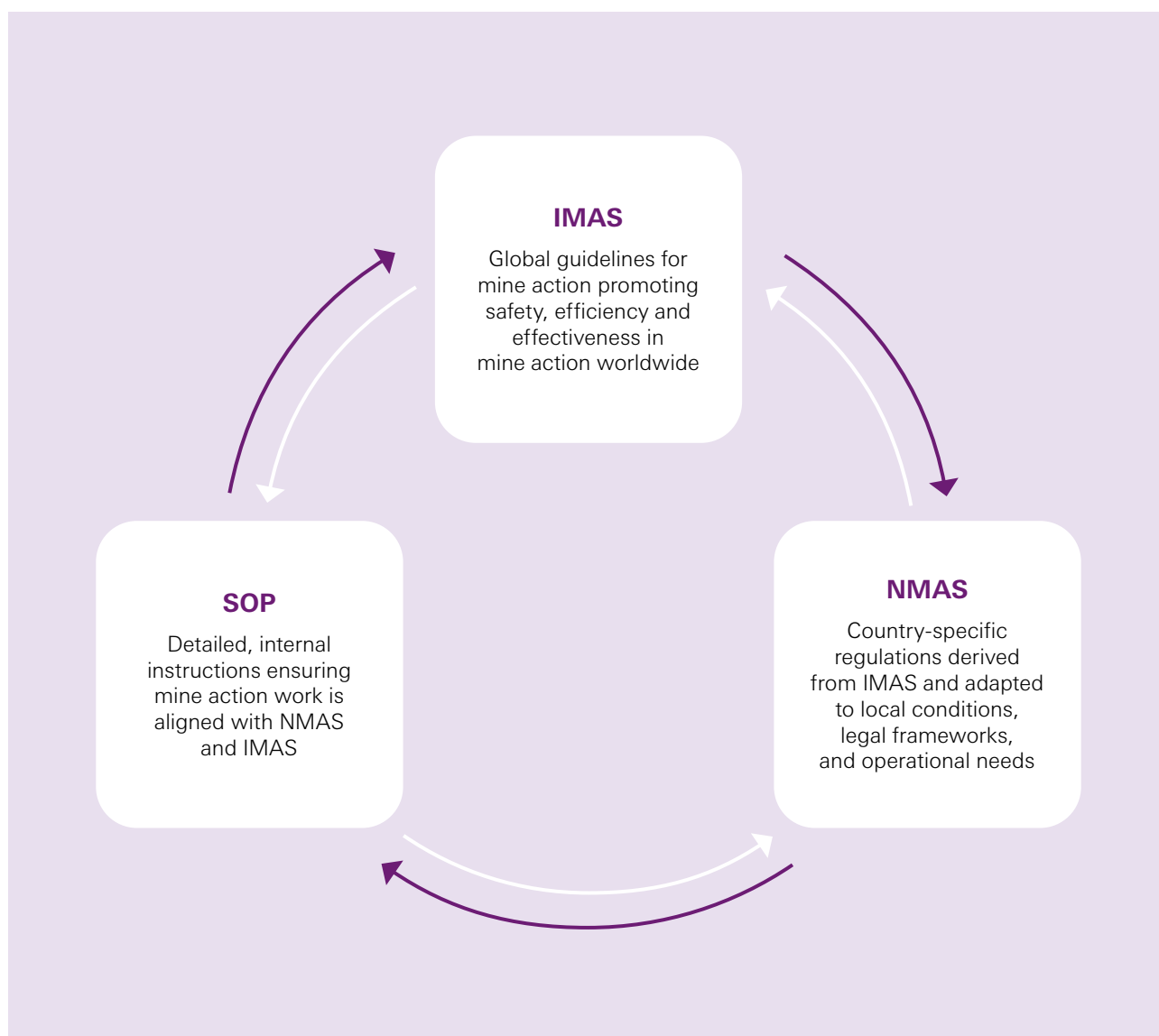
NMAS and SOPs capture how mine action is carried out in practice. Because they are shaped by operational conditions—including terrain, contamination types, available resources, and cultural context—they contain valuable information about what works and what does not. This practical insight is a critical source of learning for the global mine action sector.

When national frameworks address topics not yet reflected in IMAS—notice to air movement, or handling of specific munitions—they can provide evidence and practical examples that support the case for updating IMAS. Such national adaptations help ensure that emerging needs or new threats are documented early, improving collective understanding and helping other programmes respond more efficiently.

IMAS 01.10 highlights that IMAS are reviewed regularly and should draw on lessons from NMAS and SOPs. This creates a structured feedback loop.

At the start of the cycle, IMAS provide global guidance. NMAS tailor this guidance to national realities, and SOPs translate NMAS into detailed procedures. As organizations apply these procedures, they gain operational experience, identify strengths and weaknesses, and record lessons learned. Those lessons are then used to update SOPs and, where relevant, adjust NMAS. Once common approaches or innovations are proven to be effective, they may be proposed for integration into future versions of IMAS. This continual flow of information promotes **continuous improvement** in mine action.

NMAS feedback loop informing IMAS review



New tools, technologies, and methodologies are often trialled first at the organizational level. If field evidence shows the new method or technology is safer, more efficient, or more sustainable, an organization may incorporate it into its SOPs. Over time, an NMAA may determine that the method should become standard, updating NMAS to reflect the improvement. Where multiple countries begin using similar approaches, or where the benefits become broadly recognized, IMAS may later be updated so that the approach is shared globally. This process ensures IMAS remain relevant and reflect current good practice rather than static or outdated methods.

For example, **TNMA 10.10/03, Explosive hazard risk assessment in debris management (rubble removal) operations**, started as technical standards and guidelines developed by UNMAS for the Gaza Strip after the 2014 conflict. The increase in contexts with contaminated rubble resulted in the need to adapt, develop, and codify it into a global TNMA to share the safe approaches.

Lessons from the field—especially incidents, near misses, challenges in medical evacuation, or new threat types—can be analysed and fed back into SOPs and NMAS to strengthen safeguards. Sharing these lessons internationally through IMAS reduce the likelihood that other programmes will repeat the same errors. This collective learning culture helps protect personnel

and communities and supports more robust QM. For example, **TNMA 08.20/02, Cluster munition remnant survey**, published in 2024, is an example of this pathway. Operational experience in countries including Iraq, the Lao PDR, and Vietnam resulted in operators realizing the need to share good practices and provide guidance for the development of consistent procedures and national standards.

New techniques, improved tools, or refined processes often allow operations to be completed faster, at lower cost, or with fewer assets, while maintaining or improving safety. When such innovations are captured in SOPs, reflected in NMAS, and eventually harmonized through IMAS, the entire sector benefits. Efficiency gains free resources, allowing more land to be released, more communities to be reached, and more victims to be supported.

IMAS explain **what** is expected as a minimum by the mine action sector and **why**. NMAS then set out **what** is required nationally and **why**, adapting these expectations to local conditions. SOPs explain **how**, describing the step-by-step procedures organizations follow to meet national requirements in the field.

The table below summarizes the three standard documents.

IMAS	NMAS	SOPs
Global guidance for mine action	National requirements	Organizational procedures based on NMAS
Developed through global consultation and endorsed by the UN	Developed and approved by the NMAA	Developed by mine action organizations (and MAC, as relevant)
Support safer, more effective, and more efficient mine action	Translate IMAS into context-specific national rules	Translate NMAS into step-by-step instructions
Broad in scope; cover all pillars (for example, survey, clearance, risk education, VA)	Tailored to national needs, laws, environment, and socio-cultural context	Detailed, task-level instructions for daily field activities
Provide high-level principles adaptable to many contexts	Define binding requirements for all mine action activities in-country	Specify methods and techniques used to meet NMAS
Reference framework for policy, safety, QA/QC, training, and contracting	Directly govern mine action activities nationally	Guide operational practice within an organization
Generally non-binding unless adopted in law or contracts	Mandatory at the national level once approved	Mandatory within the organization implementing them
Use “shall/should/may” to indicate the intended degree of compliance	Use more “shall/should” to set national expectations	Describe how work is carried out in practice (for example, detection, clearance, demolition)
May influence NMAS	May use IMAS as reference	Must comply with NMAS
Updated through global consultation and feedback from NMAS/SOPs	Updated through stakeholder consultation	Updated by organizations to reflect new tools, lessons, and NMAS changes

NORMATIVE AND CONTEXTUAL FOUNDATIONS FOR NMAS

NMAS AND INTERNATIONAL FRAMEWORKS

IMAS reflect widely accepted international norms relating to EO. They align with four core Conventions that guide global mine action practice:

- ▼ the [Anti-Personnel Mine Ban Convention](#) (APMBC);
- ▼ the [Amended Protocol II and Protocol V to the UN Convention on Certain Conventional Weapons](#) (CCW);
- ▼ the [Convention on Cluster Munitions](#) (CCM); and
- ▼ the [Convention on the Rights of Persons with Disabilities](#) (CRPD).

The APMBC and CCM include obligations for States parties to record, mark and clear mines and cluster munitions, and to provide assistance to EO victims. Both conventions call for Member States to maintain NMAS up to date with related IMAS, continuously adapt to new challenges, and ensure efficient and effective implementation. In short, having up-to-date national standards is one way of aligning the requirements of these treaties. NMAS development should align to the State's obligations and priorities under these treaties.

Chapter 21 of **Somalia's** National Mine Action Standard (SNMAS) on EORE, reflects on the responsibilities under the APMBC and the CCM as follows:

"The Anti-Personnel Mine Ban Convention (APMBC), Convention on Cluster Munitions (CCM) and Convention on the Rights of persons with Disabilities (CRPD) which Somalia is a State party to, oblige the Government of Somalia to ensure that communities at risk from various explosive ordnance are given awareness and that their behavior towards risks posed by such remnants is positively changed".

Another example is **Afghanistan's** NMAS on Planning and Prioritization which was developed to facilitate better planning, coordination, and prioritization of mine action projects in accordance with Afghanistan's obligations to the APMBC (also referred to as APMBT). Below are two examples of the set requirements in the NMAS:

- ▼ "The APMBT work plan shall be reviewed by the assigned planning committee on a yearly basis preferably during the middle of the year.
- ▼ The APMBT work plan shall be maintained flexible to adopt necessary changes based on new priorities, new NTS information, donors and stakeholders' requirements."

CCW Amended Protocol II and Protocol V contain provisions and technical annexes relevant to marking and clearance of mines and other EO. The CRPD provides a normative basis for inclusive VA and reinforces the need for accessibility and participation of persons with disabilities.

States not party to these conventions may still find value in aligning NMAS with related treaty obligations and humanitarian principles. Customary international humanitarian law also requires parties to armed conflict to protect civilians by facilitating the removal or neutralization of EO after hostilities.

NMAS AND OTHER NORMATIVE FRAMEWORKS

While NMAS are grounded in IMAS and based on the mentioned international treaty obligations, they may also be guided by other recognized normative frameworks to ensure safe and responsible practice. IMAS may not always provide detailed guidance for specialized contexts, so NMAAs should draw guidance from additional national or international frameworks.

For example, the [International Ammunition Technical Guidelines](#) (IATG) are particularly relevant when NMAS address the storage, handling, transport, and disposal of EO. Although developed for wider ammunition management rather than mine action specifically, IATG guidance applies directly to demolition planning, explosive storage and risk-mitigation measures. **IMAS 09.30/01/2022, Conventional explosive ordnance disposal (EOD) competency standards**, also refers to IATG (including IATG 01.50 on hazard divisions and compatibility) to support consistent and safe explosive management.

In some areas, internationally recognized ISO standards can provide useful guidance, including on process management, QA, and environmental protection. These may help reinforce NMAS chapters on QM, documentation control, and certification. Where activities risk affecting sensitive environments—for example, through demolition residues—ISO environmental standards may help shape national requirements.

OHS frameworks also support personnel protection. National OHS laws typically define minimum requirements for managing workplace risk, medical coverage, incident reporting, and emergency preparedness. These considerations should be reflected in NMAS chapters on safety and occupational health, medical support, and training. IMAS similarly references external guidance, such as the C-TECC [Guidelines for First Responders with a Duty to Act](#) (2016) cited in IMAS 10.40/01, *Medical support*, to encourage consistent medical preparedness.

In some contexts, mine action activities fall within broader residual contamination management. For example, in the United Kingdom, there is no British national standard. Instead, the construction sector commonly refers to [CIRIA C681, Unexploded ordnance \(UXO\)—a guide for the construction industry](#), which provides widely recognized good practice guidance. C681 offers a structured approach to UXO risk from desk-based assessment to mitigation planning, and includes recommended terminology, indicative workflows, and clarification of roles and responsibilities across clients, designers, UXO specialists, insurers, and other parties. Although C681 is not a formal standard and is specific to the UK construction industry, it illustrates how national

or sectoral guidance can help fill gaps where NMAS do not exist.

Another example is the *Quality Guideline for Offshore Explosive Ordnance Disposal* in 2020.² It outlines procedures from initial survey to clearance, and reporting, and sets expectations for organizational arrangements, personnel competency, and technical methods. Although developed for German waters, its approach is relevant for the NMAA dealing with underwater EO and emphasizes environmental protection and transparency. It is used by countries as a good practice guide in the absence of national standards.

Another example, IMAS 10.30, *Safety and occupational health—personal protective equipment*, gives minimum requirements on personal protective equipment (PPE). Because there was no other recognized standard to outline PPE, the IMAS incorporated NATO's STANAG 2920.

STANAG 2920 defines the ballistic protection levels for military materials and equipment. It establishes a uniform method for testing the resistance of protective gear, armour, and other defence-related materials against high-speed projectiles and fragments.

NMAAs may adopt this requirement as is in their NMAS but they need to ensure there are modalities to monitor adherence.

