NATO STANDARD

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ALLIED TACTICAL PUBLICATION FOR EXPLOSIVE ORDNANCE DISPOSAL

Edition A Version 1

APRIL 2017

NORTH ATLANTIC TREATY ORGANIZATION

ALLIED TACTICAL PUBLICATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

27 April 2017

1. The enclosed Allied Tactical Publication ATP-3.18.1, Edition A, Version 1, ALLIED TACTICAL PUBLICATION FOR EXPLOSIVE ORDNANCE DISPOSAL, which has been approved by the nations in the MILITARY COMMITTEE LAND STANDARDIZATION BOARD, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2282.

2. ATP-3.18.1, Edition A, Version 1, is effective upon receipt and supersedes ATP-72, Edition A, Version 1, which shall be destroyed in accordance with the local procedure for the destruction of documents.

4. This publication shall be handled in accordance with C-M(2002)60.

Edvardas MAŽEIKIS
Major General, LTUAF
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
BGR	Due to the lack of capabilities, the EOD units will not implement CBRN EOD activities as well as inland water clearance.
CZE	CZE will postpone implementation of Art. 2.3, para. 2 b) till the time Engineer Corps gain stated skills; - CZE will implement Art. 2.3, para, 2 e) after CBRN EOD knowledge and skills are gained and equipment acquired; - CZE will not implement Art. 2.4, para. 1 d); - CZE will implement Art. 2.4, para, 1 e) LEVEL 1 only; - CZE will not implement execution of NAVY EOD operations referred in Art. 3.1; - CZE will not implement execution of explosive devices disposal in water referred in Art. 3.2, para. 1 a) section 4; - CZE will not implement execution of EOO operations to support NAVY forces, referred in Art. 3.2, para. 1 b); - CZE will not implement execution of EOD tasks in support of rescue and evacuation operations of wrecked battle ships and ships carrying ammunition cargo referred in Art. 3.2, para. 1 d) section 11; - CZE will not implement Art. 3.2, para. 1 d) section 15 concerning EOD support to WMD disposal.
EST	EDF has limitations on Chapter 2.2 paragraph 4 Joint tasks fulfilment because missing capabilities like CBRNEOD, WMD, aircraft battle-damaged and repair and aircraft incident assistance
POL	(1) EOD elements of the Polish Armed Forces do not have the ability of biological materials disposal. (2) EOD elements of the Polish Armed Forces possess limited exploitation capabilities.
TUR	(1) Turkish Land Forces CBRN EOD capability is at nascent stage. Equipping training center and EOD teams are in process. Until the procurement process has been completed. Turkish Land Forces EOD units cannot execute activities related to CBRN incidents. (2) Turkish Air Forces Reservation; Capability No. Of Teams Full Capability Partial Capability Limitations, Remarks Underwater EOD X Search 6 (six) meter deep underwater only Diving Supervisor None for TURAF EOD capability. CBRN EOD X TURAF EOD teams do have Chemical and Biological capability, but do not have Radiological and Nuclear capability. (3) Turkish Navy Forces Reservation; Capability No. Of Teams Full Capability Partial Capability Limitations, Caveats, Remarks CBRN EOD X Turkish Naval Forces EOD teams do have Chemical and Biological capability, but do not have Radiological and Nuclear capability.

USA	Paragraph 3.2 Comment: All nations don not have engineer units capable of conducting area clearance. Reason: USMC engineers feel the paragraph as written implies that all nations have engineer units capable of conducting area clearance, which is not true. Paragraph 8.5 Comment: The US recognizes the Law of War. Reason: The US observes the "Law of War", codified in the Geneva Conventions and other treaties.
Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.	

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B AJP-3.18 (A) “Allied joint doctrine for explosive ordnance disposal support to operations”

C ATP-3.12.1.1 “Military search”

D ATP-3.12.1.3 “Allied tactical doctrine for route clearance”

E ATP-94 “Allied maritime harbour protection”

F ATP-24 “Naval mine countermeasures tactics and execution”

G ATP-71 “Allied maritime interdiction operations”

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J ATP 6 “Naval mine warfare principles”

K ADivP-01 “Allied guide to diving operations”

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S AEODP-09 “The operation of the explosive ordnance disposal technical information centre (EODTIC)”

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Y 1949 Geneva Convention - establishing the standards of international law for the humanitarian treatment of war

Z Convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction (Biological Weapons Convention (BWC) or Biological and Toxin Weapons Convention (BTWC))

AA 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 (convention on certain conventional weapons (CCW) or inhumane weapons convention)

- protocol on non-detectable fragments (protocol I)
- protocol on prohibitions or restrictions on the use of mines, booby traps and other devices (protocol II)
- protocol on prohibitions or restrictions on the use of mines, boobytraps and other devices (amended protocol II)
- protocol on prohibitions or restrictions on the use of incendiary weapons (protocol III)
- protocol on explosive remnants of war (protocol V)

AB Convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction chemical weapons convention (CWC) -

AC Convention on the prohibition of the use, stockpiling, production and transfer of anti-personnel mines and of their destruction (Ottawa convention or mine ban treaty)

AD Convention on cluster munitions (CCM)

PREFACE

1. The purpose of this publication is to define principles for structuring and conducting multinational joint explosive ordnance disposal (EOD) operations both across the spectrum of operations and for any size multinational force. The ATP establishes the

- fundamentals of EOD in joint operations,
- elements of an EOD operation,
- EOD force command and control principles, concepts, procedures and responsibilities from the operational multinational headquarters through intermediate multinational headquarters to lower staff multinational level and for national EOD force single points of contact,
- overarching safety principles for both multinational and national EOD operations.

2. The standards set forth in this document enable efficient, effective, and safe employment of available EOD force elements (FE) to support the total Alliance force. Failure to adhere to the provisions of this ATP places the lives of military personnel and civilians at risk.

3. The explosive ordnance (EO) threat is significant in all kinds of allied joint operations, in addition to conventional direct fire and indirect fire threats. This ATP is based on experience and knowledge developed from past and current allied operations and an analysis of the future modular force support in line with allied strategy.

4. The aim of EOD is to ensure the protection of personnel and material, to assist in the maintenance or restoration of friendly forces' operational freedom across the full spectrum of operations and to assist in the restoration of normality subsequent to a conflict.

5. In conjunction with other NATO reference documents; this ATP is to be used by commanders, staff and EOD operators who have an influence on the organization, planning and conduct of EOD operations. Furthermore, the ATP describes EOD operating principles across the full spectrum of operations and in all operating environments.

6. Within the hierarchy of NATO standardization, ATP-3.18.1 (A) is directly subordinate to AJP-3.18 (A) “Allied joint doctrine for explosive ordnance disposal support to operations”, which describes the fundamental operational aspects of EOD and provides guidance on conducting multinational joint EOD operations.

7. In NATO documents for the maritime environment, the terms EOD and clearance diving are used (see ADivP-1 Allied guide to diving operations), whereas in this ATP the term EOD comprehends both terms.

8. Custodian for ATP-3.18.1 (A) is the German Army Concepts and Capability Development Centre III 3
(phone: +49 221 9371 3156, e-mail: ahentwgiii31@bundeswehr.org).

Chapter 1 BASIC TACTICAL CONSIDERATIONS FOR EOD

1.1. THE EXPLOSIVE ORDNANCE THREAT

1. To enable freedom of action in any operational area the NATO commander will require a deployable EOD capability organised and scaled to counter the EO threat. The range of EO threat scenarios on land and at sea includes:

a. **Conventional munition**

(1) Conventional munitions available today range widely in both technology and quantity. Many types of munitions can now be delivered over long ranges, either to wide area or to precise targets. Detonation may be effected either by mechanical means or electronic sensor technology. Their effects can both destroy and disrupt, and they present different EOD challenges depending on their targets. These may include operating airfields, naval operations, combat and/or supporting troops, lines of communication and non-military infrastructure.

(2) Other munitions like sea and land mines, may be laid covertly, may be continuously active, and may require no maintenance.

(3) Also of note, not all nations are parties to or comply with conventions limiting the use of mines, anti-handling devices and other weapon systems.

(4) Only conventional munitions which have not yet functioned create EO threat scenarios.

(5) In addition to hostile forces munitions targeted at our own forces, EOD planning should also take account of the threat to friendly forces by own ordnance that fail to function.

(6) Conventional munitions may occur as abandoned explosive ordnance (AXO), unexploded explosive ordnance (UXO) and as explosive remnants of war (ERW) in a post conflict scenario.

b. **Improvised explosive devices (IED)**

(1) IEDs can be simple to design and easy to make and they can also be sophisticated with the incorporation of modern electronic components which are both inexpensive and widely available.

(2) IED enable the adversary to strike without being decisively engaged and the adversary will exploit the use of IEDs to demonstrate the force's failure to deliver security. IEDs will

inhibit our freedom to manoeuvre. For the local population IEDs can lead to widespread feelings of insecurity, with a debilitating effect on the local population, potentially resulting in a loss of confidence and support for Alliance activity. IED casualties also affect morale and consequently the cohesion and effectiveness of the Alliance force. Crucially, the force's national domestic support may be eroded. Consequently, IEDs employed by an adversary as a tactical weapon can have strategic effect.

(3) IED may occur as AXO/UXO and as ERW in a post conflict scenario.

c. **Chemical, Biological, Radiological and Nuclear Explosive Ordnance (CBRN EO)**

(1) Intelligence-based threat assessments at national, allied and international levels all indicate an increased likelihood of terrorist organisations, including state sponsored terrorism, and insurgencies using EO or dispersal devices associated with CBRN payloads against both military and civil targets. Many of these aggressors no longer consider themselves constrained by international conventions, nor by commonly held moral beliefs in terms of endangering civilian populations. Allied forces are considered likely targets and measures must be considered to protect against these threats.

(2) Dissident paramilitaries and organised criminal groups are also thought to be developing capabilities in this area and this could conceivably lead to the use of improvised devices with CBRN payloads, most likely using toxic industrial materials (TIM), which can be acquired relatively easily.

(3) Such attacks, in any theatre of operations, could inflict major casualties, including multiple fatalities among military forces, security forces and especially among unprotected populations. The consequences of such an attack are incalculable and the political impact of community reactions could potentially destabilise governments and undermine law enforcement efforts at a national level. The psychological and media aspects of the incident should also be considered.

(4) Some countries did not sign the CWC and there is no absolute certainty that nations ore other actors have no access to military CBRN EO. But even storages and caches with military CBRN EO could pose a high threat for Allied forces.

(5) CBRN EO may occur as AXO/UXO and as ERW in a post conflict scenario.

(6) CBRN EO that are capable of a high order of destruction and of being used in such a manner as to destroy people, infrastructure or other resources on a large scale are potential “weapon of mass destruction”.

2. AXO and UXO occurring in a post conflict scenario with both, explosive or CBRN payload are summarised under the term ERW. These munitions pose a potential major danger for Allied Forces and public safety even when military action is ceased.

1.2. EOD PRINCIPLES

1. **EOD capabilities:** To enable freedom of action in any operational area the NATO commander will require an EOD capability on a scale to suit the force organization and deployment to counter the threat. According to the threat in the joint operations area (JOA), specialised EOD capabilities (e.g. improvised explosive device disposal (IEDD), CBRN EOD) have to be earmarked and become an integral part of the Allied force.

2. **Command and Control Principles:** Coordinated and effective EOD operations in the joint environment require not only an awareness of the capabilities and resources available, but also clearly defined and effective command and control (C2) principles. Although each operation will require a different C2 structure, underlying guiding principles should be applied to each.

3. **Reporting and tasking:** The flow of EOD information (bottom-up, top-down, and with adjacent EOD FE) in an Allied mission is essential for safe, effective, and efficient operations. EOD staff and the EOD operators must establish efficient and effective communications and consistent tasking and reporting procedures, based on allied standards.

4. **Specific safety principles:** EOD missions are aimed to counter the threat caused by unexploded and abandoned, presumably not safe EO which always involve a certain element of risk. No procedure is absolutely safe, but EOD procedures are designed to minimize the risk. The variety of existing EO worldwide does not allow full coverage by specific safety regulations. Regarding national regulations, nations may have their own safety principles which need to be taken in account. These principles need to be coherent with Alliance safety guidance. However, successful EOD actions require general and specific safety principles and considerations; these have to be considered when planning EOD actions.

5. **Safety and security versus speed:** Fundamental to the success of operations involving EOD is the recognition of the need to balance safety and security against the requirement to maintain momentum. In warfighting operations, there may be a proportionally greater need for speed than preservation of assets or exploiting and analysing intelligence. Whereas in stabilisation or peace support operations, in a relatively benign environment, the safety of the indigenous population and

preservation and collection of forensic material for judiciary purposes may take precedence above the need for speed.

