

**CEN Workshop Agreement for EOD Competency Standards for
Humanitarian Mine Action — Part 1: General requirements**

Contents

Page

1	Foreword.....	1
2	Summary.....	1
3	Scope and objectives	2
3.1	Scope of this document	2
3.2	Exemptions.....	2
3.3	Purpose of competency standards.....	2
3.4	An example of existing standards in Europe.....	2
3.5	The expected benefits of this CWA.....	2
3.6	How to use the CWA.....	3
4	Composition of a Unit of Competence as it applies to this CWA	3
5	Competency requirements of the different levels	3
5.1	EOD level 1	3
5.2	EOD level 2	4
5.3	EOD level 3	5
5.4	EOD level 4 (specialisations).....	6
6	Implementation of competency standards	6
6.1	Adaptation of competency standards	7
6.2	Defining job roles.....	7
6.3	Defining assessment criteria to fulfil the performance criteria	7
6.4	Development of training.....	7
6.5	Quality and audit process.....	7
7	Definitions	7
8	Legal Status of this CWA	9
9	Review and maintenance of the CEN workshop agreement	9
10	Other findings and recommendations.....	9
11	Acknowledgements	9

CEN Workshop Agreement for EOD Competency Standards for Humanitarian Mine Action — Part 1: General requirements

1 Foreword

This CEN Workshop Agreement has been prepared under a mandate and funded by EC DG AIDCO.

The following organisations have been members of the workshop and contributed to the CWA. Belgian Armed Forces, Danish Demining Group, French Armed Forces, Geneva International Centre for Humanitarian Demining, International School for Security and Explosives Education, Mines Advisory Group, MAG, NATO Standardisation Agency, Science Technology and Manufacturing Technologies Alliance (SEMTE) and the Standards Setting Body for Explosives, Munitions and Search Occupations (SSB for EMSO), Spanish Armed Forces, Swedish EOD and Demining Centre, SWEDEC, Swedish Rescue Services Agency, Swiss EOD Centre, Turkish Armed Forces, United Kingdom Department for International Development, United Nations Mine Action Services, UNMAS.

The secretariat was held by SIS Swedish Standards Institute

2 Summary

This CEN Workshop Agreement, (CWA) by design covers the conventional munitions disposal part of EOD in mine action. This CWA does not cover the clearance of improvised munitions, munitions containing biological, chemical, nuclear or radiological components.

The use of this competency CWA will allow Mine Action programs to enhance the capacity building process by providing a tool for planning and assessing the personal development of staff.

The whole of the Mine Action sector would benefit from using this CWA since the use should enhance the process of planning and evaluating staff development and capacity building. Additionally, the CWA should improve the Quality Management process by enhancing the assessment of training and competency of the staff involved in Mine Clearance and EOD work.

This CWA should be used to define the competency required by different categories of staff on technical matters related to mine action activities.

In the CWA three levels of competence have been defined using existing knowledge and the International Mine Action Standards (IMAS).

Level One operators are competent to locate, identify and destroy under appropriate supervision, single items in-situ on which they have been specifically trained. Level Two operators are competent to locate, identify, move, transport and destroy multiple items on which they have been specifically trained. Level Three operators are competent to conduct render-safe procedures and final disposal of any type of explosive ordnance with the exception of specialisations listed under level four.

On deciding to use this CWA it may be implemented using the process described in this document as guidance.

3 Scope and objectives

3.1 Scope of this document

This CEN Workshop Agreement, (CWA) by design covers the conventional munitions disposal part of EOD in mine action.

3.2 Exemptions

This CWA do not cover the clearance of improvised munitions, munitions containing biological, chemical, nuclear or radiological components.

3.3 Purpose of competency standards

The general purpose of competency standards is to define the minimum occupational competence in terms of the context(s) in which it needs to be applied along with performance criteria and an explanation of the required knowledge and understanding. Individual units or modules of competence can also be – or form part of – qualifications at different levels, provided that an assessment regime with appropriate evidence or test requirements is used.

The purpose of this CWA is to provide an accurate assessment tool to enable the award of appropriate recognition of individual's professional competence. The use of this CWA will also allow Mine Action programs to enhance the capacity building process by providing a tool for planning and assessing the personal development of staff.

Based on this CWA a national or organisational framework of operational licensing could be developed.