IMAS minimum requirement for PPE as Sri Lanka's national requirement

Sri Lanka adopted the minimum requirement from IMAS as a national requirement in its PPE standard without any changes to the text:

“PPE provided to reduce the risk from such a hazard should include, as a minimum:

ballistic body armour with a STANAG 2920 V50 rating (dry) of 450 m/s for 1.102 g fragments. (Such tests for ballistic protection do not realistically replicate mine effects, but will continue to be used until an accepted alternative is developed as an international standard);

a full-face visor as described in clause 4.2(b) above. However, if an analysis of the threat using the criteria set out in these guidelines and SLNMAS 10.10 indicates that a full-face visor would provide inadequate protection across a full 360° threat spectrum, then a helmet should be worn. The helmet should have a ballistic rating similar to the ballistic body armour selected by the demining organization.”

NMAS AND NATIONAL FRAMEWORKS

NMAS operate within a national legal framework. They should align with relevant laws and regulations to ensure they are enforceable, consistent and coherent across sectors.

Examples of relevant national frameworks include:

- ▼ laws or decrees governing mine action activities;
- ▼ laws governing explosives and hazardous materials;
- ▼ OHS frameworks;
- ▼ environmental legislation;
- ▼ disability and equality laws.

Other sectors may already have standards relevant to mine action, such as construction, emergency response, or health services. These should be considered during NMAS development to avoid conflict, clarify roles and responsibilities, and reinforce compliance. Harmonizing NMAS with national law supports accountability, promotes safe operations and enables a coordinated national response.

Example of alignment of NMAS with IMAS and local legislation

In Ukraine, the standard on mechanized demining processes, in addition to referencing 16 IMAS chapters, is also aligned with 15 national legislative and normative frameworks, that include:

1. Law of Ukraine "On Mine Action in Ukraine";
2. Law of Ukraine "On Technical Regulations and Conformity Assessment";
3. Law of Ukraine "On Accreditation of Conformity Assessment Bodies";
4. Law of Ukraine "On Adoption of the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices, as amended on 03 May 1996 (Amended Protocol II of 3 May 1996), annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects";
5. Law of Ukraine "On Adoption of the Protocol on Explosive Remnants of War (Protocol V), annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects";
6. Law of Ukraine "On Ratification of the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction";
7. Resolution of the Cabinet of Ministers of Ukraine No. 1207 of 10 November 2021 "On Establishment of the National Mine Action Authority";
8. Resolution of the Cabinet of Ministers of Ukraine No. 372 of 17 April 2019 "On Approval of the Rules for Marking Hazards Related to Mines and Explosive Ordnance—Consequences of War";
9. Resolution of the Cabinet of Ministers of Ukraine No. 1150 of 03 November 2011 "On Approval of the Procedure for Maintaining the Register of Mine Action Operators";
10. Resolution of the Cabinet of Ministers of Ukraine No. 271 of 08 March 2024 "On Implementation of a Pilot Project on Mandatory Certification of Mechanized Demining Means (Humanitarian Demining), Associated Products, Components and Equipment";
11. Resolution of the Cabinet of Ministers of Ukraine No. 123 of 02 February 2024 "On Implementation of a Pilot Project on Certification of Mine Action Operators and Mine Action Processes";
12. Order of the State Aviation Service of Ukraine and the Ministry of Defence of Ukraine No. 430/210 of 11 May 2018 "On Approval of the Aviation Rules of Ukraine 'Rules for the Use of the Airspace of Ukraine'", registered with the Ministry of Justice of Ukraine on 14 September 2018 No. 1056/32508;
13. Order of the Ministry of Justice of Ukraine No. 578/5 of 12 April 2012 "On Approval of the List of Standard Documents Created in the Activities of State and Local Authorities and Other Institutions, Enterprises and Organizations, Indicating Retention Periods for Documents", registered with the Ministry of Justice of Ukraine on 17 April 2012 No. 571/20884;
14. VST 700.004:2024(01) Training. Minimum requirements for external pilots (operators) of unmanned aircraft systems (STANAG 4670 Ed. 5/ATP-3.3.8.1 Ed. B "Minimum Training Requirements for Unmanned Aircraft Systems Operators and Pilots", MOD);
15. Annex 1 to the Convention on International Civil Aviation, Personnel Licensing, 11th edition, July 2011, International Civil Aviation Organization.

A strong link between NMAS and national legislation also supports **clarity of liability**. Responsibility for land release decisions, authorization of procedures, and oversight of operators must be well defined. When NMAS provide clear national requirements—supported by

law—stakeholders better understand who is accountable for decisions, who certifies land release, and how residual risk is managed. This reduces ambiguity in the event of incidents and helps protect communities, operators and the state.³

NMAS AND SOCIO-CULTURAL CONSIDERATIONS

NMAS should reflect the socio-cultural environment in which mine action takes place. Local norms, beliefs, and practices influence community engagement, risk perception, communication patterns, and decision-making. Understanding these dynamics enables mine action organizations to work safely, respectfully, and effectively. Relevant considerations may include:

- ▼ gender roles and participation;
- ▼ customs, traditions, and authority structures;
- ▼ language and communication preferences;
- ▼ religious and spiritual beliefs;
- ▼ perceptions of disability and health;
- ▼ expectations around privacy and data collection.

These factors are particularly important for NMAS that govern community-facing activities—such as EORE, land release, and VA—as well as standards dealing with medical support, safety, and occupational health. Because IMAS are intentionally generic, NMAS must adapt requirements to local context to ensure activities are socially acceptable, inclusive, and safe. This may include ensuring training facilities, PPE, and uniforms accommodate women, using gender-neutral language, building in safe reporting pathways, or adapting data collection approaches to protect privacy and dignity.

NMAS adapts to the local context

In Ukraine, DSTU 8820:2023, *Mine Action Management Processes General*, reflects inclusivity by recommending that there should be separate toilets for women and men with equipment that considers gender physiological differences. It also highlights that PPE is intended to be worn by personnel (male and female). Furthermore, DSTU 8820-3: 2024, *Mine Action Management Processes—Part 3: Information Management System*, specifies that data on affected people should be divided into categories according to age and sex, in line with IMAS 05.10, *Minimum data requirements*.

Embedding socio-cultural considerations into NMAS helps ensure mine action is equitable, responsive to community needs, and more likely to be trusted and effective.

A female supervisor in Somalia at a demolition site with an EOD team leader



GUIDING PRINCIPLES OF NMAS DEVELOPMENT

The following principles should guide the development and review of NMAS.

- ▼ **Clarity:** NMAS should use plain, direct language that can be easily understood. The text should be concise and logically structured, and terminology should carry a single, unambiguous meaning. Unnecessary detail should be avoided so requirements can be interpreted and applied consistently.
- ▼ **Consistency:** Terminology, definitions and abbreviations should be used consistently across all NMAS chapters. IMAS 04.10 serves as the primary reference, supplemented where needed by terms already used in national legislation. Including a national terminology and definitions section supports coherent interpretation.
- ▼ **Practicability:** Requirements should be realistic and achievable within the national context. NMAS should not impose conditions that operators cannot meet, as this undermines implementation and confidence.
- ▼ **Subsidiarity of NMAS and SOPs:** NMAS define what must be achieved; SOPs describe how operators meet those requirements. NMAS should therefore focus on outcomes rather than detailed procedures. Overly prescriptive requirements can restrict innovation, limit effective use of new technology, and reduce the ability of operators to tailor methods to their context.
- ▼ **Safety:** NMAS should prioritize the protection of personnel, communities, and the environment. Requirements should promote safe practices, effective risk assessment and management, safe handling and disposal of EO, appropriate PPE, and adherence to SOPs. Training requirements should ensure personnel possess the necessary skills.
- ▼ **Effectiveness:** Standards should support mine action that achieves tangible outcomes: reduced EO risk, increased access to land and services, and improved well-being of affected communities. NMAS should reinforce continuous improvement, including through reflection on lessons learned and emerging good practice.
- ▼ **Efficiency:** NMAS should encourage methods that maximize outcomes while making responsible use of time and resources. They should support streamlined processes, promote good practice, and enable feedback to strengthen performance and reduce costs.
- ▼ **Inclusivity:** NMAS should reflect the needs and priorities of all affected populations. Development processes should engage diverse stakeholders—including women, men, girls, and boys—to ensure standards are relevant to context. Inclusive participation supports trust, relevance and national ownership.

CLARITY

NMAS should be written in plain, direct language that is easy to understand for all intended users. Clear and concise wording helps ensure that requirements are interpreted consistently across organizations and over time.

The text should be logically structured, using terminology with a single, unambiguous meaning. Sentences should be concise, and complex concepts should be broken down into clear statements of requirement. Avoid unnecessary technical language when simpler wording will achieve the same level of precision. Where technical language is unavoidable, it should be clearly defined.

Clarity also means avoiding excessive detail. NMAS should articulate what is required, not describe every procedural step—that belongs in SOPs. Overly detailed standards can confuse users, reduce flexibility, and create interpretation gaps.

Clear communication also depends on inclusive language. IMAS encourages the use of gender-neutral terms to help avoid unconscious bias and ensure accessibility for all stakeholders. Terms such as “staff” or “personnel” should replace gendered expressions (for example, “manpower”). Gendered pronouns should be avoided unless specifically relevant.

Language shapes attitudes, behaviour, and perceptions, and national standards influence expectations across the MAP. Using gender-neutral language helps reduce bias and the risk of misunderstanding.

Terminology must be used consistently across NMAS chapters. IMAS 04.10 provides authoritative definitions and abbreviations, and these should be adopted to

maintain coherence. Where new or context-specific terms are needed—such as translations or locally specific descriptors—definitions should be added to a dedicated terminology section to ensure they are understood in a consistent way.

Taken together, these practices ensure that NMAS can be readily understood by national authorities, operators, trainers, monitors, and affected communities, contributing to safer and more reliable implementation.

Good examples

Principle	Example	Why
Plain language	"Survey teams shall record the location of all suspected hazardous areas".	Clear, simple, and direct. The action (record) and object (SHAs) are specific and easily understood.
Logical structure	"Operators shall submit monthly activity reports to the MAC. Reports shall include: (a) task progress; (b) number and type of EO destroyed; (c) safety incidents; and (d) community engagement activities".	Breaks information into structured elements, helping users understand content requirements quickly. Reduces interpretation errors.
Unambiguous wording	"The minimum clearance depth shall be 15 cm, unless otherwise specified by the NMAA in writing".	Uses exact figures and conditions, leaving no doubt about required depth or who may authorize exceptions.
Correct level of detail	"SOPs shall describe how teams conduct CASEVAC; NMAS require that CASEVAC plans are in place, rehearsed monthly, and communicated to all staff".	NMAS sets outcome requirements; SOPs provide procedural detail. This keeps NMAS outcome-focused while allowing operators flexibility in implementation.
Inclusive language	"All personnel shall receive induction training" (instead of "all men working on site").	Neutral phrasing supports equal participation and avoids unintentionally excluding or marginalizing groups.

Bad examples

Issue	Example	Why
Vague wording	"Survey teams should collect information where possible".	"Where possible" is unclear and unenforceable.
Overly complex language	"The clearance requirements herein are predicated on an appreciation of legacy contamination, contextualized threat matrices and corresponding operational capacities".	Difficult to understand.
Over-prescription (belongs in SOPs)	"Teams shall advance in 50 cm lanes, using a prodger at a 30–45° angle".	Procedural detail; restricts methods and innovation.
Gendered language	"Manpower shall be recruited locally".	Excludes or implies exclusion; unclear.
Ambiguous requirements	"Operators may report incidents immediately".	Leaves unclear whether reporting is mandatory, optional, or time-bound. "May" cannot substitute for "shall/should".
Undefined terms	"The zone must be checked thoroughly".	"Checked thoroughly" is vague and subjective.

CONSISTENCY

Consistency in language and terminology helps ensure NMAS are interpreted and applied in the same way by all users. In mine action—where safety, quality, and legal responsibility depend on shared understanding—consistent terminology is essential.

National authorities should avoid redefining terms already standardized in IMAS, as doing so introduces ambiguity and undermines interoperability.

However, national circumstances may require additional terminology. This may occur when:

- ▼ adapting wording to reflect national legal concepts or administrative structures;
- ▼ introducing new terms to describe hazards or practices unique to the context.

PRACTICABILITY

NMAS requirements must be practicable, achievable, and appropriate for the national context. Standards are only useful if they can be implemented in the field. If requirements are too demanding, vague, or disconnected from existing capacities, organizations may be unable to comply. This can erode confidence in the standards, weaken regulatory authority, and compromise safety and effectiveness.

NMAS should reflect what can reasonably be implemented with the resources, skills, and technologies available—or expected to be available—in the country. For example, prescribing use of mechanical land release in a country with no mechanical assets would be impractical; instead, NMAS may allow phased adoption or specify alternative methodologies.

NMAS should impose obligations only where they add value in terms of safety, effectiveness, or compliance. Overly detailed documentation requirements, for example, may limit operators' capacities without improving outcomes.

Practicability does not mean lowering standards; it means setting requirements that operators can meet in different ways. NMAS should describe the outcome to

NMAS should include a dedicated section for terminology and definitions. Definitions should be concise, technically accurate, and consistent across all NMAS chapters.

Terminology management should follow a clear and disciplined process. NMAS should be reviewed periodically to:

- ▼ incorporate updated or newly issued IMAS terms,
- ▼ retire obsolete terminology,
- ▼ document emerging national terminology, and
- ▼ ensure consistent use across chapters and annexes.

IMAS 04.10:2024, Annex A, offers a model for structured terminology management and can serve as a blueprint for national systems.

be achieved, while SOPs set out the method. This allows innovation and adaptation to local conditions.

If certain requirements cannot be met immediately but are important for safety or compliance, NMAS may define phased implementation or transitional arrangements. This enables programmes to meet essential needs early while planning toward higher capability.

