

Test and Evaluation Protocol 08.10/01/2024

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Competency standards for non-technical survey surveyor and non-technical survey team leader

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Foreword

Test and Evaluation Protocols (T&EP) include former workshop agreements for humanitarian mine action produced by the European Centre for Standardization (CEN). They have been produced to support the International Mine Action Standards (IMAS) and have been approved by the IMAS Review Board. T&EP are included in relevant IMAS as the normative reference, which gives them authority within the IMAS system.

In January 2001, the European Centre for Standardization (CEN) created a technical board which it named Working Group (WG) 126. Since then, CEN WG 126 had held a number of workshops to establish Workshop Agreements for mine action topics that had not been covered by the IMAS. The standards for the test and evaluation of metal detectors, machines and personal protective equipment (PPE) are good examples of their work.

In January 2011, CEN formally transferred the ownership rights for the CEN Workshop Agreements (CWA) for humanitarian mine action to UNMAS and the GICHD. As such, these documents have since been updated and relabelled as T&EP for mine action, with a reference to their original name. This is to avoid any confusion with the current CWA produced by CEN. They will be reviewed and amended, when needed, as part of the IMAS review process and approved by the IMAS Review Board.

Introduction

Following the approval of T&EP 09.10/01, *Competency standards for deminer, battle area clearance operator, team leader and supervisor*, a need was identified to further standardize the competency of non-technical survey staff.

The aim of this document is to establish and maintain a level of competency standards for the positions of non-technical survey surveyor (NTS surveyor) and non-technical survey team leader (NTS team leader) in mine action, providing stakeholders with the guidance to establish minimum training standards that are globally recognized for those positions (or equivalent).

Competency standards for non-technical survey surveyor and non-technical survey team leader

1 Scope

This document provides the minimum requirements associated with mine action non-technical survey operations. Organizations may require additional competencies for their staff in certain positions, for which they should be suitably trained and qualified. The category titles for staff working in non-technical survey activities are:

- non-technical survey surveyor (NTS surveyor), and
- non-technical survey team leader (NTS team leader).

It is acknowledged that different organizations may adopt and utilize different titles and levels for their personnel conducting non-technical survey activities. In addition, non-technical survey competencies for different levels of management can be based on those of the Team Leader laid out in this document.

The use of this document will allow mine action programmes and stakeholders to improve training processes to a globally recognized common standard.

2 Normative references

A list of normative references is given in Annex A. Normative references provide cross-referencing to other standards, and they form an integral part of the provisions of this T&EP.

3 Terms and definitions

A glossary of all the terms, definitions and abbreviations used in the International Mine Action Standards (IMAS) series is given in IMAS 04.10.

3.1

attitude

inclination of mind and behaviours towards things, persons and situations acquired through experiences and training

3.2

competence

competency

combination of knowledge, skills and attitudes necessary to perform a task

3.3

competency standard

level of competencies required to undertake a given task effectively and safely

3.4

explosive ordnance

EO

mine action's response to the following munitions:

- mines;
- cluster munitions;
- unexploded ordnance;
- abandoned ordnance;
- booby traps;

- other devices (as defined by CCW APII);
- improvised explosive devices

Note 1 to entry: Improvised explosive devices (IEDs) meeting the definition of mines, booby traps or other devices fall under the scope of mine action, when their clearance is undertaken for humanitarian purposes and in areas where active hostilities have ceased.

3.5

knowledge

facts, information, principles or understanding acquired through experience, research or education

3.6

mine action organization

organization (government, military, commercial or non-governmental organization/civil society) responsible for implementing mine action projects or tasks

Note 1 to entry: The mine action organization may be a prime contractor, subcontractor, consultant or agent.

Note 2 to entry: Mine action organizations include explosive ordnance clearance and improvised explosive device disposal organizations.

3.7

national mine action authority

NMAA

government entity, often an inter-ministerial committee, in a country affected by explosive ordnance, charged with the responsibility for broad strategic, policy and regulatory decisions related to mine action

Note 1 to entry: In the absence of a NMAA, it may be necessary and appropriate for the UN, or some other body, to assume some or all of the responsibilities, and fulfil some or all of the functions, of an NMAA

3.8

Non-technical survey surveyor

NTS surveyor

person qualified and employed to undertake non-technical survey activities

3.9

non-technical survey team leader

NTS team leader

person qualified and employed to lead a non-technical survey team

3.10

skill

ability to perform a task or activity with a specific intended outcome acquired through education, training, experience or other means

3.11

Test and Evaluation Protocol

agreed protocol to accompany or supplement an IMAS

Note 1 to entry: A T&EP provides advice and information relevant to activities associated with the testing of competence and equipment.