3.4 An example of existing standards in Europe

In December 2001, the Qualifications and Curriculum Authority (QCA) and the Scottish Qualifications Authority (SQA), the regulatory authorities for such standards in Great Britain accredited National Occupational Standards (NOS) for Munitions Clearance and Search Occupations. A year later, QCA and SQA accredited a suite of National and Scottish Vocational Qualifications (NVQs and SVQs) comprising different combinations of units drawn from the NOS.

3.5 The expected benefits of this CWA

By application this CWA is an aid to improving safety and efficiency in mine action. It is designed to benefit a range of stakeholders including:

- Mine affected communities who can be confident in the competency of organisations and individuals involved in mine action.
- Individuals involved in mine action who can be informed of job expectations and be aided in personal development.
- Organisations (for example NGO, commercial or military etc.) to help them demonstrate professionalism and to plan training and staff development consistent with corporate/organisational policy and procedures. Additionally the CWA will aid staff recruitment and selection by providing a recognised tool for the assessment of an individual's competence.
- National Authorities who can be confident in the ability of individuals and organisations to meet national standards and requirements, by providing a tool for quality management. Application of this CWA should enhance the process of measuring national capacity development across different organisations by providing a common understanding of the competencies of staff.

- Donors/International community who can be confident in the professional capacity of individuals and organisations, either from a funding or international aid perspective.
- The Mine Action sector through recording and evaluating the competency possessed by personnel and comparing it to the competencies required for different jobs should enhance the process of planning and evaluating staff development and capacity building. Additionally, the CWA should improve the Quality Management process by enhancing the assessment of training and competency of the staff.

3.6 How to use the CWA

This CWA should be used to define the competency required by different categories of staff on technical matters related to mine action activities. This could be done either by assigning a particular job with a competency level or by defining the units and elements of competency needed to perform that specific job.

Each stakeholder electing to use the CWA as a best practice reference will need to produce guidance and other supplementary material defining the specific competency requirements for different employment roles.

4 Composition of a Unit of Competence as it applies to this CWA

The competencies in this document are laid out in a series of performance requirements and outcomes as follows:

- a) A Unit designation, comprising a number and a title,
e.g. 2. Knowledge base
- b) Two or more elements, each comprising:
 - 1) An element designation, comprising a number and a title,
e.g.: 1.1 *Gather and prepare search or explosive ordnance clearance equipment.*
 - 2) Criteria's describing the required performance,
e.g.: *"The individual must demonstrate..."*
 - 3) Explanations, describing the necessary knowledge and understanding,
e.g.: *"The individual must explain..."*

5 Competency requirements of the different levels

The competency requirements have been constructed using existing knowledge and the International Mine Action Standards (IMAS). There are four levels of competency as follows:

5.1 EOD level 1

Level One operators are competent to locate, identify and destroy under appropriate supervision, single items in-situ on which they have been specifically trained. They must demonstrate the following competencies.

1. KNOWLEDGE BASE
 - 1.1 Explosives Theory and Safe Handling of Explosives Ordnance
 - 1.2 Explosive Ordnance Recognition
 - 1.3 Methods of Disposal
 - 1.4 Safety precautions
 - 1.5 Storage and Transportation of Explosives
 - 1.8 Medical requirements
2. EQUIPMENT
 - 2.1 Gather and prepare search or explosive ordnance disposal equipment

- 2.2 Operate search or explosive ordnance clearance equipment
- 2.3 Maintain search or explosive ordnance clearance equipment

- 3. TASK MANAGEMENT
- 3.1 Initial Threat Assessment
- 3.2 Gathering and analysing information on the location of explosive ordnance
- 3.3 Assist in defining the specific area to be searched
- 3.4 Gather and analyse information on the location of explosive ordnance
- 3.8 Assist in defining the specific area to be searched
- 3.10 Record the possible location and general disposition of explosive ordnance
- 3.11 Identify and establish working relationships
- 3.14 Evaluate the effectiveness of explosive ordnance disposal operations and programmes
- 3.15 Provide advice on explosive ordnance disposal-related matters

- 4. LOCATING AND SAFE ACCESS
- 4.1 Contribute to the identification of the specific hazard posed by the environment in which explosives ordnance are located
- 4.2 Contribute to gaining safe access to explosive ordnance
- 4.3 Contribute to the location of explosive ordnance or confirm their absence

- 6. FINAL DISPOSAL
- 6.1 Confirm the threat posed by explosive ordnance
- 6.2 Implement protective measures
- 6.3 Assist in the disposal of explosive ordnance
- 6.4 Dispose of explosive ordnance

5.2 EOD level 2

Level Two operators are competent to locate, identify, move, transport and destroy multiple items on which they have been specifically trained. They must demonstrate the following competencies.