Practicability also involves anticipating evolving contexts. The NMAS should be drafted so that they can accommodate emerging hazards, technologies and methods without requiring constant revision. Future-readiness involves:

- ▼ allowing flexibility for new tools and methodologies,
- ▼ avoiding unnecessary procedural detail in the standard,
- ▼ ensuring oversight systems can incorporate innovation,
- ▼ defining review mechanisms to integrate lessons learned.

This forward-looking approach helps NMAS remain useful as a programme matures and as capabilities, technologies, and operating environments evolve.

Aspect	Good example	Bad example
Alignment with existing capacity	Clearance requirements reflect available tools and skills; operators can comply.	Standards assume assets (for example, mechanical systems) that do not exist nationally.
Innovation pathway	NMAS provide a way to trial and integrate new technologies.	New tools cannot be used because standards are rigid or outdated.
Flexibility for local conditions	Operators adapt procedures to terrain while meeting safety outcomes.	All work sites required to follow identical procedural steps regardless of context.
Clear and practicable processes and requirements	NMAS are clear and comprehensive on what operators are to do on matters like cancellation, handover, etc.	Requirements are unachievable and operators have to continuously request direction from the MAC.
Gender inclusivity	NMAS outline team mix using 'should' rather than 'shall' allowing for situations when the mix is unattainable.	Too restrictive NMAS, for example, simply says all teams shall have a mix of women and men which may at times be impractical.
Alignment to national laws and regulations	Aligned with and reference national laws, regulations and policies.	Silent to existence of other national normative frameworks, operators cannot follow it without going against other national laws.
Clearance requirements	Clearance depth, buffers and fade outs are reasonable, allowing adaptation to contexts.	Rigid on clearance depth and buffers even in situations when this is not practical.
Equipment specifications	The NMAS prescribe equipment that is available or easily accessible; for example, communication equipment, remote controlled mech assets, drones, etc.	NMAS prescribe equipment not available or is subject to import restrictions. Or prescribe use of equipment which operators cannot afford.
Reporting requirements	NMAS outline manageable relevant reporting requirements including reporting frequency.	Data-reporting requirements are unclear, or reporting is required at random or unspecified intervals.

SUBSIDIARITY OF NMAS AND SOPS

NMAS and SOPs serve different but complementary roles. Keeping them clearly separated helps ensure an effective, flexible, and future-ready MAP.

NMAS define what must be achieved. They set national requirements for safety, quality, information management, competence, and other expected outcomes. They describe the results that activities need to deliver, not the detailed steps required to deliver them. SOPs describe how these requirements are met in practice. They translate national requirements into day-to-day procedures, tools, sequencing, and task-level instructions used in the field. Maintaining this separation has several benefits.

First, it protects flexibility and innovation. If NMAS set out detailed procedures, organizations lose the ability to tailor methods to their context or adopt new methods or technologies. Outcome-focused standards allow operators to develop procedures that reflect their assets, experience, and environment.

Second, it helps to keep guidance practical. SOPs change more frequently—often in response to new equipment, lessons learned, or changes in terrain—while NMAS should remain stable enough to guide the programme over time. Keeping procedural detail in SOPs avoids the need to revise NMAS every time an adjustment is needed.

Third, it avoids unnecessary duplication and conflict. When NMAS contain procedural detail, inconsistencies can arise across organizations. By keeping procedures in SOPs, each operator can work to the same national requirements without needing identical internal processes and tools.

In short, NMAS should focus on the minimum national requirements to be achieved, while SOPs should describe how those national standards shall be met.

For example, an NMAS may require that clearance achieve a specific minimum depth and that CASEVAC plans be rehearsed monthly. The corresponding SOPs would explain which procedures, tools, and techniques are used during clearance and how teams conduct CASEVAC.

Over-prescriptive NMAS—such as specifying lane width or how to angle a prod—restrict flexibility and should be avoided.

A deminer follows SOPs, applying approved tools and techniques



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Subsidiarity principle in Ukraine

Ukraine's national standard on the process for mechanical demining (DSTU 8820-4:2025) includes very specific requirements. However, it also gives space for mine action operators to demonstrate that their proposed methodologies will meet these requirements:

"7.2 Standard Operating Procedures for Mechanized Demining (Humanitarian Demining) of Territory

Mine Action Operators (MAOs) shall ensure the development of SOPs for mechanized operations, which must be approved by national authorities during the certification process.

[...]

The SOP shall clearly define the procedures used for each method of mechanized demining (humanitarian demining), including:

- ▼ required technical specifications and configuration of the mechanized demining equipment (MDE), associated explosive items, components, and/or mechanical tools;
- ▼ required group composition;

- ▼ inspection procedures before starting work and inspection frequency aligned with Quality Management;
- ▼ criteria for internal control;
- ▼ actions in case explosive remnants of war (ERW) are detected;
- ▼ actions in case previously unidentified threats are discovered;
- ▼ actions in case a dangerous situation arises during method implementation;
- ▼ actions in case of component failure of the MDE, associated explosive items, components, or mechanical tools;
- ▼ actions to mitigate MDE damage and associated explosive items, components, or mechanical tool failure (evacuation, technical maintenance, repair or replacement of damaged parts, removal of explosive items attached to equipment, etc.)."

While ensuring that all certified mine action operators will meet the requirements set up in national standards, it does not prevent them from developing the best possible methodologies.

SAFETY

Safety sits at the core of NMAS. Standards should prioritize the protection of personnel, affected communities, and the environment from the risks posed by EO. This requires a clear framework for risk assessment, planning, implementation, and monitoring so that mine action is carried out under the safest possible conditions.

NMAS should set national expectations for safe working practices without prescribing every procedural step. They should reinforce measures, such as appropriate PPE, safe handling and disposal of EO, clear marking, appropriate medical support, and reliable communication systems.

A strong safety approach also recognizes that conditions vary. National standards should require context-appropriate risk assessment before, during, and after tasks, including provisions to pause or halt work if conditions become unsafe. Safety responsibilities should be clearly assigned across the MAC and operators, including requirements for accreditation, supervision, and QA.

As such, NMAS should ensure that all personnel have the knowledge and skills needed to work safely, and receive regular refresher training.

Good example

"Signs are to be placed on all access routes that lead into the mine contaminated area at the limit of the assessed danger area radius. These signs are to warn personnel that:

1. They are entering the danger area.
2. Access beyond the point is only permitted to authorized personnel.
3. When mine clearance operations are ongoing, personnel proceeding past the point are to be wearing PPE."

"Routine inspections of PPE and protective clothing are to be carried out by clearance organizations. This is to ensure that these items continue to provide the required level of protection and that the condition of the PPE or protective clothing does not affect the safety and efficiency of operations. The requirements for such inspections are to be included in organizations' SOPs."

Country/NMAS chapter

Sri Lanka

Chapter 12, Mine Clearance Operations, para. 10.5.2

Lao PDR

Chapter 18, Personal Protective Equipment (PPE)

Good example

“Personnel employed on demining operations shall be fit for the work they undertake. They shall not have existing medical conditions that may affect their work or the support provided to or by them in an emergency.

All personnel recruited for mine action in Afghanistan shall be medically checked by a qualified doctor prior to employment. The medical check shall ensure that the prospective employee has no illnesses, infections or allergies that would affect their ability to carry out their intended duties.”

Country/NMAS chapter

Afghanistan

Mine Action Standards 7.03, Medical Support and Casualty Evacuation, para. 3

Safety is not static. NMAS should encourage continuous improvement, drawing on lessons from operational experience, incident reports, and new technologies. A measured approach to adopting innovation—including

controlled trials, monitoring, and feedback—helps programmes update practice without compromising safety.

EFFECTIVENESS

NMAS should support mine action that achieves meaningful and measurable results. Effectiveness is about ensuring that activities actually reduce EO risk, enable safe access to land and services, and contribute to wider recovery and development objectives. Standards should therefore guide operators toward methods that are proven, appropriate to context, and capable of delivering the intended outcomes.

Effective NMAS also encourage the use of evidence to guide decisions. Data from operations, QA findings, and community feedback should inform planning and prioritization. This helps ensure that resources are directed where they will make the greatest impact—whether by focusing clearance on high-use areas, adapting EORE approaches to specific groups, or refining VA referral systems.

NMAS encourage the use of evidence to guide decisions

Section 10 of **Zimbabwe’s** ZNMAS 8.04, Post Clearance Documentation, outlines the need for post clearance impact assessment to check effectiveness and gain feedback for continuous improvement. It says:

“Demining organizations should conduct a formal Post project Review (PPR), (on the contract, not individual tasks), to identify lessons learned during the planning, preparation and clearance phases of the operation. The PPR should include a report on the suitability of the equipment, procedures, training and support. Issues of concern should be identified and prioritized, and solutions proposed. In Zimbabwe, the NAMAAZ, the NMAA, will specify the need to complete PPR on completion of all contracts.”

NMAS should encourage reflection on lessons learned, integration of good practice, and responsible adoption of new tools and methodologies. As programmes mature, their standards should evolve to reflect

changing operational contexts—for example, shifting from wide-area clearance to more targeted residual risk management.

EFFICIENCY

NMAS should promote approaches that achieve the desired results while making responsible use of time, money, and other resources. Efficiency is not about working quickly at the expense of safety or quality. Rather, it is about ensuring that mine action activities are organized and delivered in a way that maximizes value and avoids unnecessary effort. Efficiency also benefits from good data. NMAS should support information management systems that enable programmes to track progress, measure performance, and identify

opportunities to improve. The use of appropriate indicators—such as outputs, time, cost, and asset utilization—helps understand which approaches deliver the best results under specific conditions.

NMAS should accommodate innovation and adaptation. New tools or methods may increase efficiency, but only if they are introduced responsibly. Allowing operators flexibility in how national requirements are met encourages them to adopt techniques that make

best use of their capabilities, terrain, and hazard profile. Lebanon's MAP presents a good example of how NMAS development and/or review can contribute to enhanced efficiency.

Since operationalization of the reviewed NMAS, Lebanon has improved efficiency.

Lebanon's NMAS development process enhanced efficiency

The first Lebanese NMAS was developed in 2010. The first major revision was approved in March 2018. This was meant to enhance operational efficiency by aligning national standards with IMAS developments and introducing several new chapters that were not included in the 2010 edition. The revision process involved extensive engagement with MAOs who contributed valuable comments and field data—for example, EO depths gathered during technical survey and clearance operations. The 2018 Lebanon NMAS placed strong emphasis on IMAS land release principles and evidence-based decision-making informed by operational data collected from the field. Key changes introduced included:

- ▼ reduction of clearance depth from 20 cm to 15 cm;
- ▼ reduction of fade-out distances in patterned minefields from 15 m to 5 m;
- ▼ updated fade-out specifications for cluster munition remnants (CMR) from 50 m to 35 m at 15 cm depth and 15 m visual surface search;
- ▼ introduction of TS approaches for CMR tasks;
- ▼ incorporation of explosive detection dogs in CMR technical survey operations.

INCLUSIVITY

NMAS should reflect the needs and priorities of all people affected by EO. Inclusive standards are more relevant, equitable, and effective because they recognize that different groups experience risk, access services, and participate in mine action in different ways.

Inclusivity begins with broad engagement. The development or revision of NMAS should involve diverse stakeholders—including women, men, girls, boys, persons with disabilities, displaced people, and minority groups. Their insight helps ensure standards reflect lived experience, community priorities, and barriers to access.

Inclusivity also benefits from a whole-of-government approach. Mine action intersects with multiple sectors—health, education, social protection, justice, labour, environment, and infrastructure. NMAS should therefore encourage collaboration between relevant ministries and public institutions so that standards are coherent with national policies and services. Close engagement with disability, gender, and social welfare authorities helps ensure NMAS align with national equality legislation and promote safe and fair access to assistance and

services. This approach supports integration of mine action outcomes into broader national development and protection systems.

NMAS should strengthen safe and meaningful participation throughout mine action activities. Requirements should promote non-discriminatory practices—for example, fair recruitment, mixed-gender teams for community engagement, and accessible communication formats. Standards should encourage systematic collection of disaggregated data—including by sex, age, disability, and displacement—to support evidence-based decisions.

The goal is not to prescribe a single model of inclusion. Rather, NMAS should ensure that operators consider diverse needs and take steps to remove legal, cultural, environmental, or physical barriers to participation. Thus, inclusive standards help to ensure mine action benefits are shared fairly across affected communities and embedded within national systems that support long-term recovery and development.

NMAS DEVELOPMENT METHODOLOGY

There is no single prescribed process for developing NMAS. The approach described in this chapter provides one commonly used methodology, based on practical experience from a range of MAPs. It offers a structured sequence of steps intended to help national authorities coordinate stakeholders, draft context-appropriate standards, and manage approval and future reviews.

Not all steps are mandatory in every setting. Programmes differ widely in scale, mandate, maturity, institutional arrangements, and available resources. NMAS development should therefore be tailored to national context. Some programmes may follow all steps in full;

others may combine or modify steps to reflect available capacity, urgency, or operational needs. The order of steps may also vary depending on whether the country is initiating NMAS for the first time, revising existing standards, or addressing specific thematic gaps.

The methodology is intended to provide a practical guide rather than a rigid framework. Programmes are encouraged to apply it flexibly, using IMAS as the primary reference while adapting to legal, institutional, operational, and socio-cultural realities. Continuous consultation, transparency, and documentation—regardless of the exact procedural route—remain central to producing credible, practical, and widely accepted national standards.

Overview of key steps



1. Identify the need: Determine why new or revised NMAS are required, based on operational developments, new hazards, lessons learned, or legal obligations.



2. Identify stakeholders: Map relevant actors and determine who should participate in or be consulted during the NMAS development process.



3. Prioritize chapters: Determine which chapters to start with given the capacity available, safety, operational urgency, treaty obligations, and which ones to be done later.



4. Convene a kick-off meeting and appoint a dedicated focal point: Bring stakeholders together to agree on the process, timelines, and roles, and confirm a coordinating lead.



5. Establish TWG(s): Form a group (or sub-groups) of subject matter experts and stakeholders responsible for drafting and reviewing chapters.