6. **Effects of international law and conventions:** The conduct of military operations is governed increasingly by international law and conventions. NATO nations are signatories to a number of international agreements, including the chemical weapon convention (CWC), the biological weapon convention (BWC), the convention on conventional munitions (CCW), Ottawa convention[1] and the convention on cluster munitions convention (CCM). Allied EOD FE assets have to act within the applicable legal framework and safety parameters. EOD specialists can provide advice on the possible effects and implications for own operations. In sensitive cases legal and law enforcement advice should be sought.

7. **Support measures:** EOD tasks are generally not an action for lone EOD specialists. Depending on the task, EOD FE may require varied support; e.g. military engineering (MILENG), force protection (FP), medical support, electronic warfare (EW), military working dogs (MWD), logistic, weapon intelligence teams (WIT), boarding teams, Military Search, Mine Clearance Measures (MCM), CBRN defence, military police (MP) and communications.

8. **Information exchange:** Exchanging current EOD information among NATO Armed Forces and other agencies requires the establishment of specific Standard Operating Procedures (SOP) that must take into account the safeguarding of that information.

9. **Interoperability:** Every effort must be made to optimize interoperability to facilitate efficient, effective EOD operations and to reduce risks to personnel, equipment and material. Important to interoperability are:

a. stable, efficient communication links,

b. interoperable EW systems,

c. well-developed, simple reporting procedures,

d. well-developed information management systems,

e. common language (and good command of that language, spoken and written),

f. uniform and high training standards,

g. willingness to cooperate multinational,

h. compatible equipment.

[1] Full title of CWC, BWC, CCW and Ottawa convention see “RELATED DOCUMENTS.

10. **Categories and prioritisation:** EOD incidents have to be classified into four EOD categories and four EOD priorities[2]. For each EOD relevant task, one of the four EOD categories and four EOD priorities is to be assigned.

11. **Continuity:** Every effort should be made to maintain and optimize continuity during the deployment and handover periods of contingents; particular emphasis should be placed on ensuring continuity of EOD information and functions (operations, intelligence, SOP etc.) and of staff holding appointments with safety implications for EOD operators.

12. **Counter-IED consideration:** EOD is a key enabler to counter-IED (C-IED), especially on defeat the device. All EOD personnel must have a clear understanding of this enabler role especially with regard to the intelligence, evidence collection, forensic, biometric and exploitation requirements in support of C-IED and must understand the differences between EOD and C-IED. Depending on the nature of the IED threat all measures in support of "attack the network" must be considered. This will influence EOD procedures. Close coordination of all EOD measures with the C-IED effort during the operational planning phase as well as during the operational conduct phase is essential, close coordination of the EOD staff elements – regardless a single service, multinational or joint operational environment – is mandatory.

13. **Cooperation with civilian agencies:** While EOD operations extend throughout the rear areas and forward combat areas, the existence of EOD incidents in civilian and coastal areas within the JOA will often have significant repercussions on the military situation, particularly in stabilization or peace support operations. In such cases, cooperation between NATO EOD FE and national military, law enforcement and civilian agencies will be essential and needs to be accomplished through the EOD staff elements at the appropriate command level.

14. **EOD terms and definitions:** For coherency and common understanding both care and responsibility are required in creating new EOD terminology. NATO agreed EOD terms and abbreviations are listed in the official NATO terminology database (NATOTerm). New EOD terminology will be developed by the NATO Standardization Office (NSO) EOD Interservice Working Group (EODWG). It must conform to NATO guidelines.

[2] For more details see chapter 5, section 5.6 – CATEGORIES AND PRIORITIES OF EOD EFFORT. EOD, categories and priorities are defined in AEODP-10.

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Chapter 2 EO AWARENESS SKILLS AND JOINT EOD CAPABILITIES

2.1. INTRODUCTION

1. The successful completion of EOD actions requires a common understanding about EOD skills and capabilities, EOD task areas and specific safety principles.

2. An EO threat is present in every current and likely future NATO operation and all personnel could be involved in an EOD incident, e.g. detection of an unexploded shell or an IED incident. Countering the EO threat demands an awareness and application of appropriate skills for all personnel. This applies equally to both EOD and non EOD specialists.

3. This chapter does not detail which forces (services/units) of a nation are responsible for which capabilities and tasks because this may differ considerably from nation to nation.

2.2. EO AWARENESS SKILLS

1. Basic EO awareness skills help to protect against the threat of EO and enable personnel to operate and accomplish their tasks in environments where there is an EO threat. These basic skills include the ability to detect, mark and report EO, as well as to carry out a threat analysis; all at tactical level. The personnel have to be trained to produce EO warnings and to minimize the risk to both themselves and others.

2. A training of basic EO awareness skills should be included in all military training, pre deployment training and in-theatre training. Failure to properly train personnel could cause injuries or death. Special attention is drawn to the C-IED related intelligence, evidence, forensic, biometric and exploitation awareness of all deployed personnel.

3. Military leaders should be trained, during general leadership training, how to conduct operations under the EO threat when commanding a military unit.

2.3. JOINT EOD CAPABILITIES ACROSS THE FULL SPECTRUM OF CONFLICTS

1. EOD capabilities are the particular abilities of EOD FE for countering EO threats in different operational environments, including underwater. They are provided to fulfil EOD tasks and support Allied joint operations. EOD tasks are to be carried out by personnel trained in accordance with AEODP-10. EOD tasks in maritime environment or in inland waters are carried out by qualified EOD divers in accordance with ADivP-01 “Allied guide to diving operations”. EO awareness skills

and EOD capability subsets are shown at figure 2 of AJP-3.18. EOD tasks are assigned by the EOD coordination cell (EODCC) or EOD cell (EODC) as required[3].

2. The following are the joint EOD capability subsets:

a. **Explosive ordnance reconnaissance (EOR):** EOR comprises all EOD procedures undertaken by qualified personnel for detection, marking, initial identification and reporting of suspected EO in order to determine further action. Disposal of the EO is not included in EOR capability.

EOR is the focused collection of information on the EO situation in a limited area. Some nations train non-EOD personnel in the EOR role. These personnel can then execute EOR tasks assigned by the EODCC or EODC as required.

b. **Explosive ordnance clearance (EOC):** EOC comprises all EOD procedures undertaken by qualified personnel to reduce or eliminate the explosive ordnance from a defined area.

The execution of EOC missions varies considerably from nation to nation. Some nations assign the EOC mission exclusively to EOD forces; whereas other nations assign the EOC mission to units with varying levels of EO knowledge and expertise. Therefore, nations must clearly state and identify their EOC capability for each specific operational scenario. This includes clear definition of the division of responsibilities between EOD FE and other assets.

c. **Conventional munition disposal (CMD):** CMD is the use of EOD procedures on a munition that is neither chemical, biological, radiological nor nuclear.

d. **Improvised explosive device disposal (IEDD):** IEDD is the use of EOD procedures on an IED. An IED is a device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic or incendiary chemicals and designed to destroy, incapacitate, harass or distract. It may incorporate military stores, but is normally devised from non-military components.

The likelihood of facing a significant and sophisticated IED threat requires an effective IEDD capability for each operation. IEDD forces should be linked to technical intelligence collection organisations. The disposal of an IED requires specific training and equipment. National policies require compliance with special procedural and safety regulations. The coordination of operations and standby duties is of

[3] For details see section 5.10 “EOD TASKING AND REPORTING PRINCIPLES”.

particular importance for these forces. Principles of IEDD operations can be found in AEODP-3.

e. **Chemical, biological, radiological and nuclear explosive ordnance disposal (CBRN EOD):** The use of EOD procedures on devices that contain chemical, biological, radiological or nuclear payloads and materials. CBRN EO may be conventionally manufactured or improvised. The disposal of CBRN dispersal and spray devices without explosive components is part of the CBRN EOD capability.

CBRN EOD includes biological and chemical munition disposal (BCMD). BCMD is the use of EOD procedures on a munition that contains a biological or chemical agent.

CBRN EO disposal tasks require compliance with special procedural and safety regulations, necessitating coordination with other specialized forces like CBRN assets. Due to the political sensitivity of this issue, it is unlikely that EOD operators will carry this out in isolation. Support may be required from a number of diverse agencies. Disposal of CBRN EO is an EOD task that requires special training according to AEODP-10.

2.4. EOD MAIN ACTIVITIES

1. EOD main activities are[4]:

a. **Processing of EOD incidents:** EOD elements respond to, recognise, identify, render safe, and dispose of EO that threaten/impede manoeuvre. EO that threaten civilians are handled as defined by the EOD theatre operating policies.

b. **EOD advice:** The provision of timely and accurate EOD advice is essential to allow commanders to make informed decisions (e.g. on EOD matters, priorities, planning, execution) based on comprehensive information. Advice will be required at all levels, ranging from policy and planning at the highest level to operational advice on specific incidents for commanders on the ground. Advice must be timely, relevant and comprehensive and should only be provided by suitably qualified EOD personnel. Responsibility for the provision of advice must be clearly defined in operational orders.

c. **Recovery on fixed installations:** The priority aim of all EOD recovery operations, whatever the installation, is to assist in the overall plan for the recovery of that installation such that it may undertake its primary operational role in the minimum possible time. After the operational priorities, and with time and logistics permitting, the secondary aim is to

[4] An EOD tasks may be assigned to several main activities. EOD support tasks see chapter 3.

continue with EOD recovery operations as necessitated by the overall recovery plan of the installation.

d. **Underwater EOD (UW EOD):** UW EOD is the use of EOD procedures on EO in a subsurface environment. EOD tasks are conducted in maritime environment and inland waters. Clearance diving and EOD actions in support of Naval mine warfare are included in these activities. These activities are carried out by qualified EOD divers, using specific tactics, techniques and procedures (TTP) and equipment.

e. **Exploitation of EOD incidents:** EOD qualified personnel record details of EOD incidents and preserve describe and recover physical, technical and forensic material and provide a basic technical assessment. Main focus for EOD is the collection of information about the involved EO. These activities support the C-IED field exploitation system.

f. **Weapon Technical Intelligence (WTI):** WTI is the generation of information about all types of munitions/IEDs/threats to be found in the JOA, including known variations or modifications of munitions and an assessment of munitions' condition and safety. All weapons and other items of technical intelligence value are to be declared safe to handle and safe to transport by EOD qualified personnel before being handed over to external agencies.

2. Other EOD activities:

a. **Logistic disposal:** At certain stages of an operation, EOD personnel may be required to carry out or assist in the removal of unserviceable national and foreign ammunition and explosives from a stockpile. If the ammunition is to be recovered for future use, stockpile disposal may or may not require the use of render-safe or destruction procedures.

b. **Humanitarian mine action (HMA):** HMA is usually undertaken by the United Nations (UN), international organizations and other non-governmental organizations (NGO) and is not normally a military EOD task. Nevertheless, multinational EOD operations may contribute to the HMA mission. Multinational EOD tasks conducted in support of multinational military operations may or may not be to UN clearance standards. However, it is possible that other nations or troop contributing nations in a JOA may decide unilaterally to conduct HMA tasks in support of wider military or political aims.

2.5. EOD TRAINING REQUIREMENTS

The planning and conduct of EOD in multinational joint operations requires the involvement of EOD qualified personnel. EOD staff officers and EOD operators (including officers, non-commissioned officers and privates), trained and equipped in accordance with the appropriate NATO standards[5], are the Alliance's preeminent operational, tactical and technical EOD experts.

[5] For details see AEODP-10 "EOD principles and minimum standards of proficiency".

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Chapter 3 EOD SUPPORT TO OPERATIONS

3.1. Section I – INTRODUCTION

EOD forces are employed to counter EO hazards on land, at sea and in support of air operations. These EOD capabilities protect personnel and material; maintain and/or restore the operational capabilities of friendly forces before, during and after a mission; and support the restoration of normality in the aftermath of a conflict. Therefore, EOD is a vital operational enabler within the survivability, force protection, manoeuvre support, intelligence and civil/military operations capabilities. With the emergence of global terrorism, broad-spectrum EOD capabilities gain additional importance.

3.2. EOD COMPONENT SUPPORT

1. EOD component support tasks include but are not limited to:

   a. **Land component EOD support**, aimed to improve the tactical and operational mobility of own force and to enhance force protection on land and inland waters.

      (1) **Route clearance:** EOD can support route clearance operations by conducting EOD procedures when EO has been detected and identification/exploitation is needed or vital infrastructure is threatened.[6]

      (2) **Range clearance operations:** Range clearance operations are the elimination of explosive ordnance from weapons ranges to facilitate range maintenance or target emplacement. Range clearance operations require long-range planning due to their complexity. Each operation has specific requirements that vary for each range and installation. These operations are the responsibility of the installation. EOD FE support the operational planning and safe execution of the operation. Render safe procedures, removal of explosive ordnance, or destroy in situ may be used by EOD FE to eliminate EO on ranges.

      (3) **Convoy operations:** There may be many unsecured areas throughout the NATO area of responsibility. The adversary will use these unprotected areas to exploit and attack convoys. EO, especially IED, are a significant threat for convoys. EOD FE support the detection and if found the disposal of these EO.