- 1. KNOWLEDGE BASE
- 1.1 Explosive Ordnance Recognition
- 1.2 Explosives Theory and Safe Handling of Explosives Ordnance
- 1.3 Methods of Disposal
- 1.4 Safety Precautions
- 1.5 Storage and Transportation of Explosives
- 1.6 Management of demolition sites
- 1.7 Management
- 1.8 Medical requirements

- 2. EQUIPMENT
- 2.1 Gather and prepare search or explosive ordnance clearance equipment
- 2.2 Operate search or explosive ordnance clearance equipment
- 2.3 Maintain search or explosive ordnance clearance equipment
- 2.4 Manage search or explosive ordnance disposal equipment

- 3. MANAGEMENT
- 3.1 Initial Threat Assessment
- 3.2 Threat assessment
- 3.3 Assess the explosive ordnance-related risks
- 3.4 Gathering and analyse information on the location of explosive ordnance
- 3.5 Implement plans to minimise explosive ordnance-related risks
- 3.6 Develop plans to minimise explosive ordnance-related risks
- 3.7 Use local and other information to locate affected areas
- 3.8 Assist in defining the specific area to be searched
- 3.9 Define the specific area to be searched
- 3.10 Record the possible location and general disposition of explosive ordnance
- 3.11 Identify and establish working relationships

- 3.12 Allocate explosive ordnance disposal resources
- 3.13 Respond to developing events and imperatives
- 3.14 Evaluate the effectiveness of explosive ordnance disposal operations and programmes
- 3.15 Provide advice on explosive ordnance disposal-related matters

- 4. LOCATING AND SAFE ACCESS
 - 4.4 Ensure the accurate recording of the possible location and general disposition of explosive ordnance
 - 4.5 Detect the possible presence of explosive ordnance and other risks
 - 4.6 Locate explosive ordnance or confirm their absence
 - 4.7 Identify the specific hazards posed by the environs in which explosive ordnance are located
 - 4.8 Gain safe access to explosive ordnance

- 5. TRANSPORTATION OF EXPLOSIVE ORDNANCE
 - 5.1 Determine whether to move explosive ordnance
 - 5.2 Move explosive ordnance within the designated area
 - 5.3 Transport explosive ordnance for analysis and/or disposal

- 6. FINAL DISPOSAL
 - 6.1 Confirm the threat posed by explosive ordnance
 - 6.2 Implement protective measures
 - 6.3 Assist in the disposal of explosive ordnance
 - 6.4 Dispose of explosive ordnance

- 7. REMEDIATION
 - 7.1 Provide advice on the remediation of cleared areas
 - 7.2 Contribute to the remediation of cleared areas

- 8. POST TASK ACTIVITIES
 - 8.1 Complete post task recording and reporting
 - 8.2 Provide supplementary information, statements or reports

5.3 EOD level 3

Level Three operators are competent to conduct render-safe procedures and final disposal of any type of explosive ordnance with the exception of specialisations listed under level four.

They must demonstrate the following competencies

- 1 KNOWLEDGE BASE
 - 1.1 Explosive Ordnance Recognition
 - 1.2 Explosives Theory and Safe Handling of Explosives Ordnance
 - 1.3 Methods of Disposal
 - 1.4 Safety Precautions
 - 1.5 Storage and Transportation of Explosives
 - 1.6 Management of Demolition Sites
 - 1.7 Management
 - 1.8 Medical requirements

- 2 EQUIPMENT
 - 2.1 Gather and prepare search or explosive ordnance disposal equipment
 - 2.2 Operate search or explosive ordnance disposal equipment
 - 2.3 Maintain search or explosive ordnance disposal equipment
 - 2.4 Manage search or explosive ordnance disposal equipment

- 3 MANAGEMENT
 - 3.1 Initial Threat Assessment
 - 3.2 Threat assessment
 - 3.3 Assess the explosive ordnance related risks
 - 3.4 Gather and analyse information on the location of explosive ordnance
 - 3.5 Implement plans to minimise explosive ordnance-related risks