6. Conduct desktop analysis: Review existing NMAS, national laws, data, context, organizational structures, and other relevant information to inform drafting.



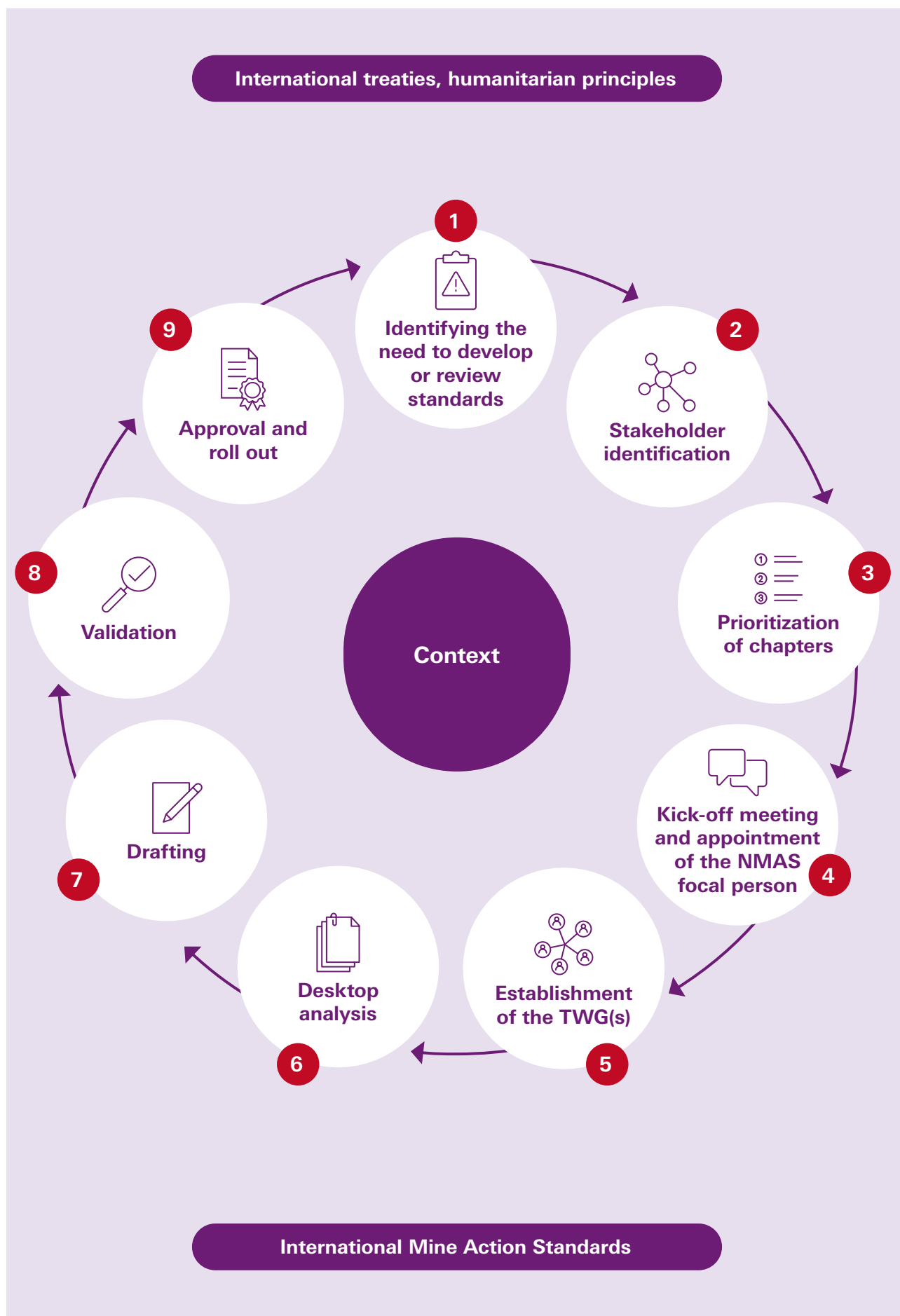
7. Draft the NMAS: Prepare draft chapters using IMAS as the foundation, integrating national requirements, legal context, and practical considerations.



8. Validate drafts: Share draft chapters for wider consultation, review, and discussion—often through a workshop—to resolve comments and refine content.



9. Approve, translate, and roll out: Present final drafts for national approval, translate as needed, distribute to stakeholders, and support implementation and SOP alignment.





IDENTIFYING THE NEED FOR NMAS DEVELOPMENT

Recognizing the need to develop or update NMAS is the first step. This process will look different in each country and should be adapted to national circumstances.

A functioning NMAA is an important foundation. Because multiple government bodies may be involved in mine action, it is advisable to designate a clear lead—ideally an NMAA supported by a MAC. Where possible, this should be formalized through legislation or decree to ensure broad recognition and to avoid development of standards that are not accepted across government. Clear designation supports coordination, legitimacy, and adoption of NMAS.

A need for new or revised NMAS may arise at any point in a programme's life cycle. Typical triggers include:

- ▼ programme establishment (new MAP);
- ▼ introduction of new methodologies, technologies, or equipment;
- ▼ newly discovered contamination types;
- ▼ lessons from operations, including QM findings;
- ▼ analysis of accidents or recurring non-conformities;
- ▼ new or evolving treaty obligations;
- ▼ organizational change or handover;
- ▼ innovations tested under trial SOPs.

These triggers reinforce that NMAS should remain living documents. Systematic review is therefore important to ensure that operational learning, technological developments, and contextual changes are reflected in the national framework.

Besides the above triggers, there can be some missing but valuable chapters that a MAP may require.

The NMAS needs assessment tool (**Annex A**) recognizes that programmes operate at different levels of maturity and have different activity portfolios, and therefore may require different standards at different times.

The tool outlines either **general, activity-based, or activity-supporting NMAS chapters** in each phase—that is, start up, maturity, and near completion.

Before drafting begins, the NMAA should assess whether it has adequate time, staff, and resources to manage the process. Capacity strengthening may be needed to ensure that focal points and technical leads can commit sufficient time and understand the IMAS framework.

Factors to consider while identifying needs

MAPs differ in scale, mandate, and maturity. Large, long-standing programmes—such as Afghanistan, Angola or Ukraine—may require comprehensive NMAS covering many specialized areas. Smaller programmes with limited residual contamination may only need a concise set of standards focused on specific hazards. Key considerations include:

- ▼ **Hazard context:** type and extent of EO contamination; availability of data.
- ▼ **Institutional arrangements:** existence and functioning of an NMAA and MAC; relevant legal frameworks.
- ▼ **Resources:** financial, human, and technical capability within NMAA, MAC, and operators.
- ▼ **Stakeholder roles:** clarity on accreditation, monitoring, and oversight responsibilities; operator capacities.
- ▼ **Programme duration:** shorter programmes may adopt IMAS plus national context-specific annexes rather than full NMAS.
- ▼ **Treaty obligations:** status of APMBC, CCM, CCW, and related deadlines/conditions.

These factors help determine which NMAS chapters are essential, whether full national standards are justified, and what sequencing or scope is appropriate.



STAKEHOLDER IDENTIFICATION

Identifying relevant stakeholders—and clarifying their roles—is essential to developing NMAS that are practical, accepted, and implementable. The NMAA, or whichever entity leads mine action, is best placed to coordinate this activity. Key stakeholders in mine action may include:

- ▼ the national mine action authority (NMAA);
- ▼ the mine action centre (MAC);
- ▼ national accreditation and monitoring entities (if separate from the MAC);
- ▼ relevant government ministries (for example, interior, defence, health, environment, social welfare);
- ▼ mine action organizations (national and international MAOs);
- ▼ civil society organizations, including those working on women's rights, disability inclusion, and community representation;
- ▼ national standards associations or regulatory bodies;
- ▼ authorities responsible for legal approval, endorsement, and publication;
- ▼ private organizations involved in mine action.

Early engagement helps ensure an inclusive and transparent process. Stakeholders who understand the objectives, process, and expected contributions are more likely to support and implement the resulting NMAS.

It is important to note that identification does not automatically mean full participation. Some organizations may be unfamiliar with mine action and may require targeted engagement to understand how they can contribute. Once identified, each stakeholder should nominate representatives to form an NMAS Review Board, to guide planning and provide later linkages to the TWGs.

Stakeholder participation supports:

- ▼ whole-of-government coordination;
- ▼ alignment with national laws, strategies and capabilities;
- ▼ technical accuracy and operational relevance;

- ▼ inclusive and context-appropriate decision-making;
- ▼ wider acceptance of the final standards.

This step lays the foundation for structured collaboration throughout the drafting and review process. Two tools in **Annex B** can help in this step.

Tool 1 (Stakeholder analysis/mapping tool) helps NMAAs identify, organize, and assess stakeholders who may influence or support the development of NMAS. It provides a structured way to understand:

- ▼ who is relevant;
- ▼ what roles they play;
- ▼ what capacity they have;
- ▼ how they should be engaged.

The tool supports an inclusive, well-coordinated NMAS development process, ensuring that all necessary institutions are represented, while helping avoid imbalanced participation or overlooked actors.

Tool 2 (Stakeholder engagement planning tool) is designed to translate stakeholder mapping into a practical engagement plan. Where the first tool identifies *who* stakeholders are and what roles they play, this tool clarifies *how* and *when* to engage them throughout the NMAS development process. It helps the NMAA coordinate participation, gather feedback efficiently, maintain communication, and ensure that those who must approve or contribute are appropriately involved.

Both tools consist of clearly labelled columns that users simply fill in. The last columns of both tables provide the necessary guidance to those leading the development or drafting process by providing ongoing reference and a better understanding of the key stakeholders. Since stakeholder standing changes over time, the analysis should be repeated whenever necessary.

Sri Lanka NMAS Review 2023 – TWGs





NMAS CHAPTERS PRIORITIZATION

The whole set of standards cannot be developed or reviewed simultaneously. Prioritizing or selecting which chapters to address first is a critical step in the NMAS development process. It is recommended that a corresponding IMAS chapter serves as the interim reference for any chapters not yet drafted, until a contextualized national version is developed and endorsed. In some instances, the national authority may produce guiding notes for specific activities to cover the interim.

Prioritization should remain practical, transparent, and directly linked to programme needs. The following factors should be considered by those conducting the prioritization.

▼ Risk management and safety considerations:

One of the drivers of any mine action intervention is the risk the communities are exposed to. Priority activities would be to ensure the safety of the affected communities—marking or EORE can be a quick, convenient intervention starting point and standards to guide such activity.

▼ Immediate operational needs:

There may be a need to identify and start with critical chapters that operational teams would require immediately. A good example is when the programme is in its infancy, it is critical to have standards for NTS and information management. At times, MAOs and other agencies would have started operations even before the specific NMAS chapters were available. For example, when EOD teams are deployed prior to the establishment of the NMAS on EOD, it is ideal to start with the EOD chapter to support and coordinate the ongoing activities.

▼ National/government priorities:

It is good practice to include mine action in government development, relief, and recovery plans. This means mine action will be an enabler to the achievement of the set national agendas.

▼ Obligations from international conventions:

Obligations under instruments—such as the APMBC, CCM or CCW—may drive prioritization. For example, where an extension request requires survey within a defined period, the NTS chapter should be prioritized to support timely compliance.

▼ Resource availability and feasibility:

Some chapters require specialized expertise or significant programme capacity (for example, mechanical clearance). If capacity is limited or funding is not yet secured, it may be more practical to prioritize other chapters first.

▼ Long-term sustainability and capacity building:

Where a programme is focused on national capacity development, training, and accreditation, related standards may be prioritized early to ensure activities and projects are built on sound frameworks.

▼ Lessons learned from other programmes:

NMAAs, or those working on their behalf, are encouraged to learn from other national authorities' experiences and adapt their prioritization based on what has proven effective elsewhere.

In small programmes, or where some chapters already exist, prioritization can be straightforward by simply looking at the immediate operational needs and existing gaps. However, there are programmes and situations where many chapters are to be worked on at the same time. For example, when a country suddenly emerges from conflict and begins to consider establishing a body of NMAS.

In such cases, a prioritization tool suggested in **Annex C** may be used. The tool (Stakeholder-driven prioritization) can be used to prioritize NMAS chapters through a broader stakeholder consensus employing a simple scoring system. This method considers the priorities of operators in a fair manner.

For example, if the plan is to divide the chapters earmarked for development into six priority batches (P1 to P6), stakeholders are asked to assign each chapter a score from 5 (highest priority) to 0 (lowest priority). Chapter scores are then added up to generate a weighted total priority score reflecting collective assessment and prioritization.

This approach allows programmes to sequence their NMAS development transparently, ensuring that the most critical chapters as voted by stakeholders are addressed first, while less urgent topics are scheduled for later development.



CONVENING A KICK-OFF MEETING AND ASSIGNING A DEDICATED FOCAL POINT

Once stakeholders have been identified, the national authority should convene a kick-off meeting to launch the NMAAS development or review process. If no NMAA is formally established, another recognized coordination body may lead this step. Invitations should be shared early to facilitate broad participation.

The purpose of the kick-off meeting is to:

- ▼ confirm the methodology and overall process for NMAAS development or review;
- ▼ agree the composition, roles, and responsibilities of the TWG, including terms of reference (TORs) (an example of TWG TORs is in **Appendix 2 to Annex E**);
- ▼ appoint a focal person or NMAAS manager to coordinate the process;
- ▼ discuss timelines, expected outputs, and agreed action points;
- ▼ consider any cross-cutting implications for existing chapters;

- ▼ clarify the approval pathway and institutional requirements;
- ▼ complete or update the prioritization of chapters (as outlined earlier).

The focal person plays a central role in coordination. Ideally, this is someone within the NMAA or MAC—such as the Head of QM or operations—who understands the national context, mine action processes, and IMAS. In contexts where national capacity is limited, international organizations can provide neutral support to guide and coordinate the process, particularly where they are not implementing operators. Where such support is unavailable, operators may take on this function temporarily, ensuring decisions remain transparent and nationally owned.