[6] For details see ATP-3.12.1.3 “Allied tactical doctrine for route clearance”.

(4) **Inland waters clearance:** EOD forces dispose EO in inland waters, such as river crossing areas, inland ports and barrages. With regard to subsurface and surface environment which needs specific formation, regular training and equipment, these tasks are realized by EOD divers.

(5) **Mortuary services:** Immediate recovery and clearance of deceased persons is a priority of the mortuary services. EOD FE may be required to assist in the recovery of remains where the presence of EO is suspected. In addition, support may be required for the exhumation of graves.

b. **Maritime component EOD support,** includes any actions performed by surface, subsurface and/or maritime air forces to gain or exploit command of the sea, sea control or sea denial and/or to project power from the sea. Sea control may also include naval cooperation and guidance of shipping, protection of the sea lines of communication, blockades or embargoes against economic or military shipping and maritime interdiction operations. Maritime operations can be performed in oceans, seas, bays, estuaries, waterways, coastal regions and ports. EOD FE provide the full range of EOD for maritime operations.

c. **Air component EOD support**, aimed to ensure the use of airports as a prerequisite for any air operation.

(1) **Airfield protection:** EOD FE support the protection of airfields and respond to EOD incidents.

(2) **Airfield damage repair:** EOD FE detect and dispose UXO in order to enable necessary and immediate post attack repairs to airfields so that normal services and operations may resume.

(3) **Aircraft battle damage repair:** EOD FE support essential aircraft repair, which may be improvised, carried out rapidly in a battle environment by rendering safe UXO remaining in the aircraft and munitions of armed aircrafts.

(4) **Armed aircraft crash assistance:** EOD FE support rescue and recovery of crashed aircrafts by rendering safe threatening explosives.

d. **All components EOD support**, aimed to enable operations of all services under the condition of an EO threat.

(1) **Collection of intelligence:** EOD FE provide technical intelligence about new munitions and EO they have dealt with. They provide a report about all EOD incidents with tactical & technical information to all relevant bodies (e.g.: EODCC/EODC, C-IED exploitation system, J2). The field exploitation of IED incidents should normally be conducted by

weapon intelligence teams (WIT). If WIT is not available, partial exploitation may be undertaken by EOD teams, IEDD capable. They provide a field exploitation report that will catalogue the physical technical and forensic materiel and provide a basic technical assessment. It should also include an immediate assessment of own and adversary's tactics, techniques and procedures (TTP) and capabilities[7].

(2) **Exploitation of EOD incidents:** EOD FE conduct and/or support accident/incident investigations, recover EO for technical intelligence exploitation and assist with post-EOD incident investigations – associated with military operations and when requested by civil authorities.

(3) **Military evacuation operations:** The evacuation of persons from threatening circumstances may be hindered by the presence of EO, such as mines and IEDs. EOD forces assist in countering EO threats when engaging the extraction forces and moving the persons in a safe haven.

(4) **Special operations:** EOD supports special operation forces (SOF) missions that are direct and indirect in nature. EOD competencies range from training and equipping indigenous forces to enabling direct action against designated targets as well as other specialized tasks, including specialized reconnaissance capabilities and enhancing civil affairs operations. In addition to general support to SOF based on requested theater allocations, specialized EOD organizations provide direct support to other SOF in the conduct of all SOF core operations and activities.

(5) **Military search:** Where EO threat is known and an action by EOD capabilities may be likely, EOD should be incorporated in the search operation. This includes also recovering EO components or related material. Military search is not to be confused with routine location and security checks. There are certain operations in which military search and EOD are mutually supporting both to reduce and manage risk.[8]

(6) **Protection of camps/infrastructure:** EOD role is to maintain or re-establish a safe and secure environment by providing critical infrastructure/camps protection and response capabilities. Critical infrastructure protection tasks may support the identification and mitigation of vulnerabilities to critical infrastructure.

[7] For details see AJP-3.15 "Allied joint doctrine for countering improvised explosive devices".
[8] For details see ATP-3.12.1.1 "Military search" and ADivP-01 "Allied guide to diving operations".

(7) **Building clearance:** EOD FE search buildings for EO and if found dispose them to ensure a use of these buildings by joint forces.

(8) **Area clearance:** EOD FE search defined areas for EO and if found dispose them to allow a military operation to continue with reduced risk. Area clearance, including mine clearance, can be executed by military engineers. EOD and military engineers are mutually supporting each other at area clearance activities.

(9) **Protection of very important persons (VIP)/Security of events:** EOD FE assist operations protecting very important persons, military and civil events (civil events as defined by the theatre operating policies), where an EO threat is assessed as likely.

(10) **Amnesty programmes:** EOD FE assist in the collection and disposal of hazardous munitions and components as part of the allied commander's FP program, to ensure the continued safety of military personnel.

(11) **Rescue and recovery:** EOD FE are necessary for the support of rescue and recovery operations, when EO is involved, e.g. medical evacuation, aircraft crash recovery, mine strikes, combat vessel or ammunition cargo ship wrecks. The support may include removal of EO threats, investigation and forensic evidence gathering.

(12) **Ammunition and weapon storage site inspections:** Site inspections are the primary means used by theatre forces to monitor foreign armed forces' compliance with imposed weapons and munitions policies/sanctions, conducted with eventually support of weapon and ammunition technicians.

(13) **Destruction of captured adversaries EO and weapons:** EOD FE ensure recovered weapons are safe and any identified EO is rendered safe and/or destroyed. They assist other forces destroying captured adversaries EO.

(14) **CBRN defence:** Beside CBRN EOD (a joint EOD capability subset) EOD FE support CBRN defence assets when conducting detection, sampling, identification and monitoring tasks in an EO threatened area.

(15) **WMD disablement:** WMD disablement requires specialised EOD capabilities in order to systematically locate, identify, characterize, attribute, control, defeat, disable or dispose of WMD, CBRN weapons, CBRN devices and CBRN materials

and/or a potential adversary's capability to research, develop, test, produce, stockpile, deploy, or employ such weapons, devices and materials.

(16) **Training of military and civilian personnel:** EOD FE may conduct or support basic EO awareness skills training and community awareness training regarding EO hazards. The training may address the recognition, marking and reporting of EO, and the correct response in the case of EO detection and bomb threats. They may also educate non-military personnel and public officials involved with civil emergency preparedness (law enforcement, fire protection, etc.) on EO identification, threats, marking, reporting, protective measures and evacuation procedures; EO threat management; IED threats, hazards, and generic response procedures. Furthermore EOD contributes to the C-IED pillar “prepare the force”.

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Chapter 4 ELEMENTS OF AN EOD OPERATION

4.1. PHASES OF AN EOD OPERATION

An EOD operation is initiated by a report about an EOD incident (EOD incident report - EO INC REP) or by the intention to get an object or area free from explosives (FFE). The EOD operation can be split into 11 generic phases. The phases, which may vary in sequence and may not all be applicable to every EOD task, are as follows:

a. assessment – planning – tasking – preparation,

b. deployment, arrival and orientation,

c. establish EOD C2 on site,

d. reconnaissance,

e. identification and diagnosis,

f. rendering safe, destroy in situ or removal and destroy,

g. recovery,

h. exploitation,

i. site remediation,

j. transport – storage,

k. final disposal.

4.2. KEY ACTIVITIES OF AN EOD OPERATION

In addition to the distinct phases of the operation, a number of key activities occur throughout the task.

a. EOD advice – provided by EOD qualified personnel,

b. command and control (C2),

c. evaluation,

d. planning.

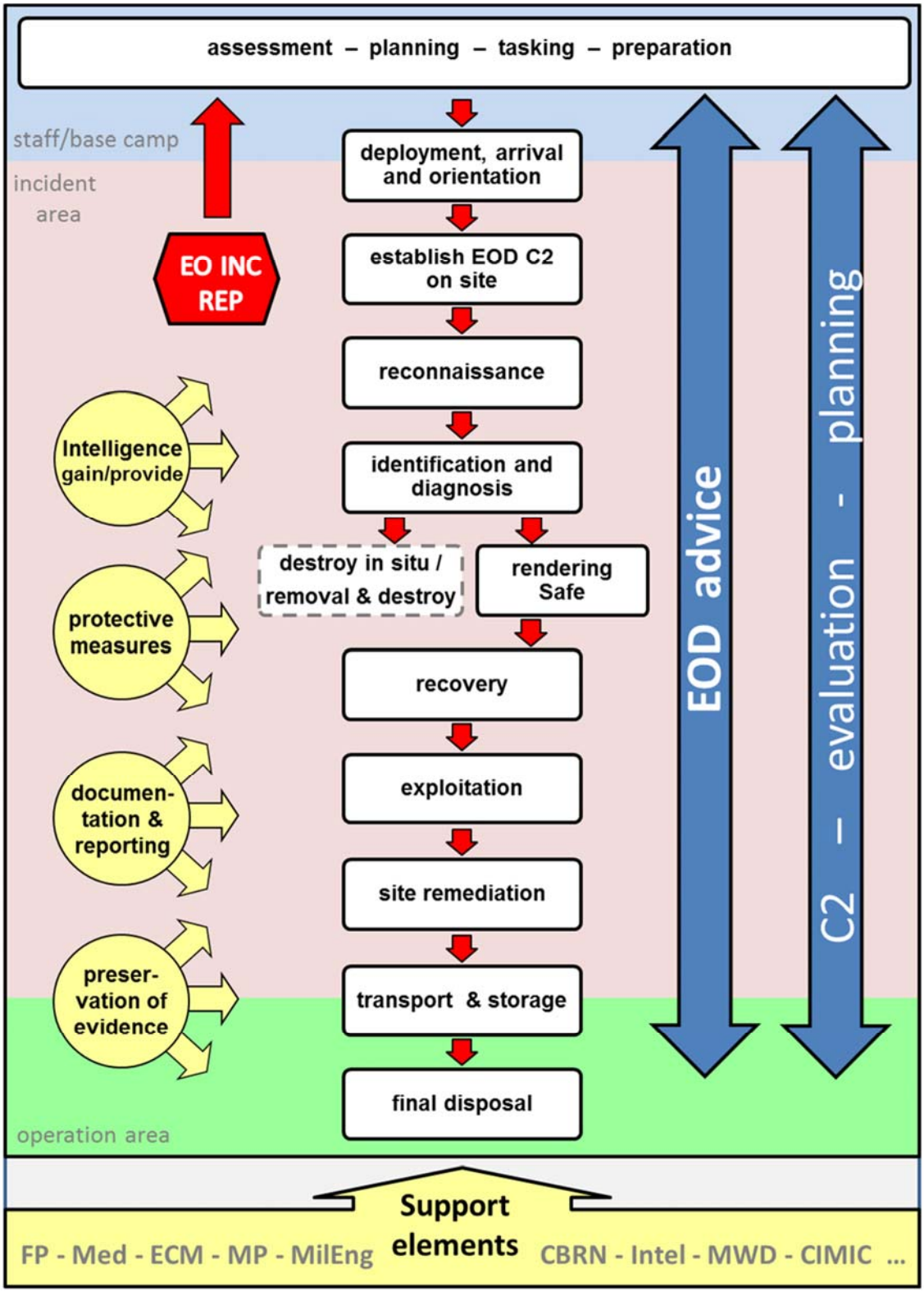

Figure 1: Elements of an EOD operation

4.3. ACCOMPANYING ACTIVITIES OF AN EOD OPERATION

EOD operators have to conduct several accompanying activities during the accomplishment of a task in order to realise the EOD philosophy and document the activities.

a. intelligence (gain and provide),

b. protective measures (damage mitigation),

c. preservation of evidence,

d. documentation and reporting.

4.4. EOD SUPPORT REQUIREMENTS

1. EOD tasks are never a solitary action. EOD FE are dependent on support by other military assets. Specific support is required by the following Allied capabilities and should be considered when planning EOD operations.

2. **Force protection:** EOD activities are not always conducted in a benign environment. EOD FE require protection from adversary attacks during the deployment and EOD activities. FP provides measures and means to minimize the vulnerability of EOD personnel, equipment, materiel and activities from threats thereby contributing to EOD operation success.

3. **Medical support:** An adequate medical support to EOD tasks is essential because of the hazardous nature of EOD tasks across all environments. CBRN EOD and underwater tasks require specific medical capabilities, e.g. emergency decontamination, evacuation of wounded personnel and medical support to diving tasks. Medical support should be provided in accordance with NATO and national policy, regulations and SOPs. The medical support plan for EOD operations/tasks must be pre-planned and coordinated.

4. **Electronic warfare:** The general availability of electronic components and their combination with explosives to create an IED is a threat for our EOD FE. Electronic countermeasures (ECM) can help to mitigate or minimize the threat from IED that are either armed or triggered by use of the electro-magnetic spectrum. EOD and EW activities are of a complex nature and require very high levels of co-ordination by all parties involved, including special assignment and safety regulations, additional education, training and equipment. Principles of EW support to EOD can be found in AEODP-11.