- 3.6 Develop plans to minimise explosive ordnance-related risks
- 3.7 Use local and other information to locate affected areas
- 3.8 Assist in defining the specific area to be searched
- 3.9 Define the specific area to be searched
- 3.10 Record the possible location and general disposition of explosive ordnance
- 3.11 Identify and establish working relationships
- 3.12 Allocate explosive ordnance disposal resources
- 3.13 Respond to developing events and imperatives
- 3.14 Evaluate the effectiveness of explosive ordnance disposal operations and programmes
- 3.15 Provide advice on explosive ordnance disposal-related matters

- 4 LOCATING AND SAFE ACCESS
- 4.4 Ensure the accurate recording of the possible location and general disposition of explosive ordnance
- 4.5 Detect the possible presence of explosive ordnance and other risks
- 4.6 Locate explosive ordnance or confirm their absence
- 4.7 Identify the specific hazards posed by the environs in which explosive ordnance are located
- 4.8 Gain safe access to explosive ordnance

- 5 TRANSPORTATION OF EXPLOSIVE ORDNANCE
- 5.1 Determine whether to move explosive ordnance
- 5.2 Move explosive ordnance within the designated area
- 5.3 Transport explosive ordnance for analysis and/or disposal

- 6 FINAL DISPOSAL
- 6.1 Confirm the threat posed by explosive ordnance
- 6.2 Implement protective measures
- 6.3 Assist in the disposal of explosive ordnance
- 6.4 Dispose of explosive ordnance

- 7 REMEDIATION
- 7.1 Provide advice on the remediation of cleared areas
- 7.2 Contribute to the remediation of cleared areas

- 8 POST TASK ACTIVITIES
- 8.1 Complete post task recording and reporting
- 8.2 Provide supplementary information, statements or reports

5.4 EOD level 4 (specialisations)

Level Four operators are competent to carry out specialist tasks in the following categories provided that they have the relevant training:

- Disposal of specific Guided Weapons;
- Demilitarisation of Explosives Ordnance;
- Chemical, Biological, Radiological and Nuclear weapons;
- Improvised Explosive Device Disposal;
- Disposal of weapons with specific fuel hazards.
- Logistic disposal

NOTE Competency requirements for level 4 are not included in this CWA.

6 Implementation of competency standards

On deciding to use this CWA, the competency standards may be implemented using the following process as guidance:

6.1 Adaptation of competency standards

At a National level the CWA should be incorporated as part of a national mine action standards policy. The CWA should be applied to comply with operational expectations. Following adaptation the National Authority will have to develop or approve a process that enables an assessment of competence and quality management.

6.2 Defining job roles

The relevant authority within the programme should equate the specific job roles to the levels of competence defined by this CWA.

If a job role does not equate readily to the levels of competency described in this CWA, then the relevant units of competence may be extracted to define the specific job role.

6.3 Defining assessment criteria to fulfil the performance criteria

The relevant authority should develop a system of measuring the competency of their work force. This assessment should be based on the performance criteria and describe what is to be accomplished to fulfil a competency unit and how that is to be accomplished according to program, organisation or national regulations.

6.4 Development of training

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

- Compare the organisations procedures, training and current competency assessment processes with the national policy.
- Based on the comparison develop or adjust training plans;
- Develop or adjust assessment procedures and material, enabling both assessment of trainees and personnel recruited from external organisations.

6.5 Quality and audit process

Based on the selected performance criteria appropriate assessment tools and procedures should be developed by the organisation. This could for example involve the development of written tests, practical exercises, demonstrating a task, or procedures for assessment of performance during operations.

7 Definitions

Competency standard

Competency standards identify units of competence required to undertake a given task in the workplace effectively and safely. The emphasis is on practical performance and on the application of knowledge and skills. Put simplistically “What people are able to do and their ability to do this in a range of contexts”.

Competency Unit

A unit of competence comprises the specification of knowledge and skill and the application of that knowledge and skill to the standard of performance required in the workplace. Additionally, competence embodies the ability to transfer and apply knowledge and skills to new situations and environments.

Conventional Munitions Disposal

Conventional Munitions Disposal (CMD) includes the detection, identification, on-site evaluation, rendering safe, recovery and final disposal of unexploded explosive ordnance. It may also include explosive ordnance which has become hazardous by damage or deterioration.

CMD does not include the disposal of improvised munitions or conventional munitions containing chemical, biological or radiological agents or material.