Appointing a focal person enables continuity, efficient communication, version control, and follow-up of agreed actions. This supports a structured process and helps ensure timely progress.



ESTABLISHMENT OF TECHNICAL WORKING GROUP(S)

TWGs play a central role in drafting and reviewing NMAAS. Their establishment may be agreed during the kick-off meeting or at a separate session soon afterward. TWGs

should include individuals with the authority, expertise, time, and willingness to contribute.

Review of Somalia's NMAAS Chapter on EORE 2024 – TWG discussion



Membership should reflect the range of stakeholders involved in mine action, including government bodies, national and international operators, UN actors, and relevant specialist organizations. This is important to ensure that diverse experience, perspectives, and technical knowledge inform the development of each standard.

Where NMAS chapters relate to direct engagement with affected people or the management of data about individuals, it is essential to include subject matter

expertise in gender, diversity, equality, and inclusion (GDEI) as well as data protection. Wider government participation should also be encouraged. Mine action intersects with multiple ministries (for example, defence, interior, health, environment, labour), so their inclusion helps strengthen policy legitimacy, streamline approvals, and reinforce a whole-of-government approach.

Training may be arranged to ensure TWG members understand IMAS, national formats, and drafting principles.

Participants in the Libya mine action programme during a national standards development workshop



TWGs should be flexible in structure. **Appendix 2 to Annex E** presents indicative TORs for a TWG. If several chapters are being drafted simultaneously, the main group may create sub-TWGs dedicated to specific thematic areas (for example, land release, EORE, medical support, mechanical assets). Each sub-group should include relevant subject experts. For example, an EORE sub-TWG should include recognized EORE practitioners. In some cases, chapters may be assigned to specific mine action organizations. Where this occurs, contributions should remain objective and acceptable to all stakeholders, including the NMAA.

Once NMAS are endorsed and in use, the TWG may evolve and be part of the NMAS Review Board. This ensures continuity, supports periodic review, and enables ongoing improvements by integrating operational lessons, innovations, and new IMAS requirements.



DESKTOP ANALYSIS

The first task of the TWG is to assemble and review the core documents that define the mine action environment. This analysis provides the factual, legal, and operational foundation on which NMAS should be built. It ensures that new or revised standards are relevant, feasible, and aligned with both international obligations and national priorities.

The TWG should begin by reviewing the relevant IMAS chapters that correspond to the topics under development or revision. The TWG should also review the national legal framework governing mine action, including legislation establishing the NMAA and MAC, as well as other national laws that may affect mine action activities—for example, laws on handling explosives, environmental protection, labour standards, and data privacy.

The TWG should also consult international legal instruments to which the country is a party (for example, APMBC, CCM, CCW and its protocols, including their action plans) as these may impose obligations relevant to survey, clearance, data reporting, risk education, and VA.

To gain a complete picture of the national mine action context, members should familiarize themselves with:

- ▼ any national mine action-related legislation (for example, data protection and privacy; equality and non-discrimination; workplace health and safety; environmental management);
- ▼ the national mine action policy;
- ▼ the institutional structure and mandates of the NMAA, MAC, and operators, including accreditation and QM arrangements;
- ▼ the history of conflict(s) to understand how contamination happened;
- ▼ the EO contamination profile—types, quantities, depth, distribution, likelihood of residual hazards;
- ▼ the socio-cultural context, including factors affecting community engagement, land use, and risk perception;
- ▼ the national mine action strategy (if available), which outlines national priorities and targets;
- ▼ the annual operational plans, which show ongoing and planned activities;
- ▼ the IMSMA data profile, including survey, clearance, and accident records;

- ▼ an accident and incident analysis, including sex- and age-disaggregated victim data, to identify risks, priority groups, and systemic weaknesses;
- ▼ existing NMAS chapters, to determine what exists, what needs updating, and where gaps remain;
- ▼ the operators' SOPs, to understand current methodologies and identify inconsistencies or best practices;
- ▼ relevant IMAS requirements, especially those specifying responsibilities or national decision points.

The desktop review should identify:

- ▼ the national requirements already defined;
- ▼ the gaps where no guidance exists;
- ▼ the areas where IMAS require national adaptation;
- ▼ any overlapping or inconsistent requirements;
- ▼ any issues affecting safety, efficiency, or inclusivity;
- ▼ any opportunities for harmonizing with other national systems (for example, emergency response, environmental protection).

Findings should be documented and shared within the TWG to build a common understanding. This step also helps determine whether additional technical expertise is required.

National requirements

The next task is to identify national requirements for individual chapters. The starting point is the relevant IMAS, which provides minimum requirements. Drafters should:

1. read the relevant IMAS in full to identify specified minimum requirements, mandatory elements (shall), and allocated responsibilities;
2. consider national legal, organizational, environmental, and socio-cultural factors;
3. determine which IMAS recommendations (should/may) are appropriate nationally.

For example, IMAS 08.10, *Non-technical survey*, sets the following requirement: "National mine action authorities should set out specific criteria for the cancellation of previously recorded suspect land, or the rejection of new information, by a non-technical survey. The criteria that are to be met should be agreed between the key stakeholders".

Adaptation of IMAS 08.10 into NMAS

Somalia's national authority (SEMA) acknowledged this recommendation and formulated a national cancellation criterion in their NTS chapter. The criterion says: "when task managers are satisfied that after resurveys and community engagements, any extra effort to look for EO in the polygon/portions of it is not necessary, a SEMA QA Officer shall be invited to assess the polygon".

The cancellation form shall be signed by the community elders as well as the SEMA QA Officer. Among other things, the chapter goes on to list the following as possible criteria to justify cancellation:

- ▼ Former polygon that has been recently subjected to crop farming for three consecutive years or more.
- ▼ Grazing land that has been used for camel/cattle grazing for the past ten years without any accident or any EO found.
- ▼ Road portions which have now been used for over five years since the last accident or evidence.

An NPA NTS team visits a polygon to assess cancellation considerations, following evidence of partial land use



In Sri Lanka, this IMAS recommendation was contextualized in the NTS standard through a cancellation form found on its Annex C as follows:

The following criteria shall be used during repeated NTS for cancellation of a recorded SHA/CHA:

Serial	Question	YES	NO	Remarks
1	Was repeated NTS of the SHA/CHA conducted by an accredited team?			If "No", why not?
	Is there any reliable information stating that the area is EO contaminated?			
	Is there any crater of EO explosion in the area?			
2	Was the head of community, landowner/user and the key informants located and interviewed?			For public land, the team conducting the repeated NTS shall identify the relevant authority responsible
3	Does the landowner(s) and the key informants agree with the repeated NTS findings that the area is EO free?			If "No", why not?
4	Has the area been used on a regular basis after it was reported as SHA/CHA through previous survey?			If "No", why not?



Serial	Question	YES	NO	Remarks
5	Was the area cultivated at least two times after being reported as SHA/CHA through previous NTS?			
6	Do the repeated NTS findings confirm that there was not any EO-related incident in the area?			If "No", please provide details
7	Does repeated NTS confirm that previous survey findings are not valid?			If "Yes", explain the reasons

The team shall recommend the area for cancellation through submission of a cancelled area report if "YES" is ticked for all serials.

The team shall not recommend the SHA/CHA for cancellation if "NO" is indicated for serials 1,2, 6 and 7. Rather further survey will need to be conducted.

If "NO" is indicated for serials 3, 4 or 5 then the area may meet the cancellation criteria, however, it shall be explained in the Remarks box why NO is marked.

Conclusion:

No evidence of EO contamination was detected during the repeated NTS using all reasonable efforts. Therefore, it is recommended that the previously registered SHA/CHA be cancelled and removed from the national information management system for mine action (IMSMA) database.

We, the undersigned, agree that the declared SHA/CHA shall be cancelled in accordance with the IMSMA requirements.

Mine action operator
(Details and signature)

Regional MAO representative
(Details and signature)

Head of local village: (Details and signature)

Key informants/landowner: (Details and signature)

While IMAS provides a helpful framework for the development of NMAS, there is no requirement for NMAS chapters to mirror IMAS numbering or structure. Each programme retains the flexibility to adopt a format that best supports its national systems, legal environment, and operational priorities. The NMAA is therefore responsible for determining how NMAS chapters are organized and presented, including whether topics from multiple IMAS are combined, separated, or rearranged.

In practice, national contexts vary considerably. Some programmes choose to follow IMAS chapter numbering and themes closely, as this can simplify comparison and cross-referencing. Other programmes take a more customized approach, integrating several subjects under a single chapter or creating entirely new chapters to reflect national needs.

An illustrative example is Lebanon's NMAS 02.10, *Guide for the Operation, Management, and Coordination of Mine Action Projects in Lebanon*. This chapter does not correspond directly to a single IMAS chapter. Instead, it consolidates requirements related to programme management and coordination into one national document, tailored to Lebanon's organizational structure and operating environment.

The Lao PDR deals with a mix of landmines, cluster munitions, air-dropped bombs, and UXO from decades of conflict. Hence, its standards spell out tailored risk categories and clearance priorities that many countries with a narrower threat profile do not need. Chapter One of the Lao PDR's National Standards, *Sector Structure, Organisations and Responsibilities*, explicitly maps out a single, government-led coordination body that links ministries, the military, NGOs, and provincial authorities.

Other affected States and territories often keep these roles more fragmented, relying on separate agency mandates.

Another example, Afghanistan's MAP has an NMAS on planning and prioritization, which does not correspond to any IMAS chapter. With the huge number of hazardous areas in Afghanistan, this was considered as an important requirement to facilitate better planning, coordination, and prioritization of the mine action projects in accordance with the APMBC.

When IMAS do not specify a particular subject, this does not mean it should be excluded from NMAS.

In 2021, Yemen developed an NMAS on cemeteries and human remains discovered during mine action activities. IMAS 07.50, *Management of human remains in mine action*, was published only in 2023. In this case, the development of an NMAS preceded the development of an IMAS. In addition, Yemen's NMAS is very specific concerning cemeteries which are not identified as a specific case in IMAS.

In 2025, Ukraine issued two NMAS: DSTU 8820-5:2024 on land release and DSTU 8820-4:2025 mechanical land release. Both include specific requirements concerning the use of aerial drones.

National data requirements

Mine action activities rely on data and data-driven decisions. The activities also generate a lot of essential data. When developing and reviewing NMAS, it is important to define which data are required. IMAS 05.10:2023, Annex B, details a list of minimum data requirements. These minimum data requirements, including their definitions, are detailed for land release, EOD spot tasks, EORE, and VA. National authorities may supplement these minimum data requirements with contextual additions when establishing national requirements, provided such additions are relevant and usable.

Context-specific additions may include:

- ▼ fuze data for aircraft bombs, where relevant;
- ▼ KPIs from TNMA 07.11/02 or the GICHD publication *Operational Efficiency in Mine Action*;
- ▼ cubic metres for rubble clearance;
- ▼ data fields supporting task prioritization.

National data requirements

As per IMAS 05.10, the following data must be collected about VA services:

- ▼ their location,
- ▼ the type of service provided,
- ▼ the contact of these services, and
- ▼ the opening hours.

The purpose is to share this information with victims of EO in order to facilitate their access to services.

In order to facilitate the access of victims to these services, additional information may be needed. For example:

- ▼ Are there any specific admission criteria?
- ▼ In the case of children, can caretakers stay with them?
- ▼ Is the service provided for free?

This example also illustrates the need to involve the right stakeholders in the definition of requirements. For example, survivor organizations are well placed to identify obstacles victims face, or the information they need, to access services.

Reporting formats may be included as informative annexes, allowing updates without revising the full NMAS. Data should reflect inclusivity.

Data gathered through operations should feed back into NMAS review. For example:

- ▼ depth of clearance data may inform minimum clearance depths;
- ▼ mine spacing data may inform reduction, buffer distance, and safe working practices.



THE DRAFTING PROCESS

The TWG should assign responsibility for drafting each NMAS chapter. Drafting teams may consist of TWG members, or sub-TWGs dedicated to specific thematic areas. All drafts should follow the agreed national format and structure to support consistency across chapters.

Drafting should be an inclusive and consultative process. If MAOs are not yet active in the country, relevant insights may be drawn from other NMAAs that have undertaken similar NMAS development processes. Where operators are present, reviewing their SOPs can help identify what is already feasible, highlight good practice, and reveal areas where additional clarification or national direction is required.

Drafting teams should:

- ▼ use IMAS as the primary reference, identifying minimum requirements and necessary contextualization;
- ▼ integrate applicable national legislation, policies, and procedures;
- ▼ consider local operational context, including resources, geography, risk patterns, and community needs;
- ▼ ensure gender, diversity, and environmental considerations are appropriately reflected.

Drafts should be shared with the wider TWG or Review Board for comments. Feedback should be consolidated, discussed, and incorporated to strengthen clarity, relevance, and practicality. Iterative review supports better alignment across NMAS chapters and facilitates early identification of interdependencies, duplication, or inconsistencies.

Once internal review is complete, the draft may be submitted to external technical partners for additional input. Their experience from other contexts can help identify gaps, ensure alignment with international good practice, and refine language and requirements.

Throughout drafting, version control is essential so that changes are tracked and earlier drafts can be referenced if necessary.

NMAS format and paragraph headings

Although IMAS do not impose a single structure for NMAS, a consistent format helps users navigate the standards and understand where to find requirements, definitions, and supporting references. Using a common structure across NMAS chapters supports clarity, promotes alignment with IMAS, and simplifies future updates and translation.

Where a national standards body exists, its formats should be followed. Where no such body exists, adopting a structure similar to IMAS is often practical. Regardless of

the model used, headings should be used consistently and only contain the information relevant to that section.

Regardless of format, the following principles apply.