5. **Military working dogs (MWD):** The unique sensory and physical capabilities of a MWD in combination with its handler can be a significant force multiplier for EOD operations. MWD provide a complementary sensor system to all other systems and they provide unique strength within the scope of EOD FE. The MWD team consists of a MWD and qualified handler who are paired, trained, tested and subsequently certified to operate as a role specific team. The following MWD types for EOD support are specified within NATO[9]:

a. patrol and explosives detection dog (PEDD),

b. high assurance search dog (HASD),

c. explosives detection dog (EDD),

d. mine detection dog (MDD),

e. improvised explosive device detection dog (IE3D).

6. **Military Police:** MP provides functions that are conducted by designated military personnel who are organized, trained and equipped using specialized MP techniques. These enabling functions are mobility support, security, detention and police functions, which may support the full spectrum of EOD operations.

7. **Military engineers:** Engineers can assist EOD elements with assets for uncovering of EO, threat mitigation and the disposal of large quantities of unexploded and abandoned munitions and of course precautionary measures to deny the adversary the emplacement of IED (e. g. route clearance). Engineers and EOD teams can be very closely involved in military search and route clearance operations. Engineers and EOD FE provide specialised advice to each other.

8. **CBRN defence:** CBRN defence helps in a CBRN threatened environment to prevent CBRN incidents, protect EOD FE from the effects of CBRN incidents and takes recovery actions, so that EOD FE are able to accomplish the mission. CBRN defence in support of EOD does not cover offensive actions to nullify, eliminate, or disable CBRN weapons or their delivery systems, however, the principles and capabilities may be employed by Allied forces during EOD operations designed to prevent CBRN incidents.

9. **Intelligence:** EOD FE respond to evolving threats posed by IEDs and WMD. Countering these threats requires EOD operators to have quick reliable access to a broad range of information. Intelligence assets provide dedicated intelligence fusion on foreign forces, their weapon systems and TTPs to support EOD operators conducting their challenging task.

[9] MWD support capabilities are detailed in AMWDP-1 (A) “Military working dog capabilities”.

10. **Further military support requirements:**

    a. communication and information systems support
    b. logistic
    c. ammunition technicians
    d. fire-fighting personnel
    e. legal advisors
    f. media officers
    g. civil military cooperation (CIMIC)
    h. interpreters

11. **Host nation/civil support requirements (optional):**

    a. police
    b. fire fighters
    c. medical support
    d. mine action organisations
    e. NGOs

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Chapter 5 EOD COMMAND AND CONTROL ORGANISATION AND STRUCTURES

5.1. EOD COMMAND AND CONTROL IN MULTINATIONAL OPERATIONS

1. General EOD command and control principles are defined in AJP-3.18.

2. In order to implement the C2 principles of joint operations it is essential that EOD advisors and/or EOD staff elements are established at each level of command. Qualified EOD personnel must be placed so as to be able to advise and support the commander and all staff functions from the outset throughout the planning, preparation, execution and transition of operations.

3. An EOD estimate is essential to determine EOD C2 requirements. There are a wide variety of factors to consider; for example the size and terrain of the EOD areas of operation (AOO), the nature of the threat and the mission, the EOD mission scope, response times, the size and capability of the EOD force. In some circumstances, the EOD estimate may dictate that several multinational and/or national EODCC and EODC are established.

4. Each EOD staff level element (combined joint EOD cell – CJEODC, EODCC, EODC, national point of contact EOD – NPOC EOD) performs distinct tasks, roles and activities, see Annex A. The allocation of EOD staff elements in a theatre depends on mission analysis and will be determined by the following parameters:

a. Intention of the political and military leaders,
b. threat assessment to determine the EOD structure and capability,
c. expected restrictions of operational freedom,
d. scope of the military mission,
e. multinational operational structure,
f. national and service EOD policies,
g. size and characteristics of the JOA,
h. theatre environment (land, maritime and/or inland waters),
i. EOD capabilities provided by the individual nations,
j. military agreements between the nations,
k. other EOD elements (UN, other international organizations, host nation, NGOs etc.).

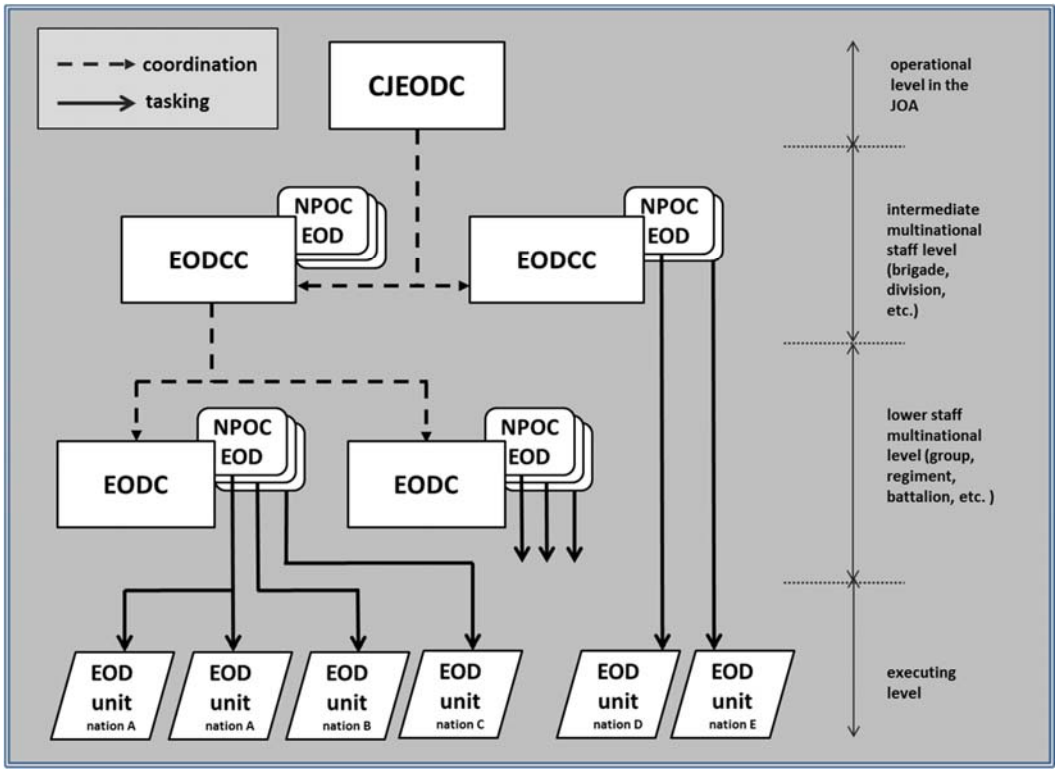

Figure 2: EOD coordination structure

5. The entire EOD capability in a JOA should be placed under one multinational coordination and tasking authority.

a. There are several arguments for pooling coalition EOD FE.

(1) The coalition force commander requires EOD FE to facilitate essential operations.

(2) The coalition force commander desires to achieve economy of effort employing available multinational EOD resources.

(3) Within the coalition, a national force commander may not have sufficient EOD capabilities to continue/accomplish his mission and must request assistance from the higher coalition force commander; the coalition force commander may then provide EOD resources from available multinational EOD FE.

b. However, national force commanders may choose to employ their EOD FE to resolve EO hazards without involving either the coalition or other national forces. Consequently, the national force commander will make either no EOD FE or a portion of his EOD FE available to the broader coalition.

c. The coalition must distinguish between EOD FE that are coordinated and tasked by a multinational EODCC/EODC and EOD FE that remain under full national command and control.

d. EOD operations in a maritime environment and inland waters (e.g. naval mine warfare, harbour clearance, support to amphibious operations, support to maritime strike operations, support to maritime special operations and support to riverine operations) are normally maritime operations under control of a naval command (e.g. maritime component command - MCC). Particularly in joint/multinational operations modifications are required for tasking and reporting.

6. EOD commanders and staff should have training and experience in the full range of EOD operations. Irrespective of the command level, vacant posts in the EOD command and control structure will have negative effects on EOD task safety and overall EOD effectiveness. Senior military commanders must ensure that qualified personnel continuously occupy the key EOD command and staff posts.

5.2. OPERATIONAL STAFF LEVEL - COMBINED JOINT EOD CELL

1. A single CJEODC must be established in the operational headquarters in the JOA. The CJEODC is the focal point for the operational headquarters for all EOD matters. The broad roles of the CJEODC are defined in AJP-3.18.

2. Collectively, the CJEODC staff must have training, qualifications and experience in the full spectrum of EOD operations. The CJEODC staff needs to review regularly overall EOD developments to ensure that multinational C2 arrangements and force structures are appropriate to meet the threat. This review process is particularly important as missions change from war fighting to peace.

3. The CJEODC manning should be representative of the multinational force. Recommended minimum manning is:

a. Senior EOD staff officer,

b. operations/coordination/planning officers,

c. EOD qualified personnel,

d. intelligence officers (including technical/weapons intelligence),

e. geographic/threat database staff,

f. liaison officers as necessary.

4. Where there are intermediate commands between the CJEODC and the multinational EODCCs, EOD staff will be required to support those commands, as appropriate.

5.3. INTERMEDIATE LEVEL HEADQUARTERS –EOD COORDINATION CELL

1. The EODCC must be established in the multinational brigade, division level or component level multinational joint headquarters based upon mission analysis. It is a multinational staff element and serves as a coordinating authority for EOD matters. The EODCC is the focal point, within a combined command, for the individual nations in EOD-relevant matters, and the central point of contact for the multinational headquarters (HQ) for all EOD issues. The purpose of the EODCC is to:

a. coordinate allocated EOD FE within the command's AOO,

b. coordinate subordinated EODC,

c. analyse and display EOD situation in the AOO,

d. provide EOD advice to the commander and the entire HQ,

e. categorize and prioritize EOD incidents,

f. allocate EOD tasks to EODC or national contingent EOD FE,

g. coordinate EOD matters with higher and adjacent headquarters.

2. The directives governing staff composition and authorities of the EODCC must be clearly defined by written orders (annex C).

3. While there may be multiple EODCCs within a theatre of operations, there will only be one EODCC in each chain of command. EOD staffs at higher headquarters will have functions modelled upon the CJEODC.

4. The EODCC manning should be representative of the multinational force and must allow for 24 hour operations. Recommended minimum manning is:

a. Senior EOD qualified staff officer,

b. operations/planning officers,

c. EOD qualified personnel,

d. intelligence officers (technical/weapons intelligence trained),

e. liaison officers as necessary.

5. Collectively, the EODCC staff must have training, qualifications and experience in the full spectrum of EOD operations within in the AOO. While the EODCC senior staff officer is not an operational commander, vesting ultimate decision authority for EOD matters in a single person within the headquarters is critical (unity of command).

6. Preferably, the EODCC senior staff officer should be provided by the lead nation. The EODCC senior staff officer must be experienced in and appropriately qualified to command EOD operations.

7. Minimum proficiencies for an EOD staff officer are defined in AEODP-10.

5.4. LOWER STAFF – EOD CELL

1. The EODC must be established in the regiment/group or battalion level joint staff based upon mission analysis. It is a multinational staff element in a multinational unit and serves as a coordinating authority for EOD matters. The EODC is the focal point, for the individual nations in EOD-relevant matters, and the central point of contact for the multinational staff for all EOD issues. The purpose of the EODC is to:

a. coordinate allocated EOD FE within the AOO,

b. analyse and display EOD situation in the AOO,

c. provide EOD advice to the commander and the entire staff,

d. categorize and prioritize EOD incidents,

e. allocate EOD tasks to national contingent EOD FE,

f. coordinate EOD matters with the EODCC.

2. The directives governing staff composition and authorities of the EODC must be clearly defined by written orders (annex C).

3. The EODC manning should be representative of the multinational force and must allow for 24 hour operations. Recommended minimum manning is:

a. EOD qualified staff officer,

b. EOD qualified personnel.

4. Collectively, the EODC staff must have training, qualifications and experience in the full spectrum of EOD operations within in the AOO. While the EODC staff officer[10] is not a commander, vesting ultimate decision authority for EOD matters to a single person within the headquarters is critical (unity of command). Preferably, the EODC staff officer should be provided by the lead nation. The EODC staff officer must be experienced in and appropriately qualified to lead EOD operations.

5. Preferably, the EODC staff officer should be provided by the lead nation. The EODC staff officer must be experienced in and appropriately qualified to command EOD operations.

[10] Preferable is a senior staff officer.