Explosive Ordnance

All munitions containing **explosives**, nuclear fission or fusion materials and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms **ammunition**; all **mines**, torpedoes and depth charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature. [IMAS 04.10].

Explosive Ordnance Disposal

The **detection**, identification, evaluation, **render safe**, recovery and **disposal** of **UXO**. EOD may be undertaken:

- a) as a routine part of mine clearance operations, upon discovery of the UXO.
- b) to dispose of UXO discovered outside mined areas, (this may be a single UXO, or a larger number inside a specific area).
- c) to dispose of explosive ordnance which has become hazardous by damage or attempted destruction.

Land Service Ammunition

All items containing explosives or pyrotechnic compounds which are placed, thrown or projected so as to cause damage to men and equipment during land warfare.

Mine Action

Activities which aim to reduce the social, economic and environmental impact of mines and UXO.

Mine action is not just about demining; it is also about people and societies, and how they are affected by landmine contamination. The objective of mine action is to reduce the risk from landmines to a level where people can live safely; in which economic, social and health development can occur free from the constraints imposed by landmine contamination, and in which the victims' needs can be addressed. Mine action comprises five complementary groups of activities:

- a) mine risk education;
- b) humanitarian demining, ie. mine and UXO survey, mapping, marking and (if necessary) clearance;
- c) victim assistance, including rehabilitation and reintegration;
- d) stockpile destruction; and
- e) advocacy against the use of anti-personnel mines.

A number of other enabling activities are required to support these five components of mine action, including: assessment and planning, the mobilisation and prioritisation of resources, information management, human skills development and management training, quality management and the application of effective, appropriate and safe equipment.

Unexploded Ordnance

Explosive ordnance that has been primed, fused, armed or otherwise prepared for use or used. It may have been fired, dropped, launched or projected yet remains unexploded either through malfunction or design or for any other reason.

8 Legal Status of this CWA

The exploitation rights of this CEN Workshop Agreement remain the property of CEN.

Notwithstanding this, this CEN Workshop Agreement may be utilised by the Geneva International Centre for Humanitarian Demining, for incorporation into the International Mine Action Standards (IMAS).

Should the CEN Workshop Agreement not be incorporated into IMAS by the end of the contract period, the Commission may elect either to hold it on file for future reference or utilise it to the public good by presenting it, unchanged, as a description of best practice. This should be done through CEN, with such guidance as is deemed necessary.

9 Review and maintenance of the CEN workshop agreement

Increasing operational requirements could change the skills needed by staff to successfully accomplish their clearance and disposal missions. In order to ensure that the CWA is up to date in the light of developments in mine action a custodian should be appointed. It is recommended that United Nations Mine Action Services, supported by the IMAS Review board, be appointed custodian of the CWA and empowered to liaise with the CEN.

The workshop agreement is reviewed periodically as specified in the CEN management system. It is the custodian's responsibility to support CEN in reviewing the standards. If necessary the custodian should urge the CEN to revise the standards to meet emerging operational requirements.

10 Other findings and recommendations

During the process of reaching this CWA several findings and conclusions have been drawn. The working group therefore recommends that:

- The standard should be put through field trials in one or more Mine Action programs in order to verify its usability. The findings of these trials should then be used to revise this document, if required
- An advisory team is formed to assist the implementation of the CWA into Mine Action programs opting to use the CWA.
- Competency standards for basic Deminers and Technical Advisors should be referred to the IMAS Review Board for further discussion.
- An accreditation body should be formed to accredit training organisations performing training in accordance with this CWA.

11 Acknowledgements

A large number of people and organisations have been instrumental in the development of this CWA and the chairman would like to express this gratitude to all the relevant persons and organisations for their contribution during the process of reaching this CWA.

Belgian armed forces

Danish Demining Group

French Armed Forces

Geneva International Centre for Humanitarian Demining

International School for Security and Explosives Education

Mines Advisory Group

NATO Standardisation Agency

Science Technology and Manufacturing Technologies Alliance (SEMTA) and the Standards Setting Body for Explosives, Munitions and Search Occupations (SSB for EMSO).

Spanish armed forces

Swedish EOD and Demining Centre

Swedish Rescue Services Agency

Swedish Standards Institute

Swiss EOD Centre

Turkish armed forces

United Kingdom Department for International Development

United Nations Mine Action Services