- ▼ Use a logical, consistent numbering system, allowing expansion later.
- ▼ Number each paragraph to support referencing.
- ▼ Ensure a consistent structure across chapters.
- ▼ Show clearly the version/edition and allow for amendment records.

A typical NMAS chapter may include the following elements.

Foreword: The foreword establishes the context, authority, and intent of the standards. It is not technical. Instead, it explains *why* the NMAS exists, *who* was involved in the development process, *who* issued it, and *how* it relates to national legislation. It may reference the legal framework governing the NMAS, including international agreements, conventions, or national mine action policies. The foreword should note that the NMAS is subject to periodic review and updates to align with changes in IMAS and specify who is responsible for this process. In some NMAS, the foreword may be titled “Preamble” or combined with the Introduction, depending on national formatting standards. It should also include details on how to access and distribute the NMAS document (for example, via official websites or contacts). The same foreword may be used on all the chapters of the NMAS.

Introduction: Like the foreword, this section is informative and shall not contain any technical requirements. It provides background information to assist in understanding the rationale for the development of the present NMAS chapter and to explain its context and intent. The introduction establishes the foundation for understanding the purpose of the chapter, ensuring that all stakeholders have a clear understanding of its structure and the reasons for its adoption from the outset. It may describe the national framework within which mine action activities are regulated and highlight that the present chapter has been developed in accordance with the principles and requirements of IMAS and other relevant international instruments. The introduction shall not be combined with the scope.

Scope: The scope clearly and succinctly defines the subject of the NMAS chapter. This section ensures that mine action stakeholders understand the geographical and thematic boundaries of the standard and the context in which it is applied. The scope should describe the specific geographic area or regions where the NMAS is applicable (for example, details about the country, state, province,

or any other relevant territorial boundaries). Its primary focus, however, should be on the thematic coverage of the NMAS—such as the various aspects of mine action including survey and clearance, risk education, VA, and related activities. Where applicable, the scope should also specify any areas, activities, or situations that may be perceived as falling within the chapter but are explicitly excluded from its coverage. It may further indicate whether the NMAS incorporates or references other national or international standards, guidelines, or regulations.

The scope should be written as a series of short, concise, and precise statements of fact. It shall not include any requirements and recommendations. Common phrasing used in the scope includes:

- ▼ This standard/NMAS chapter covers...
- ▼ It does not cover...
- ▼ It applies to...
- ▼ It does not apply to...

Practical examples of scope

The scope of IMAS 08.40, *Marking explosive ordnance hazards*, is specific about what is covered and what is not covered.

- ▼ “This standard specifies the minimum requirements for the marking of explosive ordnance (EO) hazards (isolated EO) and suspected and confirmed hazardous areas (polygons). This marking is intended to warn civilians and to prevent them from approaching EO hazards or entering suspected and confirmed hazardous areas. This standard also details the responsibilities of the national mine action authorities and mine action organizations involved.
- ▼ It applies to the marking of hazardous areas on land. It applies to the marking aimed at preventing the entry into hazardous areas by people approaching by land. It does not provide guidance for approaches by air. It does not apply to the marking of underwater contamination.
- ▼ This document does not cover the specification for the marking within the perimeter of hazardous areas when conducting technical survey (TS) and clearance operations. IMAS 10.20 and TNMA 10.20.02/09 provide additional guidance for the management of marking on worksite.”

The Ukraine National Standard on the Process for mechanical demining in Ukraine (DSTU 8820-4:2025) is also clear about its scope:

“1 SCOPE OF APPLICATION

This standard establishes the basic principles, requirements, and guidelines for the use of mechanized demining equipment (humanitarian demining tools) (hereinafter—MDE) during the implementation of demining activities (humanitarian demining). It applies to all mine action operators (hereinafter—MAOs) or authorized bodies intending to conduct demining activities (humanitarian demining) or other mine action measures involving the use of MDE.

This standard is a supplement to the requirements set out in DSTU 8820. If this standard specifies requirements that are not included in DSTU 8820, or if requirements in DSTU 8820 are lower, then the requirements specified in this standard must be followed.

This standard does not apply to sea or river water areas.”

It also links these specific national standards on mechanical land release with the overarching national standards on land release. Given the war context, it also clarifies that it applies to humanitarian demining as opposed to demining conducted during military operations.

Normative references: Normative references are important documents to which reference is made in the standard and which form part of the provisions of this standard. They include specific international, national, or regional guidelines, or legal documents that are considered important and form an integral part of the NMAS chapter. The normative references section of an NMAS chapter should explain what normative references are and either mention or refer the reader to the annex containing the list of normative references.

Terms, definitions, and abbreviations: This section defines chapter-specific terminology. Only include terms essential to the chapter; general terminology may appear in a separate national definitions chapter. Terms such

as “shall/should/may” should be reaffirmed as aligned with IMAS. New or contextual terms must be used consistently.

Main chapter content and requirements: The content sections of the NMAS provide context-specific requirements. They should build on IMAS but incorporate national laws, socio-cultural considerations, and operational realities. Use concise paragraphs and checklists to improve clarity. To further enhance the clarity and understanding of complex information within NMAS documents, consider the use of visual aids that include bullets, flowcharts, tables, and diagrams. The most suitable visual aids for the specific data should always be chosen. Flowcharts are effective for illustrating

procedures and processes, such as QC or reporting requirements. Tables are ideal for presenting detailed data and statistical requirements, for example, on minefield information. Graphs are best used to visualize trends in mine action data over time.

Additionally, notes can make NMA documents more informative. To prevent cluttering the main text and making it confusing, concise notes just below the paragraph which they are expanding on or explaining are helpful. Otherwise, long and detailed explanations should be developed into separate normative annexes.

Responsibilities: This section outlines the various actors involved in mine action and their respective duties within the scope of the chapter. The section is critical to ensure clarity, accountability, and effective coordination among all relevant stakeholders. It clearly describes duties of the NMAA, MAC, MAOs, and other relevant actors. Define only responsibilities relevant to the chapter. Avoid repeating the roles of the NMAA in the section on MAOs. Instead, reverse the sentence to keep the focus on the subject. For example, if the section on NMAA provides that *“the NMAA shall accredit capable organizations according to the outlined procedures”*, the reverse requirement can appear in the section on MAOs as *“the demining organization shall receive accreditation from the NMAA to conduct its work”*. Ensure roles related to safety, reporting, QA/QC, and referral mechanisms are clear.

Annexes: Annexes are documents attached to the main document and aimed to provide additional or complementary information. In this case, any documents which support or complement the NMA may be included as annexes. They may be identified with numbers or letters, and their inclusion provides additional details without overloading the main document. Annexes are useful for providing greater clarity and completeness to the NMA. They can be normative or informative.

▼ **Normative annexes:** Normative annexes include specific documents that are considered important and form an integral part of the NMA chapter. These annexes provide further detail or tools that could not find space inside the main document and must be cited within the NMA document. One of the normative annexes typically contains a list of normative

references. For example, IMAS 07.11, Annex B, is a list of independent normative reference documents which includes:

- IMAS 05.10, *Information management for mine action*
- IMAS 07.12, *Quality management in mine action*
- IMAS 08.10, *Non-technical survey*
- IMAS 08.20, *Technical survey*
- IMAS 09.10, *Clearance requirements*
- TNMA 07.11/03 *All reasonable effort*

▼ **Informative annexes:** Informative annexes are additional documents, reports, or resources—including tools, templates, or explanatory material—that may be consulted for a clearer understanding of the NMA. While not mandatory, these annexes provide valuable context and guidance for implementing the NMA. Independent documents, forms, or tools can also be listed as informative references in one of the informative annexes. The latest version/edition of these references should be used. For example, IMAS 7.13 Environmental management and climate change in mine action’s Annex B lists the following among other informative references:

- United Nations Convention to Combat Desertification, 1994;
- Rio Declaration on Environment and Development, 1992;
- UNGA Resolution 77/104 *Protection of the environment in relation to armed conflicts (PERAC)*, 2022
- UNEP Resolution UNEA-3/1. *Pollution mitigation and control in areas affected by armed conflict or terrorism*, 2017.
- IMAS 10.50, *Storage, transportation and handling of explosives*
- IATG 10.10, *Demilitarization, destruction and logistic disposal of conventional ammunition*

Amendment record: The amendment record summarizes changes over time, supporting transparency, version control, and traceability. It also ensures that users are aware of the reasons behind modifications. It allows users to stay informed about the most recent updates and understand how the standards have been adapted over time. This section usually contains a table with columns for the amendment number, date, and details.

A suggested NMA structure is outlined in **Annex D**.



VALIDATION

Validation is recommended once a draft NMAS chapter is complete. This is usually done through a workshop, although other formats (for example, focused review meetings or virtual consultations) may be used depending on scope and complexity. During validation, the drafting group (or relevant sub-TWG) should present:

- ▼ key aspects and requirements of the standard;
- ▼ the development process;
- ▼ additions, omissions, or revisions (if it is a revision of an existing chapter);
- ▼ substantially changed sections (if it is a revision of an existing chapter);
- ▼ contentious points raised during drafting and how they were addressed.

The workshop gives stakeholders an opportunity to review outstanding issues, check alignment with IMAS and national legislation, and confirm that the chapter is practical and technically sound. Feedback should be recorded and incorporated into the final draft if validated.

After the validation workshop, a clean final draft should be compiled and delivered to the NMAA for onward submission to the authority responsible for approval. If the approving authority requests clarification or amendments, the NMAA and the RB should reconvene—either a short meeting or written consultation—to resolve the matter. The revised final draft is then resubmitted for approval. All drafts should be subject to basic version control, including version number, date, and a summary of changes.

Consensus is preferred, but unresolved issues may remain. Where consensus cannot be reached within a reasonable time frame, the NMAA may decide through a vote or, if necessary, exercise authority and make final decisions, as it is the custodian of NMAS.

Ukraine NMAS validation workshop





APPROVAL AND ROLL OUT

The approval process varies by country and may take time depending on national legislation, administrative structures, and the level of consultation required. The NMAA should understand the national approval pathway early in the process to avoid delays and ensure that required documentation is prepared in a timely manner. Once approval is granted, the NMAA should distribute the updated NMAS to all relevant stakeholders.

Formal approval or endorsement by a national authority ensures that the updated standards become mandatory at the national level.

Only the latest approved version should be made available to MAOs and other organizations, including those seeking accreditation. Where operators are already active, the NMAA should convene a briefing to explain the main changes and agree on how implementation will take place. Topics for discussion may include:

- ▼ roll-out timeline;
- ▼ training requirements;
- ▼ implications for existing SOPs.

Translation can introduce challenges—including mistranslation, inconsistent terminology, delays, and increased cost. It may also lead to discrepancies between language versions. To minimize these risks, the NMAA

should approve and manage all translations and ensure that updates to the primary version are reflected promptly in agreed languages.

If NMAS are approved in a national language, it is recommended that the NMAA also provide an official English version to reduce the risk of multiple unofficial translations produced independently by different organizations. When developing and translating NMAS, it is essential to adhere to the terminology in IMAS 04.10 to ensure consistency and accuracy. For other languages, a consistent glossary based on IMAS 04.10 should be developed and applied uniformly across all developed, revised, and translated materials. It is also advisable to create a translators' guide and, wherever possible, use translators with experience in mine action documentation. Crucially, every translated document should undergo a thorough quality check to ensure accuracy and fidelity to the original.

When the process is complete, implementing partners who may have already been operational should be given a period to align their SOPs on the changes and submit them to the NMAA for reaccreditation. This should then be followed by the necessary retraining and reaccreditation of the teams to ensure the changes have been implemented.

An animal detection system (ADS) handler and the dog undergoing re-accreditation in Angola



The NMAA should ensure that the developed standards are reviewed periodically so that they remain relevant. Where the NMAA has a website, it is good practice to

have the most up-to-date set of NMAS accessible on the website.

MANAGEMENT AND REVIEW OF NMAS

RESPONSIBILITIES OF STAKEHOLDERS

Clear definition of roles and responsibilities among the NMAA, MAC, donors, and MAOs supports effective coordination and helps ensure that NMAS are relevant, actionable, and widely adopted.

The primary responsibility for mine action lies with the government of the affected state. This responsibility is normally exercised through the NMAA, an inter-ministerial body charged with regulatory, strategic, and policy oversight. The NMAA is responsible for all phases of mine action, including establishing NMAS in line with IMAS (IMAS 01.10:2025, 6.1). NMAS must enable safe, efficient, and effective operations, while respecting national legislation and international treaty obligations.

1. National mine action authority: The NMAA provides policy direction and oversees all mine action activities. Its responsibilities include:

- ▼ leading development of NMAS tailored to national legal, operational, and environmental conditions;
- ▼ establishing mechanisms to involve MAOs, government agencies, military actors, and civil society in development and review processes;
- ▼ ensuring alignment with international obligations (APMBC, CCW, CCM, CRPD, and others);
- ▼ approving NMAS and subsequent revisions;
- ▼ managing official versions, translations, and publication;
- ▼ ensuring NMAS are periodically reviewed and updated.

2. Mine action centre: The MAC is the technical and operational arm of the NMAA. In some programmes, a separate MAC may not exist; these roles may be undertaken directly by the NMAA or delegated to another entity. Key responsibilities include:

- ▼ coordinating, maintaining, and updating NMAS to reflect IMAS revisions, field lessons, new technologies, and national priorities;

- ▼ ensuring consistency with IMAS and recognized good practice;
- ▼ collecting feedback from MAOs, military actors, and affected communities to inform improvement;
- ▼ providing training and guidance on NMAS to stakeholders;
- ▼ monitoring compliance with NMAS through accreditation, QA/QC, and reporting;
- ▼ where the MAC is also an operator, developing and maintaining its own NMAS-compliant SOPs;
- ▼ reviewing and accrediting MAOs' SOPs, ensuring they align with the NMAS.