6. Minimum proficiencies for an EOD staff officer are defined in AEODP-10.

5.5. NATIONAL EOD COMMAND ELEMENTS – NATIONAL POINT OF CONTACT

1. Each nation participating in multinational EOD must appoint a NPOC EOD within each EODCC or EODC that are responsible for coordinating their national EOD FE. The EODCC and EODC allocate tasks to the NPOC EOD. The NPOC EOD generally accepts the EOD task and in turn tasks the national EOD FE. In addition, each nation shall specify the tasks and authority of this NPOC EOD within the national EOD framework and C2 structure.

2. The NPOC EOD may challenge allocated EOD tasks.

3. The NPOC EOD may serve other functions within the national EOD organization such as the commander or as a staff officer in a national element, e.g. EOD company, battalion and group commands.

4. To enable proper coordination, nations shall ensure (via the NPOC EOD) that the EODCC and EODC are advised of national EOD operations, in accordance with locally agreed procedures.

5.6. CATEGORIES AND PRIORITIES OF EOD EFFORT

1. All EOD incidents are categorized according to their potential threat and the risk posed to the EOD Operator, third parties and the environment balanced against the acceptable risks of carrying out the mission. The categories range from A (highest category) to D.

2. EOD incidents are also assigned a priority based on the ongoing operational situation and the mission priorities. The priorities range from 1 (highest priority) to 4.

3. EOD categories and priorities are detailed in AEODP-10.

4. The decision on which category to assign is made by the operational chain of command, based on EOD advice. The authority to determine and assign EOD categories and priorities (according to AEODP-10) must be clearly defined in the theatre SOP. As the assignment of category A to an incident ("disposal operations are to be started immediately, regardless of personal risk") imposes the highest risk on the EOD operator, the participating nations must agree upon the authority to determine that an incident is category A.

5. Due to of the typically limited reaction time any restrictions associated with the allocation of EOD category A tasks must be identified and notified by a national authority in advance of EOD-unit assignment.

6. Once EOD incident category and priority are assigned, the chain of command must prioritize the efforts of EOD FE. Normally this prioritization is completed based upon support priorities established by the command and the current situation.

7. The categorization and prioritisation of an EOD incident may change depending on the situation. The tasking authority determines the category and priority. However, the EOD operator on site may propose the re-categorization and prioritisation of a task at any time e.g. change to category A when immediate safety to life becomes a consideration.

5.7. CONSIDERATIONS FOR EOD PLANNING

1. The EOD staff elements should be involved at all levels in decision making and planning processes where EOD expertise and EOD FE support are required. EOD staff elements should provide input to staff products related to EOD operations and capabilities.

2. NATO operations may take place under conditions which can vary widely depending on the relevant threat and the intensity of operations. They require the cooperation of several nations operating in the JOA, because the individual nations will provide different capabilities in the fields of EOD and other supporting assets, these must be coordinated and harmonized. Supporting capabilities must be adapted to the specialized requirement of an EOD operation/task. This is of particular importance when non-military assets are also acting.

3. To avoid unacceptable delays and confusion in case of an EO incident it is imperative to establish a high readiness EOD response plan. The most effective approach is to establish an EOD response package. Depending on the situation and threat analysis, an appropriately arrangement of participating teams, capabilities, notice to move (NTM) regulations and alert procedures have to be established. Proposals for appropriate SOP see annex C. EODCC and EODC have a crucial role in this context.

4. The assignment of responsibilities for dealing with an EO threat will depend on many factors such as: the type of operation; operational imperatives and directives; terrain; EOD or other asset availability; risk and EOD policy/rules of engagement (ROE). The forces available to counter any EO hazard will consist of specially trained EOD personnel augmented by, amongst others, military engineers, ammunition technical personnel and divers. Former belligerents[11], host nation agencies, other nations, international organizations and NGOs may also conduct EOD operations within the JOA.

[11] Notwithstanding the provisions of the 1949 Geneva Convention.

5. EOD incidents require the deployment of appropriate qualified EOD operators. When facing a significant and complex IED situation and environment, e.g. IEDD operators themselves are targeted or secondary IED are deployed; IEDD operators shall be trained appropriately.

6. The elimination or minimization of a threat caused by CBRN devices requires from each participating asset a clear and common understanding of how to command, as well as to execute CBRN EOD tasks. As a rule, CBRN EOD activities are of a complex nature and require very high levels of coordination by all parties involved, including special assignment and safety regulations, additional education, training and equipment. Protective means for each type of CBRN threat need to be considered. Therefore it is necessary to issue clear, simple and effective regulations for a multinational deployment of all parties involved, in particular for the CBRN and EOD elements.

7. EOD incidents in a maritime environment and/or inland waters require specific expertise, training and equipment, preferably including the use of remote control/unmanned underwater vehicles. The diving supervisor of a clearance/EOD diving team (CDT) is a source of search expertise and advice[12]. It is important that a diving supervisor is involved in the initial planning of a proposed search in the maritime environment and/or inland waters and is used as an advisor to the tactical commander about the conduct of search tasks in the maritime environment and/or inland waters. The diving supervisor commands the CDT and oversees the execution of a search or EOD task in a maritime environment and/or inland waters[13].

5.8. THEATRE OPERATING POLICIES, OPERATING PRINCIPLES, PLANNING AND TASK ASSIGNMENT

1. The CJEODC prepares EOD theatre operating policies to define the scope of EOD action for units operating under Allied command. Theatre operating policies may include, be drawn from, or refer to, information from: MOU, ROE, SOP, orders, STANAGs, international and national law, directives and orders, and environmental regulations.

2. EOD-relevant operation orders and SOP are to be issued for each operation. Annex C is a starting point for considerations to be addressed. EOD staff are to consult troop contributing nations during the preparation or amendment of these documents to ensure that national regulations are considered. Appropriate legal advisors should be consulted during the preparation of orders and SOP.

[12] Diving supervisors for EOD activities possess different levels of qualification, see section 7.2.
[13] Diving is detailed in ADivP-1 “Allied guide to diving operations”.

3. Following the preparation of EOD-relevant orders, the commander must ensure that all EOD FE (from the highest command/staff level to the execution level) understand the command structure and authorities – including any changes to the structure with time. In this context, all EOD staff elements play a crucial role. If required, the participating nations themselves are responsible for ensuring that the orders are translated into the corresponding national languages so that safety-related misinterpretations of orders and procedures can be avoided.

4. At all staff levels (CJEODC/EODCC/EODC) the operating language must be spoken and written according to the appropriate standard language proficiency as stated in ATrainP-5. Standard language profile (SLP) 3332 for an officer and 2221 for a non–commissioned officer (NCO) should be a minimum proficiency.

5. Prior to assigning tasks, EOD staff must analyse whether the policy for the operation permits a military EOD task (such as the clearance of a large munitions field) or whether a task is more appropriately transferred to another organization.

6. For each EOD task, the EODCC and EODC must address support requirements.

7. For EOD tasks involving more than one nation, detailed planning and clear definition of command and control is required. EODCC or EODC will nominate a lead nation who will be responsible for the execution of the task, including preparation and dissemination of relevant task orders.

5.9. THE INCIDENT COMMANDER

1. The processing of EOD incidents requires the appointment of an incident commander (IC). On site only one leader, the IC has overall responsibility. The IC has to coordinate all safety measures and elements operating on site. The IC is not responsible for the action against the EO (techniques, render safe procedures etc.). In the field of EOD the EOD operator decides on the actions to be performed on site.

2. The IC is the single point of contact (POC) for staff level elements and for all elements involved on site, concerning the coordination of on-site activities.

3. On Allied operations, the IC is likely to be a member, military or civilian, of the unit or organisation in whose AOO the incident has occurred. The competent authority (civil authority and/or military staff) may designate the IC.

4. The IC should be experienced in managing complex incidents. He does not need to be EOD qualified. He always depends on actionable advice coming from the acting EOD FE. In order not to confuse the IC or oblige him to take decisions that are outside of his competences, this advice must be clear and unambiguous, thus well-coordinated.

5. Tasks and responsibilities of the IC:

   a. C2 element on-site,

   b. overall on site responsibility,

   c. assume control of the incident on site,

   d. determine the incident command post (ICP),

   e. to coordinate all assets and activities required on site,

   f. establish the communication lines on-site,

   g. determine signals in case of emergencies,

   h. fully brief all required actors on their role (clear designation), responsibilities and what the IC expects of them,

   i. confirm and coordinate all required safety measures (overall hazard area, evacuation, cordon),

   j. authorize the start of the action against the EO (permission to start),

   k. establish direct communications link to superior staff,

   l. oversee the collection and distribution of information and intelligence regarding ongoing EOD operations,

   m. decide on measures in light of the sequence of priorities,

   n. make arrangements about the course of action,

   o. hand over scene to civil or military authorities (depends on the situation).

6. CBRN EOD incidents demand specific tasks and requirements on an IC. For details see AEODP-8.

5.10. EOD TASKING AND REPORTING PRINCIPLES

1. AEODP-6 forms the foundation for a standardized EOD Message and Reporting System. This system facilitates tasking and reporting that are the backbone of information exchange between those forces requiring EOD support, EOD staffs, and EOD FE.

2. Basically, four main entities have to communicate to perform EOD tasks.

   a. The requesting unit facing an EOD incident and/or requesting specialized support,

   b. the EOD staff elements (usually the EODCC and EODC),

   c. the EOD tasking authority (usually the NPOC EOD) committing and coordinating specialized EOD support and

   d. the EOD FE performing the tasks.

3. In multinational deployments, the EODCC and EODC coordinate activities and allocate tasks to NPOC EOD. The NPOC EOD will then task national EOD teams.

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Chapter 6 INFORMATION MANAGEMENT

6.1. INFORMATION FLOW AND MANAGEMENT

1. The flow of EOD information (bottom-up, top-down, and with adjacent EOD FE) in a multi-national EOD structure is essential to safe, effective, and efficient operations. EOD staff and the execution levels must establish efficient and effective communications.

2. Basic concepts for establishing effective and necessary EOD-related information flow structure are:

a. Collected intelligence and information must be analysed and passed to those with a need to know – two-way information flow is essential.

b. Information flow routes must be specified in advance – but flexible enough to adapt to changing situations and needs.

c. Information flow routes must be simple and widely disseminated/known.

d. A single language must be specified for use at the multinational level. Individual nations will decide whether multinational orders and EOD tasks will be translated into their own language.

e. Employ appropriately qualified liaison officers with the multinational EOD force and other EOD-related organisations including civilian and host nation groupings.

f. National EOD FE should first use internal national resources to satisfy EO information requirements.

g. Information exchange using all EOD databases and EOD documents available during an operation must be promoted.

h. Multinational level staffs (and as a minimum EODCC) should be the POC for the NATO explosive ordnance disposal technical information centre (EODTIC see AEODP-9).

i. The NATO EOD publications set (NEPS) provides vital EOD related information on identification, associated threats, safety precautions, and EOD procedures for rendering safe and disposal of EO (AEODP-14).

j. The EOD reporting system and historical record requirements/archiving must be specified.

k. Classified information that is of vital importance to the safety of EOD operators must be made available. Special consideration should be given to the timely appropriate de-classification and release of relevant safety information.

l. Safety bulletins, precautions and other safety-relevant information gathered by EOD personnel of other nations and from other sources are to be widely disseminated, taken into consideration and acted upon when planning and executing an EOD task. If information differs between nations the lead EOD nation should determine which to adopt.

6.2. THE EOD SITUATIONAL PICTURE

1. All EOD staff elements require for accomplishment of their tasks a comprehensive situational picture in order to ensure that appropriate action is taken.

2. The EOD situational picture covers the following aspects:

a. threat situation,

b. the extent and locations of EO contamination,

c. residual risk,

d. availability, capabilities and workload of EOD FE (type, duration and number of operations),

e. EOD incident history,

f. munitions and EO used within the JOA by adversaries and own forces,

g. EOD intelligence,

h. overview about EOD relevant law, regulations, SOPs and orders,

i. EOD communication links,

j. activities of civil mine action organisations.

3. Resources for generating the EOD situational picture collection are:

a. EOD reports and messages,

b. EOD technical intelligence information,

c. threat database,

d. EO information systems, e.g. the NEPS,

e. EOD technical information organisations, e.g. the EODTIC,

f. intelligence products,

g. C-IED exploitation products,

h. archival information (reports, photographs, drawings of incident site/disposal procedure/result),

i. information from civilian mine action organisations, e.g. from the information management system for mine action (IMSMA),

j. archive of EOD activity in the JOA.

6.3. EOD MESSAGES

1. Message formats included in AEODP-6 meet the requirements described above. They are the standardized forms for EOD information exchange for multinational operations.