4 Conformance

In T&EP, the words “should” and “may” are used to convey the intended degree of compliance.

In IMAS, “shall” is used to indicate requirements, methods or specifications that are to be applied in order to conform with the standard. This term is not used in T&EP, as their contents are purely advisory.

“Should” is used to indicate the preferred requirements, methods or specifications. “May” is used to indicate a possible method or course of action.

5 Competency standards

5.1 Purpose of the competency standards

The purpose of the competency standards is to clarify the minimum required competency for staff conducting non-technical survey activities to be able to fulfil their duties. Individual competencies or modules of competencies can also form qualifications (or part thereof) at different levels or for different roles within mine action, provided that an assessment of the competencies is conducted in accordance with IMAS 06.10. This T&EP should be read in conjunction with IMAS 07.10 Guidelines and requirements for the management of land release and residual contamination operations, IMAS 07.11 Land Release, IMAS 08.10 Non-technical Survey, and 08.20 Technical Survey.

5.2 Application

This document should be applied to improve the safety and effectiveness in mine action. It is designed to benefit a range of stakeholders, including:

- EO-affected communities, by providing a common level of competence for organizations and individuals conducting non-technical survey activities;
- Individuals working in mine action, by providing internationally recognized mine action non-technical survey qualifications;
- mine action organizations, through the development of internationally recognized standards. Additionally, this document aims to support organizations in their recruitment and selection processes by providing a tool to assess an individual’s competence;
- national mine action authorities, by providing a recognized standard by which to measure the performance of an individual or an organization. Application of this T&EP aims to enhance the process of measuring national capacity development and assist in the development of national mine action training standards. In the absence of such standards, it should be used to provide a common understanding of the competence of mine action non-technical survey staff;
- donors and the United Nations agencies, by ensuring the professional capacity of individuals and organizations, either from a funding or international aid perspective; and
- the mine action sector, by recording and evaluating the competency of personnel and organizations to ensure effective planning and evaluation, staff development and capacity building. Additionally, application of this standard aims to improve the quality management process by enhancing the assessment of staff training and competency.

5.3 Use of competency standards

Competency standards should be used to support NMAA and mine action organizations in defining the competency levels for mine action staff conducting non-technical survey activities. It can also provide a basis for defining policy, structures, training, operational processes and standard operating procedures.

6 Competency categories and requirements

6.1 Competency categories

The competencies have been structured into the following ten sub-categories:

- 1) context;

- 2) safety;
- 3) non-technical survey process;
- 4) EO contamination;
- 5) equipment;
- 6) navigation and mapping;
- 7) community engagement;
- 8) marking;
- 9) reporting;
- 10) quality management.

6.2 Non-technical survey surveyor position requirements

A non-technical survey surveyor (NTS surveyor) is required to:

- collect data accurately and comprehensively following established survey methodologies, undertake basic analysis of evidence collected to guide whether more evidence/information is needed to be gathered;
- apply safety protocols to ensure personal safety and the safety of other team members and survey participants;
- scrupulously respect the ethical principles associated with data collection, including confidentiality, informed consent and the protection of participants' privacy;
- demonstrate empathy and sensitivity towards participants, establishing a climate of trust that encourages their cooperation and openness;
- communicate effectively with participants to explain the purpose of the survey and the procedures to be followed, and respond to their questions and concerns;
- ensure rigorous data collection, recording all information accurately and completely;
- immediately report any safety, ethical or other significant concerns to the team leader;
- work closely and effectively with other members of the NTS team;
- adhere to NTS IMAS/NMAS and established processes, including documentation requirements and reporting.