3. Mine action organizations and agencies: UN agencies, national and international NGOs, and national operators are primary implementers of NMAS. They contribute essential field experience and technical expertise. Their responsibilities include:

- ▼ actively participating in NMAS development and review processes, including serving on TWGs;
- ▼ ensuring organizational SOPs are aligned with NMAS and submitted for accreditation;
- ▼ providing systematic feedback to the NMAA/MAC on NMAS applicability, safety, and efficiency;
- ▼ sharing lessons and innovations to inform revisions.

4. Donors provide financial support for mine action and typically monitor the performance and risk management practices of the programmes they fund. Their responsibilities linked to NMAS include:

- ▼ supporting NMAA-led NMAS development and review processes, including funding technical assistance and workshops;
- ▼ encouraging adherence to NMAS as a condition of support;
- ▼ using NMAS and IMAS as benchmarks for programme assurance and risk management;
- ▼ promoting feedback mechanisms and learning that strengthen NMAS over time.

REGULAR REVIEWS

NMAS are not static; they must evolve to reflect lessons learned from operations, changes in national priorities, technical developments, and updates to IMAS.

Regular review ensures that NMAS remain relevant, implementable, and aligned with national needs.

A review is an assessment of whether a chapter should be revised, reaffirmed, or withdrawn. A review does not automatically result in change. A revision is a modification to an NMAS chapter, which may range from minor edits to a full rewrite.

Like IMAS, a formal review cycle is recommended. IMAS are reviewed every five years, and the same maximum interval is advised for NMAS. Earlier review or amendment may be necessary to address urgent issues relating to safety, efficiency, effectiveness, or inclusivity. Newly developed NMAS may also benefit from an early review to capture lessons from their initial implementation. Where new data requirements emerge after approval, a rapid and targeted review may be required.

To keep NMAS current, national authorities should establish a clear management and review process. After initial development, the NMAS Development Board should transition into a Review Board with a mandate to lead periodic reviews and support development of new chapters. Minutes from Review Board meetings should be recorded and retained.

In Afghanistan, for example, a standing Review Board composed of mine action stakeholders meets periodically

to review existing NMAS chapters. As NMAS already exist, the review workload is typically less complex than initial development, and operational experience makes it easier to identify areas requiring adjustment.

In addition to the triggers mentioned earlier, the review of NMAS may be as a result of:

- ▼ updates to IMAS requiring contextualization at national level;
- ▼ reports from operators that a requirement is impractical, unsafe, inefficient, or ineffective;
- ▼ amendments to related NMAS chapters that create knock-on effects;
- ▼ new national legislation or policies;
- ▼ missing but relevant chapters;
- ▼ new data needs or reporting requirements identified after NMAS approval;
- ▼ risk-based approach to review frequency.

While a five-year cycle is recommended, NMAS used in rapidly changing operational environments (for example, improvised explosive device (IED)-heavy contexts or new underwater operations) may require more frequent review. A risk-based approach can help determine whether earlier revision is needed.

Example 1: Introduction of new methodologies, technologies or equipment

In **Ukraine**, general provisions standard DSTU 8820 provided guidance on the use and accreditation of machines. Since 2022, the national mine-action programme scaled up and as a wider variety of mechanical assets entered the field, more comprehensive standardized mechanical assets references became essential. To fill this gap, the first mechanical-demining chapter was developed (DSTU 8820-4:2025, *Mine Action–Management Processes, Part 4: Processes of Mechanical Demining*) and officially adopted by order of State Enterprise “Ukrainian Scientific Research and Training Centre for Standardization, Certification, and Quality” (SE “UkrNDNTs”) on 1 May 2025. It now serves as the primary reference for integrating mechanical equipment into Ukraine’s mine action toolbox.

Example 2: New national legislation or policies

Sri Lanka’s NMAS chapters were developed in 2010 and, since then, the standards have not been revised. As part of the Sri Lanka National Mine Action Completion Strategy (2023–2027), one strategic objective was to review and revise three NMAS chapters: land release, non-technical survey, and QM. With GICHD support, a TWG was established, comprising representatives from national and international operators, the regional MAC, and the focal point from the Sri Lanka National Mine Action Centre. The working group completed the review of the three chapters, incorporating substantial changes through several meetings and technical discussions. The revised chapters were further discussed during a validation workshop, and the final versions were submitted to the Sri Lanka National Mine Action Centre for approval and roll-out.

Example 3: Lapse of the review time frame, with new contamination and new activity

Libya’s standards were compiled and approved in 2017. Since then, there has been a lot of developments and changes in IMAS. Over the years, mechanical rubble clearance which was not prescribed by the standards before commenced. Hence, in 2025, the programme started a deliberate process of reviewing all the national standards chapters prioritizing establishment of rubble clearance requirements.

A structured and timely review system helps ensure NMAS continue to support safer, more effective, and efficient mine action over time.

NMAS REVIEW STEPS

The review process generally mirrors the steps followed during initial development, with a few differences. Several chapters may be due at the same time, so prioritization is usually required. Priorities should be set using the criteria described earlier. A tool is provided in **Annex C**.

The RB guides and oversees the process. Its roles and responsibilities should be documented and shared with members. An example of generic TORs is in **Annex E**. The RB monitors developments in IMAS and other international guidance, sets priorities, and manages cross-impacts between chapters. It should have a way to gather feedback from stakeholders on an ongoing basis.

Before drafting begins, the RB should examine the current NMAS to identify outdated, unclear, impractical, or ineffective provisions. Data and feedback should be collected from MAOs, national authorities, and affected communities. Operational reporting, case studies, lessons learned, and quality findings can help identify areas requiring refinement. Changes in IMAS since the last review should be checked, and possible cross-impacts across chapters considered. For example, new requirements on medical support may affect provisions on team composition. This preparatory work ensures that revisions are justified and evidence based.

Once priority areas are confirmed, drafting may be done by the RB or by TWGs with relevant subject expertise. The drafting process should be consultative and inclusive. Changes should reflect

IMAS, national legislation, organizational structures, cultural considerations, and operational realities. New technologies or methods now used in the programme may also justify updates. The draft text should show suggested additions, amendments, and deletions. Drafts are shared with the RB for review. The RB may endorse, amend, or reject proposals. Consolidating feedback and resolving differences is an important part of this stage.

If needed, external technical review may be sought. A validation workshop can be held to deal with outstanding comments and help build consensus. Throughout drafting, revisions should remain aligned with IMAS, national priorities, current field practice, and relevant laws.

Once the revised text is agreed, the approval and roll-out follow the same process used during initial development as described earlier. After earlier experience, NMAAs normally have clearer approval routes and timelines. During roll-out, attention should be given to the impact on operations, implications for other NMAS chapters, and any training needs. Mine action organizations should be given time to adjust SOPs and submit them for re-accreditation. Transitional arrangements may be needed if changes are significant.

Training may vary depending on the scale of revision, from brief orientation to more formal instruction. Periodic review should continue to ensure NMAS remain relevant and usable.

A deminer conducting an excavation drill



ANNEXES

ANNEX A. NMAS NEEDS ASSESSMENT TOOL

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NMAS needs assessment tool

STEP 1: WHAT GENERAL NMAS CHAPTER DO YOU NEED?		STEP 2: WHAT ACTIVITY-BASED NMAS CHAPTER DO YOU NEED?			STEP 3: WHAT ACTIVITY-SUPPORTING CHAPTER DO YOU NEED?	
Phase of the mine action programme (MAP)	Recommendations for general NMAS chapters	Tick box if NMAS chapter exists	Recommendations for NMAS chapters based on country-specific mine action activities	For each activity implemented, add "yes"	For each "yes", tick box if NMAS exists	Recommendations for additional NMAS chapters based on country-specific mine action activities
Phase 1. Startup phase The MAP may not have been fully established yet or be at the beginning of its establishment. Mine action organizations may have started implementing field activities which are not well coordinated yet. The MAP's focus is on gaining a better understanding of the contamination and setting up effective planning and coordination mechanisms.	In the startup phase of the MAP, the following general NMAS chapters should be in place:		Regardless of the phase of the MAP, for each of the following mine action activities implemented in your country, you should establish a separate NMAS chapter:			Regardless of the phase of the MAP and depending on the mine action activities implemented in your country (see previous column), you may need to establish additional NMAS chapters:
	• Glossary	☐	1) Non-technical survey	yes	☐	1. If <u>any</u> mine action activity mentioned in the previous column is implemented, you should also establish an NMAS chapter on:
	• Accreditation	☐	2) Technical survey	yes	☐	• Safety and occupational health ☐
	• Information management	☐	3) Manual clearance	yes	☐	2. If a mine action activity listed as No. 1) to 15) in the previous column is implemented, you should also establish a NMAS chapter on:
	• Quality management	☐	4) Mechanical demining	yes	☐	• Investigation, reporting of accidents, incidents ☐
	• Risk management	☐	5) Mine detection dogs	yes	☐	3. If a mine action activity listed as No. 2) to 15) in the previous column is implemented, you should also establish a NMAS chapter on:
	• NTS	☐	6) Other animal detection systems	yes	☐	• Storage, handling, transportation of explosives ☐
	• Marking mine and ERW hazards	☐	7) Battle area clearance		☐	• Demining, EOD, IEDD, worksite safety, land, water ☐
Phase 2. Maturity The MAP has achieved clarity on the type, extent, and impact of the contamination. Mine action activities are actively coordinated and follow an existing mine action strategy or general direction that sets clearly identified objectives. The focus of the MAP is on improving quality, effectiveness and efficiency of mine action activities.	In the mature phase of the MAP, you should have in place/establish the following general NMAS:		8) Building clearance		☐	• Personal protective equipment ☐
	• All chapters listed for phase 1) (tick boxes above for all chapters that already exist)		9) Road clearance		☐	• Environmental management ☐
	• Land release, prioritization, all reasonable effort	☐	10) Underwater survey and clearance	yes	☐	4. If a mine action activity listed as No. 1) to 10) in the previous column is implemented, you should also establish a NMAS chapter on:
	• Monitoring and evaluation of MAOs	☐	11) Clearance of ammunition storage area explosions		☐	• Handover procedure and post-clearance documentation ☐
	• Management of training	☐	12) EOD	yes	☐	
	• Long-term monitoring of released land	☐	13) Improvised explosive device disposal (IEDD)	yes	☐	
			14) Underwater EOD	yes	☐	
			15) Stockpile destruction		☐	
Phase 3. Close to completion It is expected that the remaining known area of contamination will be cleared in a district, province, or countrywide within a defined timeframe. The focus of the MAP is on maintaining donors' and implementing partners' interest and establishing a post-completion set-up to deal with residual contamination.	In the phase close to completion of the MAP, you should have in place/establish the following general NMAS:		16) EORE	yes	☐	
	• All chapters listed for phases 1) and 2) (tick boxes above for all chapters that already exist)		17) Victim assistance	yes	☐	
	• Residual contamination management	☐	Your assessment result: If your MAP is in phase 1 : • Each empty box in the yellow part of the table; plus • Each "yes"+empty box in the orange part of the table; plus • Each empty box in the purple part of the table... ... stands for an NMAS chapter you should establish/have in place. If your MAP is in phase 2 : • Each empty box in the yellow and the blue part of the table; plus • Each "yes"+empty box in the orange part of the table; plus • Each empty box in the purple part of the table... ... stands for an NMAS chapter you should establish/have in place. If your MAP is in phase 3 : • Each empty box in the yellow part of the table; plus • Each empty box in the yellow , the blue and the green part of the table; plus • Each "yes"+empty box in the orange part of the table; plus • Each empty box in the purple part of the table... ... stands for an NMAS chapter to be established/to be in place.			

ANNEX B. NMAS STAKEHOLDER MAPPING TOOLS

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Tool 1. Stakeholder analysis

Stakeholder analysis

Serial	Stakeholder / organization	Type of Organization (NMAA, government body, UN, national NGO, international NGO, donor, etc.)	Mine action activities in country	Current role in NMAS development (part of TWG, provides support to NMAA, contributes, no involvement, no capacity)	Has resources to support NMAS development (yes or no)	Technical specialization of the organization or its individual staff (mechanical, ADS, EORE, VA, QM, NTS, TS, BAC, IM)	Interest level (high, medium, or low)	Influence Level (high, medium, or low)	Notes (Specify how they should be managed based on the answers in the other columns for example, persuaded/ requested, kept updated, given specific responsibility)
Example 1	Clear land org	International NGO	Survey and clearance	Part of existing TWG	No	The org. has good NTS experienced staff	High (The NTS standard is of concern to them)	Low (limited influence, as the NMAA has limited trust in international NGOs)	Involve them as members of the NTS sub TWG, Keep them in check ensure objectivity

Tool 2. Stakeholder engagement analysis

Stakeholder engagement analysis

Serial	Stakeholder (name of organization)	Type of engagement (get feedback, approval, inform, etc.)	Priority (high, medium, or low)	Frequency of engagement (weekly, monthly, on completion of each stage, one time, when needed)	Member of TWG (yes or no)	Lead/ co-lead (yes or no)	Method of engagement (meetings, TWG membership, NMAS maintenance structure, etc.)	Notes

ANNEX C. STAKEHOLDER-DRIVEN PRIORITIZATION TOOL

[DOWNLOAD](#)