2. AEODP-6 message formats cover the entire progress of an EOD task:

a. **Explosive ordnance incident report – EOD 100 -** (EO INC REP) is sent by the reporting unit via the chain of command to the EODCC/EODC and/or sent by a level 1 technical exploitation team to report about an EOD incident.

b. **EO task order– EOD 200 - (**EO TASK ORD) is used to allocate and/or assign an EO task.

c. **Incident response and exploitation report – EOD 300 -** (IRE REP) is sent by an EOD team to the EOD tasking authority to report the detailed completion of the EOD task and/or sent by a technical exploitation team to report the detailed completion of the exploitation task.

d. **Explosive ordnance technical and exploitation report – EOD 400 -** (EO TECHEXPL REP) is used by the EOD team to report technical intelligence when an EO is discovered or blown up and/or by the exploitation team to report exploitation level 2 data. Can also be used to report exploitation level 3 data.

3. The EODCC has to provide and disseminate a standardised EO identification guide for the respective AOO in order to enable informative, simple and consistent EO INC REPs.

4. The EODCC or EODC must make every effort to facilitate the distribution of the EOD messages across the force to ensure standardised reporting.

6.4. EOD TECHNICAL INTELLIGENCE INFORMATION EXCHANGE

1. If new technical intelligence about EO or munitions becomes available, technical information (EO TECHEXPL REP) is to be prepared and transmitted to the EODCC/EODC, if relevant to the C-IED exploitation organisation and to national level agencies as detailed in AEODP-6.

2. All IED incidents are to be investigated by IEDD teams and weapon intelligence teams (WIT). They provide a tactical & technical report about the IED incident (IRE REP). IED technical intelligence assessments are to be coordinated by CJEODC and disseminated down to NPOC EOD through EODCC. This activity has to be performed in close co-operation with the C-IED organisation at all levels.

6.5. EMERGENCY TASKS

All EOD tasks require a written record in accordance with AEODP-6. A verbal tasking should be the exception. In such cases, written tasking orders and reports are to be completed at the earliest opportunity.

6.6. COMPLEX TASKS

In cases where different nations are working together on long term or complex tasks, the EODCC or EODC will direct the reporting specifications to meet the requirements of a clear C2 in a multinational operation.

6.7. NATIONAL TASKING AND REPORTING

All EODCC and EODC level EOD reporting is to be carried out in accordance with AEODP-6 format. Internal national systems may vary but must include all mandatory fields required to complete AEODP-6 reporting.

6.8. CONCEPT OF COMMUNICATIONS

1. A secure and robust communications system gives the EOD Commander the ability to maintain awareness of current EO threats and advise the combatant commander on adversaries actions related to EO. A communications system that provides connectivity throughout the JOA and across all joint and multinational forces is vital to planning, conducting, and sustaining operations.

2. EOD must maintain lines of communications when its forces are widely dispersed and operating independently from their higher headquarters. EOD must be able to provide for the timely flow of information in accordance with the commander's priorities, with integrated and secure communications capable of line of sight, beyond line of sight, and reach back to national level agencies to achieve unity of effort.

Chapter 7 EOD FORCE ELEMENTS

7.1. FORMATION OF EOD FORCE ELEMENTS

1. EOD echelons range from EOD teams up to EOD groups as a functional C2 headquarters for Army EOD. EOD FE can be self-sufficient units or they can be integrated into non-specific EOD FE, e.g. MILENG units, boarding teams or naval mine warfare units.

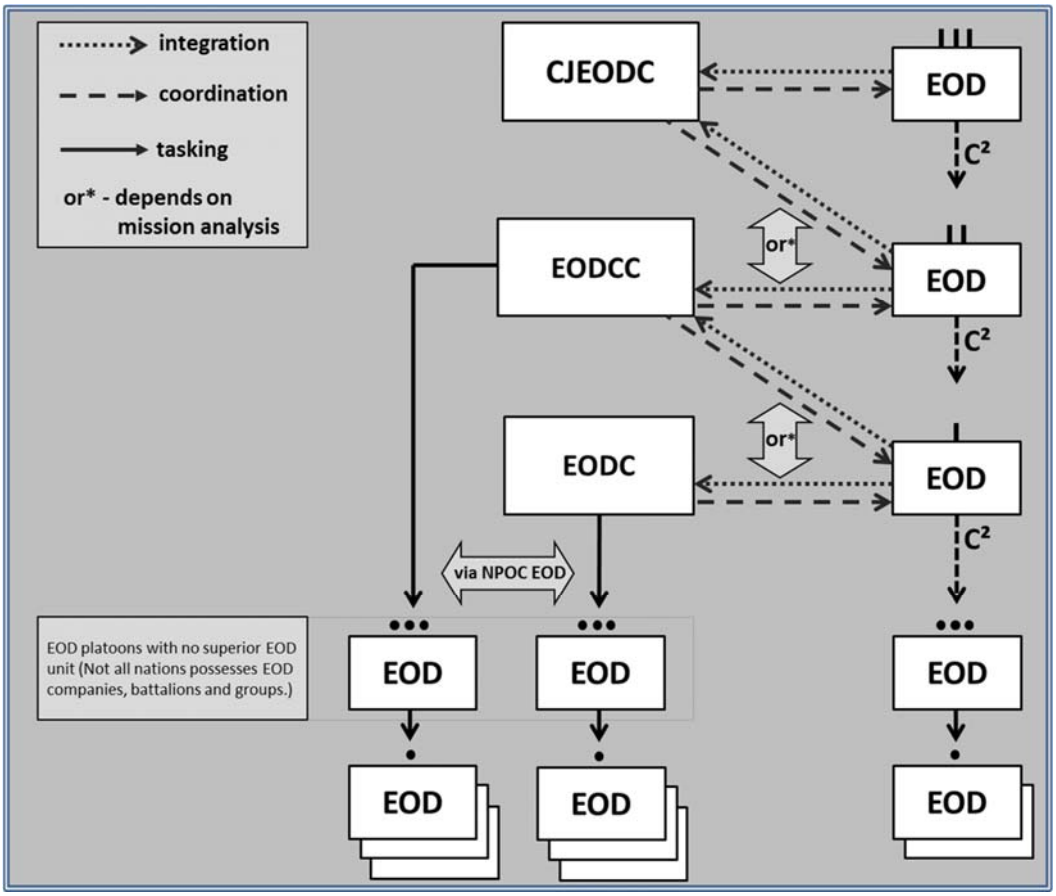

Figure 3: EOD organizational chart

2. The structure of EOD FE varies amongst nations and the EOD FE of one nation may not address the entire spectrum of EO threats encountered during an operation. Multinational EOD FE bring together complementary EOD capabilities enabling the required capability spectrum to be available in a JOA. The assignment of AOO and/or specific EOD tasks will be derived from declared EOD capabilities of each troop contributing nation according to the statements in the EOD capability planning matrix (annex B).

7.2. TYPES OF EOD FORCE ELEMENTS

1. **EOD company, battalion and group commands** may exercise synchronized mission command of joint and multinational EOD FE. Senior EOD personnel can provide the expertise to plan, prepare, execute, assess and integrate external EOD formations into the supported unit. They have to be integrated or closely linked to EOD staff elements, e.g. CJEODC, EODCC and EODC. If directed by a joint forces command, the EOD group or battalion commander may be designated as the chief of the EODCC/EODC or as NPOC EOD. The EOD company commander can act as NPOC EOD as well.

2. **EOD platoons** should be able to operate decentralized from the company HQ, based on mission requirements, and be further task organized to support requirements throughout the AOO. EOD platoons can provide limited augmentation to battalion HQs with special staff expertise associated with explosive ordnance threats. EOD platoons typically consist of minimum three EOD teams.

3. **Teams**[14] are the smallest acting force elements. They are capable of conducting specific tasks. The spectrum of the capabilities of the teams depends on the proficiencies, the equipment and mission or national regulations/caveats. Teams with specific capabilities are:

a. EOR team,

b. EOC team,

c. EOD/CMD team,

d. EOD/IEDD team

e. underwater EOD team,

f. CBRN EOD team.

Nations may have EOD teams that have multiple capabilities.

4. **Clearance/EOD diving team (CDT)**: EOD incidents in a maritime environment and/or inland waters are handled by CDT. CDT is a specialist skill requiring specific training and equipment preferably including the use of remote control/unmanned underwater vehicles. A CDT consists of a diving supervisor and divers. They are trained for air scuba, mixed gas, and/or pure oxygen scuba diving. National policies for CDT may differ in requirements for compliance with procedural and safety regulations. The diving supervisor commands the CDT and oversees the execution of a search or EOD task in a maritime environment and/or underwater[15].

[14] Some nations have also squads. The provisions for teams apply also for squads.
[15] Diving is detailed in ADivP-1 “Allied guide to diving operations”.

5. **Diving supervisors** for EOD activities possess different levels of qualification.

   a. **Basic level:** Qualified to plan, supervise and conduct basic EO diving operations (EO awareness level). He performs verbal or written reporting of the conducted work.

   b. **Intermediate level:** Qualified to plan, supervise and conduct intermediate EO diving operations in an EO threatened environment (EOR/EOC). The reporting is conducted in accordance with the required reporting systems.

   c. **Advanced level:** Qualified to plan, supervise and conduct advanced EO diving operations (CMD, IEDD). The reporting is conducted in accordance with the required reporting systems.

6. The minimum size of an **EOD team** is 2 appropriately qualified personnel (CMD and/or IEDD). Additional supporting personnel (drivers, operators for equipment, EOR personnel) could be integrated. A team leader has to be assigned.

7. **The EOD team leader** is the sole operational authority within the inner cordon during an EOD mission. This is to ensure the safety of the EOD team and for all others in the surrounding area of operation. No personnel or equipment not specifically authorized by the EOD team leader will enter or operate within the inner cordon. The EOD team leader will ensure the IC is aware of security requirements, the role of the EOD team leader at the incident site and is notified prior to any controlled detonations and rendering safe actions during EOD activities.

8. **EOD FE** can be attached to task forces in order to provide EOD support for their specific mission. EOD FE are able to operate independently from their platoon HQ, but only for a limited amount of time.

9. **EOD FE** must deploy fully equipped for EOD tasks and be ready to operate in accordance with operational and national requirements. Contributing nations must make provisions to sustain their EOD capability throughout the deployment.

10. **The EOD capability matrix** (annex B) is to be used by nations to declare the capabilities and limitation of national EOD FE in preparation of a multinational mission or exercise.

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Chapter 8 GENERAL SAFETY PRINCIPLES AND SPECIFIC CONSIDERATIONS

8.1. BASICS FOR EOD SAFETY

1. The variety of existing EO worldwide does not allow full coverage by specific safety regulations. EOD missions are hazardous by their nature and always involve a certain element of risk. No procedure is absolutely safe, but EOD procedures are designed to minimize the risk.

2. The knowledge, skills, experience and intuitive sense of EOD personnel at all levels will contribute significantly to safe operations.

3. Specific national safety regulations vary widely across NATO. For multinational EOD operations, the most stringent safety regulation amongst nations involved in a specific task, in any given environment, is to apply.

8.2. GENERAL SAFETY PRINCIPLES

1. The general safety principles should always be applied. Relaxation of safety regulations of individual nations is prohibited; stricter regulations can be directed by SOP or other orders for a specific task.

2. Deviations from national safety regulations are only permitted for EOD category A incidents. For other incidents in categories B, C or D, deviations are permitted when absolutely necessary but only under conditions set or approved by the operator's chain of command.

3. **Minimum-risk principle:** Operational imperative and mission importance must always be balanced against risk to personnel. The safety of personnel cannot always be the primary consideration, but must take the highest possible priority. The EOD procedure chosen should result in minimizing most risks to personnel, third parties, equipment and the environment. Only those tasks that are necessary should be undertaken. In the process, no individual should ever disregard his or her natural sense of caution.

4. **Minimum-personnel principle:** During the execution of EOD tasks, the number of people within the EO safety exclusion zone is always to be minimized.

5. **Minimum-EOD-personnel-on-target principle:** Only EOD personnel absolutely required performing the render safe or disposal procedures should be permitted to remain in the vicinity of the EO.

6. **Minimum-exposure-time principle:** During the execution of an EOD task, the EOD personnel shall stay in the hazard area only as long as absolutely necessary to fulfil the task.

7. **Destroy in-situ principle:** Destruction in situ is often the safest method to dispose of EO. The risk of moving the EO can be avoided. It is not an preferred option when it poses an immediate, certain and unacceptable risk to personnel, critical operations, critical facilities or critical equipment. In all instances, the EOD operator must first consider this method when selecting a course of action. The preservation and collection of forensic material may take precedence above a destroy in situ procedure.

8. **Worst-case principle:** Regardless of the chosen EOD technique, the operator should always consider and implement mitigation measures to counteract the impact of the worst-case unintended event.

9. **Unity-of-command principle:** The chain of command for an EOD task is to be clearly defined – this may include non-EOD leadership. Without exception, during the execution of an EOD task, only one EOD operator is responsible for that task. He decides on site on the actions to be performed. Other personnel, including additional EOD personnel if required, shall comply with his instructions. For complex tasks, an overall incident commander may be designated, advised by EOD qualified personnel. AEODP-13 further details the divisions of responsibilities between EOD personnel and others. Adequate monitoring and command supervision of subordinates are of particular importance.