6.3 Non-technical survey team leader position requirements

A non-technical survey team leader (NTS team leader) is required to:

- understand and be familiar with the various NTS SOPs and NMAS, and their applications;
- be able to select the most appropriate survey methods for specific objectives;
- conduct detailed analysis of evidence collected to provide recommendations for further mine action and land release activities;
- regularly assess survey progress and adjust plans where necessary;

-
- develop clear and achievable survey objectives;
 - ensure compliance with survey protocols and quality standards;
 - design effective survey plans, including logistics and resource allocation;
 - identify opportunities for continuous improvements to optimize the survey process and raise suggestions to the appropriate management level;
 - lead, guide, motivate and coordinate survey teams;
 - report survey results accurately and comprehensibly;
 - ensure that survey deadlines and survey quality requirements are met;
 - resolve conflicts effectively, both within the team and with stakeholders;
 - keep track of health and safety issues relating to the survey and implementing preventive measures.

6.4 Additional required training and skills

In addition to the competencies covered by this T&EP, NTS surveyors and team leaders will require training and skills in other areas.

Additional training requirements include:

- NTS surveyors and NTS team leaders are required to be qualified as Basic Care Providers. All surveyors should be trained in accordance with TNMA 10.40/01.
- NTS surveyors and NTS team leaders are required to be able to use mobile devices, such as mobile phones, GPS and tablets, to collect data and report.

Additional skills include:

- Team leaders may be required to work on basic Information Technology applications such as Microsoft Excel and Word.
- NTS surveyors and NTS team leaders are required to be competent to communicate verbally with the local community in which they will conduct non-technical survey activities, this includes language skills and an inclusive approach.

7 Quality and audit process

Based on the selected performance criteria, appropriate assessment tools and procedures should be developed by the mine action organization to determine mastery of competencies by the NTS surveyors and NTS team leaders. This may involve the development of written tests, practical exercises, assessed simulated tasks or procedures for assessment of actual performance during live operations.

8 Responsibilities

8.1 General

On deciding to use this document, competency standards may be implemented taking into consideration the following process as guidance.

8.2 Adaptation of competency standards by NMAA

The NMAA or organization acting on its behalf should:

- incorporate this protocol at a national level as part of the national mine action standards;
- apply this protocol to enable achievement of operational expectations; and
- develop or approve a process that enables an assessment of competence and quality management.

Mine action organizations should develop a system of measuring the competency of their work force. This assessment should be based on the competency list in Annex B.

8.3 Training organizations

The relevant training authority (training school, NGO, commercial company, military unit, etc.) should:

- compare the organization's procedures, training and current competency assessment processes with the national policy and standards;
- develop or adjust training plans accordingly;
- develop or adjust assessment procedures and materials;
- enable the assessment of trainees and personnel recruitment from external organizations;
- establish and maintain certification procedures so that training completion certificates explicitly list the disciplines on which the individual has been trained and is deemed competent.
- implement training in accordance with all other requirements listed in IMAS 06.10.

Annex A (normative)

References

- [1] IMAS 04.10, Glossary of mine action terms, definitions and abbreviations
- [2] IMAS 05.10, Information management for mine action
- [3] IMAS 06.10, Management of training
- [4] IMAS 07.10 Guidelines and requirements for the management of land release and residual contamination operations
- [5] IMAS 07.11, Land release
- [6] IMAS 07.12, Quality management in mine action
- [7] IMAS 08.10, Non-technical survey
- [8] IMAS 08.20, Technical survey
- [9] TNMA 10.40/01 Medical support

The latest version/edition of these references should be used. A register of the latest version/edition of the IMAS series, guides and references is maintained by the GICHD, and can be read on the IMAS website (<http://www.mineactionstandards.org/>). NMAA, employers and other interested bodies and organizations should obtain copies before starting mine action programmes.

Annex B (normative)