Stakeholder-driven prioritization tool

SER	CHAPTER TITLE	P1	Score	P2	Score	P3	Score	P4	Score	P5	Score	P6	Score	CAN WAIT	Score	N/A	Score	NOT NEEDED	Score	Total priority score
1	Guide for the application and development of International Mine Action Standards (IMAS)	4	20	1	4		0	1	2	1	1		0		0	2	-4		0	23
2	Guide for the establishment of a mine action programme	3	15	1	4	2	6		0		0		0		0	2	-4	1	-3	18
3	Guide to the procurement of mine action equipment	1	5	1	4		0		0		0	2	1		0	1	-2	4	-12	-4
4	Procurement process	1	5		0	1	3		0		0	2	1		0	1	-2	4	-12	-5
5	Guide to the research of mine action technology	1	5		0		0	1	2	1	1	1	0.5	1	-1	1	-2	3	-9	-3.5
6	Test and evaluation of mine action equipment		0	1	4	1	3	2	4		0		0	3	-3		0	2	-6	2
7	Glossary of mine action terms, definitions and abbreviations	4	20	2	8	3	9		0		0		0		0		0		0	37
8	Information management for mine action	9	45		0		0		0		0		0		0		0		0	45
9	Guidelines and requirements for the management of land release and residual contamination operations	1	5	3	12	3	9	1	2		0	1	0.5		0		0		0	28.5
10	Land release	7	35	2	8		0		0		0		0		0		0		0	43
11	Quality management in mine action	5	25	3	12	1	3		0		0		0		0		0		0	40
12	Environmental management and climate change in mine action	1	5	1	4	2	6	1	2		0	1	0.5	1	-1		0	2	-6	10.5
13	Risk management in mine action	4	20	1	4	4	12		0		0		0		0		0		0	36
14	Guide for the development and management of mine action contracts		0	1	4		0	1	2		0		0	1	-1	2	-4	4	-12	-11
15	Accreditation of mine action organizations	3	15		0	1	3	2	4	1	1	1	0.5		0		0	1	-3	20.5
16	Accreditation and operational testing of animal detection systems and handlers		0		0	1	3	2	4	1	1		0	1	-1		0	4	-12	-5
17	Monitoring of mine action organizations	3	15	1	4	3	9	1	2	1	1		0		0		0		0	31
18	Monitoring of stockpile destruction programmes	1	5		0	3	9	3	6		0		0	1	-1		0	1	-3	16
19	Management of human remains in mine action	3	15		0	3	9	1	2		0		0	2	-2		0		0	24

Tier	TPS range	Action
Tier 1: Immediate	> 35	Draft immediately (within xxxx)
Tier 2: High	25–35	Draft within XXX
Tier 3: Medium	10–24	Draft within XXX
Tier 4: Low	< 10	optional or integrate elsewhere
Excluded	TPS < 0	Do not draft unless re-justified

Vote category	Weight
P1 (top priority)	5
P2	4
P3	3
P4	2
P5	1
P6	0.5
Can wait	-1
N/A	-2
Not needed	-3

Rank	Title	TPS
1	Information management for mine action	45
2	Non-technical survey	45
3	Battle area clearance	45
4	Explosive ordnance disposal	45
5	Demining worksite safety	45
6	Explosive ordnance risk education (EORE)	45
7	Improvised explosive device disposal	44
8	Land release	43
9	Clearance requirements	42
10	Investigation and reporting of accidents and incidents	42
11	Quality management in mine action	40
12	Technical survey	40
13	Storage, transportation, and handling of explosives in mine action	40
14	EOD clearance of ammunition storage area explosions	38
15	Building clearance	38
16	Mechanical land release	38
17	Glossary of mine action terms, definitions and abbreviations	37
18	Risk management in mine action	36
19	Post-clearance documentation	36

ANNEX D. INDICATIVE STRUCTURE OF AN NMAS

Government of [Country]

NATIONAL MINE ACTION STANDARDS

NMAS 00.00

[First/second/...] edition
[dd/mm/yyyy] (normally, date of approval)
Amendment [number, dd/mm/yyyy] (amendment date)

Title

Director
[Country]
National mine action programme address

Warning and copyright notice

Contents
Foreword
Introduction
1 Scope
2 Normative references
3 Terms, definitions, and abbreviations
4 Heading (general)
5 Heading (requirements)
5.1 Subheading
5.2 Subheading
6 Heading (responsibilities)
Annex A (normative) References
Annex B (normative/informative) Heading
Annex C (normative/informative) Heading
Amendment record

ANNEX E. EXAMPLE OF NMAS REVIEW BOARD TERMS OF REFERENCE

General

At the direction of the national mine action authority (NMAA) of the Government of **[insert country name]**, the mine action centre (MAC) developed a set of national mine action standards (NMAS). The NMAS were prepared with input from government agencies, **[provide names of departments and or ministries]**, national and international NGOs, the military, and independent advisors. The NMAS were endorsed by the Government through the NMAA on **[insert date: dd/mm/yyyy]**. The NMAS are considered a living document and, as such, the NMAA authorized the creation of an NMAS Review Board (RB) to meet regularly, review the standards, and consider any recommended changes. These terms of reference (TORs) describe the composition, management, and responsibilities of the NMAS RB.

General conditions

The NMAS RB has been established under the authority of the Director of the **[MAC/NMAA]** and is the highest level at which technical input to the NMAS is debated, agreed upon, and then forwarded to the Director of the NMAA through the MAC for final endorsement and approval process. The main objective of reviewing standards is to ensure the NMAS remain up to date with global changes, as well as facilitating the standardization of new operational improvements and the consideration of lessons learned during operations.

Roles of the RB

The roles of the NMAS RB are to:

- ▼ ensure that the NMAS are aligned with IMAS and international frameworks, such as the APMBC, CCM, and CCW;
- ▼ assess and provide guidance on emerging technologies, practices, and methodologies in mine action;
- ▼ evaluate the effectiveness of the current standards and recommend improvements based on challenges and experience of field operations;
- ▼ foster collaboration and communication among mine action stakeholders, including government bodies, UN agencies, NGOs, and local communities;
- ▼ develop, review, revise, amend, and endorse NMAS regularly;
- ▼ review proposals for new standards and recommend them for approval;
- ▼ ensure the inclusion of stakeholder inputs (for example, operators, donors, affected communities);
- ▼ consider lessons learned from mine action activities, including demining, risk education, and victim assistance;
- ▼ advise the NMAA on national priorities and challenges in the mine action sector.

Composition of NMAS Review Board

Chair and Secretary

The Chair of the NMAS RB is the **[insert the appointment and organization]** (Normally the Chief of Operations of the MAC is well placed to take this role).

The Secretary of the NMAS RB is the **[insert the appointment and organization]** (It may be the Head of the Quality Management section)

In the absence of the above, the Director of the MAC will assign a replacement. (Appointments are not definitive; even members of implementing partners may be appointed.)

Members

The following stakeholders are invited to be members or nominate representatives to the NMAS RB:

- ▼ the operations department, MAC;
- ▼ the national standardization agency;
- ▼ international technical advisors;
- ▼ national and international operators and agencies (if there are many implementing partners, then a few may be invited with an option to rotate over a specific period);
- ▼ the military;
- ▼ the Government ministries involved.

The contributing organizations are requested to provide qualified persons to represent them. Each organization should ensure that a suitably qualified replacement is available in the event of the initial representative being temporarily absent or unable to fulfil the role. Members of the NMAS RB can make suggestions for new or additional members and can

request a vote to terminate or extend a member's representation for whatever reason. A two-thirds majority is required for the vote to pass.

Non-affiliated members

To ensure a wide representation of the mine action community, the NMAS RB may also contain members who are not specifically affiliated with any organization but have wide or past experience which can be beneficial to the NMAS review process. Affected communities may be represented in specific topic discussions.

Qualifications

Members of the NMAS RB should have worked for mine action organizations with demonstrable experience and expertise in mine action, preferably in decision-making positions. Experience in the development and application of IMAS is desirable. They should be capable of providing high-quality comments on drafting NMAS in **[insert language(s) required]**. RB members are expected to be able to collaborate and communicate effectively, both orally and in writing.

Tenure

Members of the NMAS RB are appointed for an initial period of two years. Extensions may be approved or requested by the NMAA.

Specialists

Specialists may be consulted and temporarily co-opted into the NMAS RB when dealing with technical topics in which the RB may lack expertise. This includes dealing with mine detection dogs, mechanical, medical, explosive ordnance risk education, victim assistance, and other related topics.

Observers

Observers may be invited to attend NMAS RB meetings but will not be allowed to vote.

Working procedures

The NMAS RB meets in person at least twice per year. In order to form a quorum, at least half of the members must be present. Throughout the year, the usual NMAS RB routine involves members responding to requests for comments from the Chair or Secretary. These requests are forwarded to members via email and may ask for comments on draft NMAS, new NMAS, membership issues, or any other topic. Members are expected to respond within one month. If no comments are received by that time, then agreement is assumed. Furthermore, members can be divided into TWGs to work on specific aspects or chapters of the NMAS. Their findings and recommendations are then discussed at a full-board meeting online or in person.

Voting/decision making

The Chair establishes rules for voting on issues in the absence of a general agreement. These may be simple-majority votes for certain issues, or two-thirds majority for specific issues, such as safety, etc.

Conclusion

The NMAS Review Board plays an important role in the continuous improvement of this programme. The need for comprehensive and well-understood NMAS is vital for ensuring the standard of the MAP. Membership of the NMAS RB is a serious responsibility, and members are encouraged to perform their duties in a professional and timely manner.

Appendix 1 to Annex E.

Terms of reference (TORs) for RB appointments

TORs for Chair, NMAS Review Board

Appointment: The Chair of the NMAS Review Board is appointed by the Director of the MAC/NMAA and is normally the person filling the position of Chief of Operations, MAC.

Tenure: Indefinite

Responsibilities:

- ▼ Chair the meetings of the NMAS RB.
- ▼ Report to and present RB decisions to the Director of the MAC and to the NMAA as may be necessary.
- ▼ Propose new members of the RB.
- ▼ Provide guidance as necessary to the Secretary.
- ▼ Lead establishment of TWGs.
- ▼ Act as NMAS review focal point.

TORs for Secretary, NMAS Review Board

Appointment: The Secretary of the NMAS Review Board is appointed by the Director of the MAC and is normally the person filling the position of Head of QM section, MAC.

Tenure: Indefinite

Responsibilities:

- ▼ Plan and organize the biannual meetings of the NMAS RB.
- ▼ Produce meeting agendas.
- ▼ Produce minutes of meetings held.
- ▼ Publish minutes on the MAC website after approval by the Chair.
- ▼ Act as the point of contact for all RB information.
- ▼ Produce an annual work plan to ensure that every NMAS is reviewed at least once every [number] years.
- ▼ Circulate and distribute draft and proposed amendments to NMAS for RB members to comment on, and consolidate their feedback.
- ▼ Amend NMAS in accordance with the recommendations of the RB.

TORs for Member, NMAS Review Board

Appointment: By invitation of the Chair of the NMAS Review Board

Tenure: [number] years (extendable by RB vote)

Responsibilities:

- ▼ Attend RB meetings.
- ▼ Respond to requests from the Secretary or Chair for comments and input into drafts for new NMAS, revision drafts of existing NMAS, voting procedures, etc.
- ▼ Provide knowledgeable comments based on experience.
- ▼ Be a member of TWG as per the Chair's appointment.

Appendix 2 to Annex E.

Example of terms of reference for a technical working group

Terms of reference

[Country X]

NMAS Technical Working Group on the use of dogs in support of land release

Background and introduction

In [country X], dogs are not yet employed in support of land release operations. Several mine action operators have informed the national mine action centre (NMAC) of their intent to use dogs. To date, no national mine action standards (NMAS) regulate the use of dogs in support of land release operations in [country X]. [Alternative: an NMAS chapter was published in [year Y] but never revised.]

Dogs used as a single methodology or along with manual demining and mechanized assets can improve the effectiveness and efficiency of land release in [country X]. The National Mine Action Standards Review Board (NMAS RB) decided to develop [alternative: to review] an NMAS chapter to regulate the use of dogs in support of land release. Furthermore, the NMAS RB requested [organization X] to coordinate a technical working group (TWG) responsible for the development of this NMAS.

Areas of focus

The TWG is co-chaired by the NMAC and [organization X] and focuses on developing and refining NMAS that govern the use of dogs in support of land release operations in [country X].

The TWG ensures that this NMAS is properly tailored to the context of [country X], giving due attention to international standards (IMAS) and aligning with relevant existing NMAS.

Working group composition

The TWG includes representatives from:

- ▼ the national mine action centre;
- ▼ [organization X];
- ▼ [organization Y];
- ▼ [organization Z];
- ▼ ...

Participation of other organizations may be approved at the discretion of the NMAS RB.

Objective/outcome

- ▼ Safe and effective dog methodologies support land release.

Outputs

An NMAS covering relevant aspects of the use of dogs to support land release operations in [country X]. This NMAS shall:

- ▼ be aligned with relevant NMAS including land release and quality management;
- ▼ describe requirements for the operational use of dogs;
- ▼ describe requirements for the certification of dogs;
- ▼ outline requirements for the occupational health of dogs.





Activities (6–9 months)

Phase 1 (May)

- ▼ Establish a TWG for the use of dogs (see above).
- ▼ Identify requirements and recommendations for the use of dogs in support of land release operations.
- ▼ Draft a first version of the NMAS.

Phase 2 (May–June)

- ▼ Review the draft.
- ▼ Collect comments from the members of the TWG.
- ▼ Agree on a final version of the NMAS.

Phase 3 (June–July)

- ▼ Organize a validation workshop with relevant stakeholders.
- ▼ Agree on a final version of the new draft NMAS.
- ▼ Submit the final version of the new draft NMAS to the NMAS RB.

Phase 4

- ▼ NMAS RB submits the NMAS chapter for adoption by the national standardization authority.

ENDNOTES

- 1 Republic of South Sudan and UNMAS, *National Technical Standards and Guidelines South Sudan—Part 1: Demining*, 2019, https://www.unmas.org/sites/default/files/ntsg_october_2019.pdf.
- 2 Torsten Frey, *Quality Guideline for Offshore Explosive Ordnance Disposal*, Berlin: Beuth Verlag, 2020, <https://oceanrep.geomar.de/id/eprint/51692/>.
- 3 GICHD Insights, *Integrating Liability into Land Release Frameworks*, 2025, https://www.gichd.org/fileadmin/user_upload/Integrating_Liability_into_Mine_Action_Frameworks_v11_FINAL_WEB.pdf



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