10. **Seek-advice principle:** If any EOD operator has any doubts or uncertainties, especially with regard to safety, he is to seek clarification or advice immediately, if necessary stopping activity until the situation is resolved.

11. **Intervention principle:** If any individual has doubts concerning the safety in the execution of a particular EOD task performed by an EOD operator, he shall inform the operator concerned as soon as possible of his doubts. EOD operators, regardless of rank, should intervene whenever safety regulations and/or EOD procedures may be, are or have been violated. If they obtain no response in such a situation, they should leave the danger area and report to the appropriate commander immediately.

12. **Qualification principle:** EOD personnel should only perform tasks for which they are qualified and authorized.

13. **Proper-planning-&-preparation principle:** All EOD actions shall be considered and prepared outside the hazard area rather than improvised within it.

14. **One team – one nation principle:** To avoid confusion over differing national EOD techniques and/or operating procedures, a multinational EOD structure within an EOD platoon and/or EOD teams is not recommended and should be avoided. If the situation demands the integration of multinational EOD teams then the division of responsibilities must be clearly specified with emphasis on: detailed planning, clear orders, clear issue of orders (ensuring that all key points are emphasized and everybody knows what is going to happen), full safety control and visible leadership and supervision.

15. **Disassembly/free from explosive procedures:** Explosive ordnance disassembly and rendering free from explosive (FFE) present a significant threat to EOD personnel. These tasks will exclusively be performed on the basis of national authority, policies and procedures and are conducted under extremely stringent regulations. Unnecessary disassembly or FFE procedures are not recommended (e.g. for display items, souvenirs etc.).

8.3. GENERAL SAFETY CONSIDERATIONS

1. **Function and training:** It is vital that appropriately trained and qualified personnel command, staff and execute EOD tasks at all levels.

2. **Preparatory training and exercises:** EOD FE including command/staff should be integrated into preparatory training and exercises for multinational EOD operations.

3. **EOD safety concepts:** In order to achieve safe and efficient EOD operations, safety concepts can be used. An example for this is crew[16] resource management (CRM), as detailed in annex D.

8.4. COMMUNICATION

1. Personnel participating in an EOD task (particularly support personnel) must be advised on essential safety-relevant details. These may include: command authority, relevant locations and emergency response in the event of an accident, medical support, hazard area, emergency radio communication, prohibitions and special conditions.

2. In complex multinational EOD tasks, effective communications are of paramount importance. Satisfactory communication requires compatibility of equipment, software, language and procedures.

3. Satisfactory, reliable and constantly available internal and external communication systems are of fundamental importance for the safety of EOD personnel. Incident communication comprises on-site information links and rear links that provide conduits to the other organizations such as the tasking authority, technical superiors, HQ, emergency support services and other agencies. These links must be clearly detailed in a communications net diagram as part of EOD relevant SOP and orders. Inadequate communication provision will result in ineffective and inefficient use of EOD FE, has an adverse effect on their safety, and may hinder tasks.

[16] Crew means a group of people working on common task.

4. The communication links between the EOD leader, incident commander, chain of command (EODCC/EODC/tasking authority) and emergency support services must be established and maintained at all times and at any EOD task location. In addition, relevant personnel must be able to operate the communication equipment and have an adequate grasp of the designated communications operating language.

5. The disposal of EO must be coordinated and communicated prior to execution, for example, by reporting time and location. The chain of command may then inform those who need to know e.g. neighbouring units, local warring factions, local populations, notice to airmen (NOTAM) and media.

6. When several tasks are undertaken in close proximity, a single incident command post (ICP) must be established. The siting of an ICP is critical as it is the point where all communications meet and where the effort of the Incident Commander and EOD commander is coordinated and communicated. All participants must know the ICP location. It should be located on the edge of the hazard area, because the participating support forces must be able to establish contact with the EOD personnel without being exposed to further threats. EOD teams may operate from this point or choose to establish a forward EOD control point (ECP) to execute the task.

8.5. PROTECTIVE MEASURES

If applicable, any EO threat must be marked using adequate aids. Care shall be taken to make sure that the markers constitute a clear and early warning. If possible, marking is to be in accordance with STANAG 2036 and relevant international humanitarian law (IHL).

8.6. THREAT ANALYSIS

To enhance safety, a thorough threat analysis must be undertaken, and must be followed by the preparation of a clear risk mitigation plan. Threat analysis should include the evaluation of all threats caused by the EO itself, the EOD procedures applied, booby-traps, IEDs, adversary's forces, and any other threats to the personnel employed.

8.7. SPECIFIC CBRN EOD SAFETY CONSIDERATIONS

1. EO in which chemical, biological, radiological or nuclear contents are suspected require special procedures. Should CBRN EO be discovered, the chain of command is to be informed immediately. Unless emergency conditions exist, no action may be taken without further appropriate authorization.

2. Before attempting to dispose of CBRN agents or weapons, all personnel involved should be protected in accordance with the applicable national regulations. The areas believed to be contaminated or threatened with contamination should be

evacuated. The threat analysis must be worst case, based on the potential full release of the hazardous materials.

3. It is essential that all actions on these weapons be performed by appropriately CBRN trained EOD (in accordance with AEODP-10) and other experts.

8.8. TRANSPORTATION AND TEMPORARY STORAGE

1. EO recovered during EOD operations should be transported only if it has been positively identified or classified and assessed as safe-to-transport by the EOD operator in accordance with national directives.

2. Transport of EO recovered during EOD operations will be in accordance with the regulations of the nation concerned, provided that no stricter regulations apply. EO is to be transported by the safest feasible route.

3. Most of the EO recovered and assessed safe for transport are still hazardous by nature and different than own regular ammunition. Therefore their storage is temporary and must be isolated from own ammunition, their disposal is to be considered at the earliest convenience.

4. General SOP are to be issued for recovered EO transportation and temporary storage (based on annex C).

8.9. DEMOLITION SITE OPERATING REGULATIONS

Established central demolition sites (CDS) used during operations are generally located in open accessible terrain and used by several nations and NGOs. Prior to the initial use of a demolition site, appropriate regulations and procedures must be prepared. The organization controlling a CDS will be responsible for coordinating site use. CDS procedures will address the requirements for orders. Considerations to be addressed in the regulations and procedures may be found at annex C.

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ANNEX A TASK SUMMARY – EOD STAFF LEVEL ELEMENTS

		EOD staff elements		
principal functional staff areas		**operational staff Level (CJEODC)**	**intermediate and lower staff level coordination & tasking (EODCC & EODC)**	**national command level (NPOC EOD)**
J1	welfare & manning	• Boards of inquiry • Manning levels • Casualty reporting • Battle casualty replacement (BCR) policy • Legal aspects of EOD operations	• Evaluate new manning and structure requirements for EODCC/EODC and EOD field elements • Coordinate legal impact of EOD operations (investigation of war crimes, compensation etc.)	• Ensures that manning and qualifications of EOD operators are maintained • Requests manning reinforcements as required • Staffing honours and awards
J2	intelligence & information	• Collate, interpret, disseminate Intel (IMSMA, national and international databases – EODTIC, targeting) • Development of common aide-memoirs (policy on intellectual property rights) • Liaison (UN, NGO, other staff branches, governmental agencies) • Gathering of statistics and dissemination to follow on forces (including UN, NGOs etc.) • Coordination and policy for technical EOD/weapons intelligence • Gathering targeting information (advise J3 staff on types of munitions to use based on	• Monitor weather and terrain information • Seek out relevant Intelligence information (general & EOD technical), then disseminate information to NPOC EOD • Collect intelligence information from NPOC EODs, then pass information to J2 and next higher EOD staff • Reporting & dissemination of information (information management system for mine action (IMSMA), EOD reports, etc.) • Information conduit to/from EODTIC and NEPS • Exchange of EOD technical information with UN, NGOs, other	• Collects technical and general information about EOD matters • Reports and disseminates information • Validates and quality controls EOD reporting • Monitoring of local EO trends • Liaison with exploitation organization • Provides input for EO guides

		EOD staff elements		
principal functional staff areas		**operational staff Level (CJEODC)**	**intermediate and lower staff level coordination & tasking (EODCC & EODC)**	**national command level (NPOC EOD)**
		impact, to support EOD planning) • Define technical intelligence requirements • Fuse and disseminate strategic intelligence related to the EOD threat to all EODCCs • Advise J3 staff on adversary's TTP and technical developments	agencies • Report EOD incident trends to J3 and CJEODC • Report statistics to next higher EOD staff • Prepare and update EO guides • EOD input to threat database	
J3	operations, coordination and operation requirements	• Advice to commanders where EOD will impact the 'battle' or scheme of manoeuvre • Coordinate of effort, assignment of missions, allocating forces • Balancing of EOD resources across components/JOA dependent on situation • Focus for the development of capability (force generation, equipment Statements of requirement) • Advice to targeting board • Commander's diary • Advise on ROE • Advise on IED trends and their impact upon counter terrorism/ insurgency procedures. • Staffing urgent EOD equipment requirements	• Advise the commander of EO impacts upon operations and EOD and search operations • Categorize EOD incidents • Prioritize and plan EOD/search operations: o Receive EO INC REP o Prepare requests for additional forces o Conduct daily EOD operational planning conferences o Pre-coordinate Emergency EOD response (QRF) with Command and NPOC EOD o Schedule QRF teams (24x7) o Coordinate EOD support to mine clearance	• Provides national EOD and search coordination • Advise the national commander on EOD matters • C^2 of own troops (responsibility for conduct of allocated tasks): o Receive tasks from EODCC/EODC o Accept or challenge tasks o Assigns tasks allocated by EODCC/EODC o Assigns tasks allocated by national J3 (C2 of national EOD operations) o Monitors current EOD operations o National reporting o Quality assurance o Is informed by J3 about all EO INC REP coming from

		EOD staff elements		
principal functional staff areas		**operational staff Level (CJEODC)**	**intermediate and lower staff level coordination & tasking (EODCC & EODC)**	**national command level (NPOC EOD)**
		o More equipment o New equipment capabilities • Advise on military search • Integrate EOD FE into search operations	operations o Request EOD operations support (engineer, medical, EW, CBRN, transportation, ammunition technical, logistic, MP, Communications, host nation support, FP) o Plan and coordinate EOD operations including coordination of central demolition sites o Implement higher command operational instructions relevant to EOD operations o Coordinate/integrate underwater EO operations o Coordinate/Integrate CBRN EOD operations o Coordinate / Integrate airfield EO operations • Task NPOC EOD to provide routine EOD incident response • Receive and record EOD task completion • Prepare EO hazard information (spot reports, overlays, etc.) supporting friendly forces	his own nation. o Archives tasks orders and reports. o Updates EOD situational map. • Acts as liaison cell (national point of contact) o Maintain close contact (communication and information flow) with the EODCC/EODC o Participate in EOD coordination conferences and debriefings o Inform EODCC/EODC of national EOD operations. o Submit EOD reports to EODCC/EODC o Update and report the national EOD capability profile and the operational readiness of national EOD FE to the EODCC/EODC o Reports and returns as appropriate • Capability development o Identify critical capability gaps, shortfalls and deficiencies. • Raise urgent EOD equipment

		EOD staff elements		
principal functional staff areas		**operational staff Level (CJEODC)**	**intermediate and lower staff level coordination & tasking (EODCC & EODC)**	**national command level (NPOC EOD)**
			• EOD technical liaison (UN, NGO, other staff branches, governments) • Develop, coordinate, disseminate EOD SOP • Monitor national EOD operations • Maintain appropriate historical records • Maintain understanding of National contingent EOD capabilities • Coordinate military search supporting EOD operations • Coordinate IED threat surveys • Reports and returns as appropriate	requirements o more equipment o new equipment capabilities • Capturing lessons identified and debriefing

J4	logistics and move	• Prioritization of inload - desired order of arrival staff table (DOAST etc.) • Negotiating priorities and authorities for movement of personnel and material • Formulation of associated support and sustainability policies (equipment, medical and logistic support, ammunition & explosive calculations) • Advise on deconfliction of national ammunition safety regulations for EOD FE • Policy for multinational support (interoperability/compatibility)	• Coordinate support (medical/logistics/capability) • Coordinate/deconflict UXO and hazardous EO storage policies and procedures • Facilitate resolution of interoperability problems	• Ensures EOD equipment is maintained and modified when appropriate • Reporting on equipment availability and failures • Ensures that replenishment is performed. • Requests material/equipment reinforcements as required • Monitor progress of urgent EOD equipment requests for o More equipment o New equipment to meet capability shortfalls
J5	planning	• Advanced recce, estimate and plan • Negotiate EOD national terms of reference (TOR) and develop overarching EOD policy that applies across the JOA • Develop, coordinate, disseminate EOD policy/SOP (e.g. suicide bombers, etc.) • Develop policy on technical exploitation and FFE • Advice to commanders and all staffs including responding to government and international political questions • Integration of EOD in operational planning • Requesting additional forces	• Plan and coordinate for continuity of operations upon transfer of authority • Plan and coordinate EO collection campaigns • Integration of EOD in tactical planning • Coordinate/deconflict EO safety procedures • Coordinate IED and search awareness programme.	• Plans allocated EOD operations • Assures that national EOD structure matches the national and multinational requirements • Advises on national EOD policy & direction • Advises on SOP implementation • Implement national policy on technical exploitation and FFE