Competency lists for NTS surveyor and NTS team leader

Competence number	Competence sub-category	K/S/A	Description	NTS surveyor	NTS team leader
1.1.1	Context	Knowledge	Explain the responsibilities of relevant stakeholders (NMAA, MAC, other implementing partners communities and donors) that the NTS personnel will encounter in their role.	X	X
1.1.2		Knowledge	Outline the purpose of the standing and operating procedures and their relationship with NMAS (or IMAS).	X	X
1.1.3		Knowledge	List the basic principles of land release, including NTS, TS, clearance, land classification principles and terminology.	X	X
1.1.4		Knowledge	Describe the history of the conflict (country-specific) and how this relates to the distribution and types of EO in country	X	X
1.1.5		Skill	Apply the principles and methodology of non-technical survey (desk assessment, pre-deployment planning, engagement with potential sources, field visit, assessment of findings, reporting and debrief, internal QM of reporting, compiling and submitting reports).	X	X
1.1.6		Knowledge	Differentiate confirmed and suspected hazardous areas based on the criteria specified in NMAS/SOP.	X	X
1.1.7		Knowledge	Assess the cancellation criteria for previously defined SHA/CHA.	X	X
1.1.8		Knowledge	Describe all reasonable effort in the country.	X	X
			Describe residual contamination in the country.	X	X
1.1.9		Knowledge	List the criteria for priority-setting in the country.	X	X
1.1.10	Knowledge	Define the beneficiaries in the country.	X	X	
1.2.1	Safety	Knowledge	Describe the general safety and occupational health requirements.	X	X
1.2.2		Knowledge	Apply the general safety requirements for NTS teams in accordance with the SOPs.	X	X
1.2.3		Knowledge	Describe the roles and actions of different members in the team in response to an incident/accident.	X	X
1.2.4		Skill	In accordance with the SOPs, conduct the actions to be taken in response to an incident/accident.	X	X

Competence number	Competence sub-category	K/S/A	Description	NTS surveyor	NTS team leader
1.2.5		Skill	Perform the actions of a basic care provider in accordance with TNMA 10.40/01.	X	X
1.2.6		Attitude	Report situations which are believed to present hazard to the team.	X	X
1.3.1	Non-technical survey process	Knowledge	List the different sources of information (first-hand and second-hand informants, historical sources, minefield records, mine action reports, remote sensors, NTS, TS, etc.).	X	X
1.3.2		Skill	Assess the reliability of sources.	X	X
1.3.3		Knowledge	Differentiate between indirect and direct evidence.	X	X
1.3.4		Knowledge	Demonstrate how to extrapolate information from evidence.	X	X
1.3.5		Skill	Identify and distinguish types of evidence (physical, documentary, testimonial) and their value (direct and indirect).	X	X
1.3.6		Knowledge	List the criteria for setting priorities to SHA/CHA.	X	X
1.3.7		Skill	Assess and cross-check all findings when conducting a re-survey (repeated NTS) to update the original results and to make recommendations about the cancellation of all or part of the SHA/CHA as appropriate.	X	X
1.4.1	EO contamination	Skill	Recognize different types of landmines.	X	X
1.4.2		Knowledge	Explain basic mine-laying tactics and assess the make-up of a hazardous area containing mines.	X	X
1.4.3		Skill	Recognize different ordnance categories other than mines (rocket, mortar, grenade, projectile, aircraft bomb, missile, etc.) as per various forms of categorization (for example, NATO, CORD, treaties, IMAS, etc.) and types of contamination.	X	X
1.4.4		Skill	Recognize cluster munitions and types of contamination.	X	X
1.4.5		Skill	Recognize (basic) IEDs and types of contamination.	X	X
1.4.6		Skill	Recognize ground signs and other evidence of contamination.	X	X
1.4.7		Skill	Recognize EO in the country by ordnance category and for key items by model name.	X	X
1.5.1	Equipment	Knowledge	List the content of the NTS team equipment (as per the SOPs).	X	X
1.5.2		Skill	Use the equipment of the NTS team (binoculars, camera, etc.).	X	X
1.5.3		Skill	Correctly select the appropriate piece of equipment for the task.	X	X
1.5.4		Skill	Inspect, set up and operate the GPS.	X	X
1.5.5		Skill	Use the data collection and reporting tools (paper, Survey 1,2,3, etc.).	X	X
1.5.6		Attitude	Maintain the equipment at the user level to the required standard.	X	X

Competence number	Competence sub-category	K/S/A	Description	NTS surveyor	NTS team leader
1.5.7		Knowledge	Explain the possible use of unmanned aerial systems (UAS) and other observation methods and equipment.	X	X
1.6.1	Navigation and mapping	Knowledge	Explain basic geographic information systems (GIS) that are being used locally for the collection and management of NTS data.	X	X
1.6.2		Knowledge	Explain basic geospatial data (bearings, distance, latitude and longitude) as detailed in NMAS.	X	X
1.6.3		Skill	Use basic geographic information systems to interpret maps and images	X	X
1.6.4		Skill	Take GPS coordinates in the coordinate system defined in the NMAS	X	X
1.6.5		Skill	Draw a site sketch map.	X	X
1.6.6		Skill	Read and orientate maps.	X	X
1.6.7		Skill	Measure and record bearings and distances.	X	X
1.7.1	Community engagement	Knowledge	Explain the importance of gender and diversity for NTS.	X	X
1.7.2		Knowledge	Explain the principle of conflict sensitivity, do-no-harm and accountability to affected populations.	X	X
1.7.3		Knowledge	Explain the principles of communicating with different members of the community.	X	X
1.7.4		Skill	Use appropriate interview techniques.	X	X
1.7.5		Skill	Identify and report direct victims and their needs.	X	X
1.7.6		Skill	Identify and report needs for EORE.	X	X
1.8.1	Marking	Knowledge	Identify temporary, durable and informal marking systems to mark SHA/CHA and EO.	X	X
1.8.2		Skill	Recognize SHA/CHA and EO marking.	X	X
1.9.1	Reporting	Knowledge	Describe information management principles for NTS	X	X
1.9.2		Knowledge	List the data requirements for NTS (minimum data requirements as detailed in IMAS 05.10:2023, Annex B, and country-specific data requirements).	X	X
1.9.3		Skill	Compile reports related to NTS activities (NTS, SHA/CHA and spot task).	X	X
1.10.1	Quality management	Knowledge	Describe the purpose, principles and process of quality management in mine action.	X	X
1.10.2		Knowledge	Describe the difference between quality assurance (QA) and quality control (QC).	X	X
1.10.3		Knowledge	Summarize the principle of continual improvement and how the results of technical survey and clearance activities should be analyzed to improve future NTS.	X	X

Competence number	Competence sub-category	K/S/A	Description	NTS surveyor	NTS team leader
1.10.4		Knowledge	Explain how the NTS and the role of its team members will be quality-controlled, both internally and externally.	X	X
2.1.1	Context	Knowledge	Recognize that the SOPs are designed to meet the requirements of NMAS and IMAS.		X
2.1.2		Knowledge	Apply measures to ensure safety, efficiency and effectiveness in the conduct of NTS.		X
2.1.3		Knowledge	Explain the possible use of multi-task teams with NTS (EORE, EOD, marking, TS, clearance, etc.) capacities.		X
2.1.4		Knowledge	Explain the responsibilities of a team leader before, during and after conducting NTS.		X
2.2.1	Safety	Knowledge	Identify and assess the risks to the NTS task.		X
2.2.2		Skill	Plan access routes and alternatives in case of blockages.		X
2.2.3		Skill	Plan a communication schedule and contacts in the field.		X
2.2.4		Skill	Plan (and, if necessary, command and control) the actions of a team in response to an accident/incident.		X
2.3.1	NTS process	Skill	Assess and cross-check all findings when evidence is found, to make recommendations about the definition of SHA/CHA.		X
2.4.1	Community engagement	Skill	Plan community and stakeholder meetings (schedule, prepare questions, cross-check informational data).		X
2.4.2		Skill	Explain the findings and conclusion to the community and stakeholders, including the marking system used.		X
2.5.1	Reporting	Skill	Review reports from surveyors, identify errors and make corrections.		X
2.5.2		Skill	Clearly and timely report NTS activities and products (SHA, CHA, EO hazard spot, cancellation).		X
2.6.1	Quality management	Knowledge	Explain the requirements to facilitate external monitoring inspection (QA).		X
2.6.2		Knowledge	Make recommendations to relevant management to apply changes to the NTS based on the lessons learnt during the review of the previous NTS compared to land release completion.		X
2.6.3		Skill	Demonstrate how to take corrective action in response to nonconformities.		X
2.6.4		Attitude	Demonstrate commitment to continual improvement principles.		X

Amendment record

Management of IMAS amendments

The IMAS series of standards, TNMAs and T&EPs are subject to formal review on a five-yearly basis. However, this does not preclude amendments being made within these five-year periods for reasons of operational safety and efficiency or for editorial purposes.

As amendments are made to this document they are given a number. The date and general details of the amendment shown in the table below. The amendment is also shown on the cover page of the document by the inclusion under the edition date of the phrase “*incorporating amendment #.*”

As the formal reviews of each IMAS documents are completed, new editions may be issued. In this case, amendments up to the date of the new edition are incorporated into the new edition and the amendment record table cleared. Recording of amendments then starts again until a further review is carried out.

The most recently amended IMAS are posted on the IMAS website at www.mineactionstandards.org.

Number	Date	Amendment details