		• Policy on clearance/performance standards • Handover/takeover/continuity policy for transfer of authority (TOA) • Carry out a systematic estimation of the EOD threat and adjust EOD C2 and force structures accordingly.		
J6	communication & information systems	• Defining communications structures • Coordination of communications interoperability	• EOD reporting system • Coordinate communications support	• Works to achieve interoperability of EOD, information technology and communication equipment • Ensures that AEODP-6 messages are understood and used • Ensures EO guides are widely disseminated • Translating reports as necessary
J7	training	• Policy on EOD qualifications and training • Basic EO awareness skills training policy	• Coordinating & conducting basic EO awareness skills training – friendly forces • Receive and integrate newly arrived EOD forces into multinational EOD operations • Multinational EOD training	• Monitors training and readiness status • Facilitates training • Conduct basic EO awareness skills training as required • Receive and integrate newly arrived EOD forces into operations • Validation of national doctrine
J8	budgets & finance	• Investigate, report, advise as required	• Assist with damage compensation claims and investigations	• Advise and support as required • Assist with damage compensation claims and investigations

J9	media/ civil affairs	• Liaison (UN, NGO, other Staff branches, governmental agencies) • Media lines to take • Integration of military EOD plans with civilian EOD plans	• Technical liaison coordination (UN, NGO, other governmental agencies) • Coordinate national EOD FE interface with the host nation population • Provide basic EO awareness skills training – local population • Coordination with host nation law enforcement and other support agencies • Receive and disseminate relevant host nation information • Public affairs – media lines	• Technical liaison coordination (UN, NGO, other governmental agencies) • Coordinate national EOD FE interface with the host nation population • Provide basic EO awareness skills training – local population • Coordination with host nation law enforcement and other support agencies • Receive and disseminate relevant host nation information • Public affairs – media lines

ANNEX B EOD CAPABILITY PLANNING MATRIX

The EOD capability matrix is to be used by nations to declare the capabilities and limitation of national EOD FE in preparation of a multinational mission or exercise. The minimum proficiencies for the EOD personnel are detailed in AEODP 10. The equipment requirements are detailed in AEODP-7. The lines can be adapted in accordance with the mission.

mission / exercise: .....

nation	capability	no. of teams	full capability	partial capability	limitations, caveats, remarks
	EOR				
	EOC				
	EOD/CMD				
	EOD/IEDD				
	underwater EOD[17]				
	diving supervisor[18]				
	CBRN EOD				
	EOD staff element				

Sample:

ABC	EOD/IEDD	2		X	remote operating vehicle is not available

[17] The EOD capabilities of the underwater EOD team (EOR, EOC, CMD, IEDD) has to be detailed in the right column.
[18] The level of qualification (see section 7.2) has to be mentioned in the right column.

ANNEX C SOP CONCERNING EOD

SOP-1. basis policy concerning EOD

SOP -2. routines at the EODCC/EODC

SOP -3. regulations for the central demolition site (CDS)

SOP -4. EOD reports and messages

SOP -5. carrying out EOD missions

SOP -6. procedures in the case of suspected or detected CBRN - explosive ordnance

SOP -7. safe carriage of explosive ordnance

SOP -8. safe temporary storage of explosive ordnance

SOP -9. actions to be taken in the case of damage caused during EOD missions

SOP -10. EOD immediate response team (EOD IRT)

SOP -11. EOD quick reaction team (EOD QRT)

SOP -12. IEDD standby team

SOP-1 - BASIS POLICY CONCERNING EOD

(proposal for minimum contents)

A primary EOD tasks, relating to the operation

B EOD operational principles, relating to the operation

C requirements of the EODCC/EODC for the EOD FE

D EOD joint operation area (EOD JOA)

E safety philosophy

SOP-2 - ROUTINES AT THE EODCC/EODC

(proposal for minimum contents)

A mission and tasks of the EODCC/EODC

B manning

C accessibility and communications

D day-to-day routine

E chains of command

F cooperation with the EOD FE

G cooperation with the HQ

H tasking

I information management

J priorities and EOD categories

K coordination conferences

L debriefings

M Standby regulations and standby duties

N operational support

O command support (radio plans, frequencies, charts ...)

P safety regulations

SOP-3 - REGULATIONS FOR THE CENTRAL DEMOLITION SITE (CDS)

(proposal for minimum contents)

A general description of the CDS (location, coordinates)

B intention

C restrictions, licensing, authorities and permissions

D prohibitions (including types of disposal methods allowed)

E conditions

F allocation of the CDS

G utilization times

H safety regulations

I medical support

J safety-relevant communication links

K cordoning-off actions

L preparation, safety orders and briefings

M execution

N follow-up

O disposal

P reporting system

Q support

R responsible authority of the demolition site

S site inspection requirements

SOP-4 - EOD REPORTS AND MESSAGES

(proposal for minimum contents)

A important references/principles

B reporting channels

C language

D EO INC REP form

E EO TASK ORD form

F IRE REP form

G EO TECHEXPL REP form

H system of archiving

SOP-5 - CARRYING OUT EOD MISSIONS

(proposal for minimum contents)

A intention

B activities and duties of the EOD command levels

C activities and duties prior to the execution of an EOD mission

D activities and duties during the execution of an EOD mission

E activities and duties after the execution of an EOD mission

F restrictions and prohibitions

G communications links

H references to safety regulations

I regulation of medical support

SOP-6 - PROCEDURES IN THE CASE OF SUSPECTED OR DETECTED CBRN EO

(proposal for minimum contents)

A intention

B command and control

C tasking

D clearance for the execution of EOD tasks

E execution

F conditions

G restrictions

H prohibitions

I communications

J special safety regulations and precautions

K equipment

SOP-7 - SAFE TRANSPORT OF EXPLOSIVE ORDNANCE

(proposal for minimum contents)

A intention

B conditions

C restrictions and certification

D prohibitions

E execution

F safety regulations and precautions

G equipment

H command, control and communications

SOP-8 - SAFE TEMPORARY STORAGE OF EXPLOSIVE ORDNANCE

(in accordance to AASTP-1)

(proposal for minimum contents)

A intention

B conditions/pre-conditions

C restrictions

D prohibition

E execution

F safety regulations

G safeguarding provisions

H requirements for and identification of the storage site

I physical security

J record keeping

K licensing authority

SOP-9 - ACTIONS TO BE TAKEN IN THE CASE OF DAMAGE CAUSED DURING EOD MISSIONS

(proposal for minimum contents)

A intention

B actions to be taken by EOD FE (operators)

C actions to be taken by the EOD command levels

D claim settlement

SOP-10 - EOD IMMEDIATE RESPONSE TEAM (EOD IRT)

(proposal for minimum contents)

A intention

B purpose/objective

C tasks and competences

D assumption

E staff composition

F material equipment

G medical support

H EW support

I operational support

J restrictions, conditions

K safety-relevant and other communication links

L alerting and tasking

M chains of command

N coordination measures

SOP-11 - EOD QUICK RESPONSE TEAM (EOD QRT)

(proposal for minimum contents)

A intention

B purpose/objective

C tasks and competences

D assumption

E staff composition

F material equipment

G medical support

H EW support

I operational support

J restrictions, conditions

K safety-relevant and other communication links

L alerting and tasking

M chains of command

N coordination measures

SOP-12 - IEDD STANDBY TEAM

(proposal for minimum contents)

A intention

B purpose/objective

C tasks and competences

D assumption

E staff composition

F material equipment

G medical support

H EW support

I operational support

J restrictions, conditions

K safety-relevant and other communication links

L alerting and tasking including category A tasks

M chains of command and referral process

N coordination measures

O IEDD reporting procedures and timelines

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ANNEX D SAFETY PHILOSOPHY CREW[19] RESOURCE MANAGEMENT FOR EOD

1. Crew resource management for EOD (CRM EOD) is to be understood as an overarching safety concept regarding EOD operations and means the utilization of all available organizational, informational, equipment and human resources at all levels of the EOD process toward the effective performance of safe and efficient EOD operations. In order to achieve this, CRM EOD comprises all measures serving the purpose of identifying and designating existing and possible sources of error within the entire EOD process as well as the introduction of measures to reduce or eliminate them prior to the development of their negative effects on safety.

2. Identifying existing and possible sources of error comprises the following areas of the EOD process:

a. Management (leadership and organisation; e.g. quality of leadership, supervision, information, rules and regulations, safety culture, lack of personnel and resources),

b. training (e.g. selection of personnel, aptitude test, quality of basic training and recurrence),

c. environment (e.g. climate, culture, equipment, team, language),

d. individual (e.g. aptitude, motivation, knowledge, skills, attitude, physiological and psychological aspects) and

e. defences (mechanism to avoid human errors; e.g. checklists, back-up systems).

3. CRM EOD particularly focuses on imparting of related knowledge to EOD personnel in order to develop non-technical skills, methods and strategies to prevent human errors (human factor training).

4. Human factor training (HFT) comprises

a. Human error (error models and theories, violations, avoiding and managing errors, human reliability, etc.),

b. human performance and limitations (human senses, information-processing, memory, situational awareness, attention and perception, motivation, attitudes, fitness, health, fatigue, drug abuse, stress, etc.),

[19] Crew means a group of people working on common task.

c. environment (team, group pressure, climate, language, threats, culture, etc.),

d. communication,

e. leadership and follower ship (teamwork, roles, professionalism, authority, supervision, etc.),

f. decision-making (FORDEC-Model[20], etc.) and

g. operational risk management (ORM).

5. ORM is a continual cyclic process resulting in acceptance, mitigation or avoidance of risk during EOD operations in accordance with the EOD categories.

6. The principles of ORM are:

a. Accept risk when benefits outweigh the commitment,

b. accept no unnecessary risk,

c. anticipate and manage risk by planning and

d. make risk decisions at the right level.

7. ORM process comprises five steps (This process is cyclic, this means any change to the situation requires re-evaluation as per step one):

a. Identifying threats prior and during EOD mission,

b. assessing threats (analysis and evaluation),

c. making risk decisions,

d. implementing controls and

e. supervising (monitoring and reviewing).

[20] FORDEC Model for decision making, developed for aeronautics **(F**acts, **O**ptions, **R**isks, **D**ecision, **E**xecution, **C**heck)

LEXICON

ABBREVIATIONS

AAP	allied administrative publication
AASTP	allied ammunition storage and transport publication
AEODP	allied explosive ordnance disposal publication
AJP	allied joint publication
AOO	area of operation
ATP	allied tactical publication
AXO	abandoned explosive ordnance
BCMD	biological and chemical munition disposal
BCR	battle casualty replacement
BWC	biological weapon convention
C2	command and control
CBRN	chemical, biological, radiological and nuclear
CBR	chemical, biological and radiological
CBRN EO	chemical, biological, radiological and nuclear explosive ordnance
CBRN EOD	chemical, biological, radiological and nuclear explosive ordnance disposal
CCW	convention on certain conventional weapons
CDS	central demolition sites
CIMIC	civil - military cooperation
CJEODC	combined joint explosive ordnance disposal cell
CMD	conventional munition disposal
CRM	crew resource management
CWC	chemical weapon convention
C-IED	countering-improvised explosive devices
DOAST	desired order of arrival staff table
DtD	defeat the device
ECP	EOD control point
ECM	electronic countermeasures
EDD	explosives detection dog
EO	explosive ordnance
EOC	explosive ordnance clearance
EOD	explosive ordnance disposal
EODC	explosive ordnance disposal cell
EODCC	explosive ordnance disposal coordination cell
EODWG	explosive ordnance disposal working group

EO INC REP	explosive ordnance incident report
EOR	explosive ordnance reconnaissance
EODTIC	explosive ordnance disposal technical information centre
EO TASK ORD	explosive ordnance task order
EO TECHEXPL REP	explosive ordnance technical and exploitation report
ERW	explosive remnants of war
EW	electronic warfare
FE	force element
FFE	free from explosives
FORDEC	facts, options, risks, decision, execution, check
FP	force protection
HASD	high assurance search dog
HFT	human factor training
HQ	headquarters
IC	incident commander
ICP	incident command post
IE3D	improvised explosive device detection dog
IED	improvised explosive device
IEDD	improvised explosive device disposal
IHL	international humanitarian law
IMSMA	information management system for mine action
IRE REP	incident response and exploitation report
IRT	immediate response team
JOA	joint operations area
MCC	maritime component command
MDD	mine detection dog
MILENG	military engineering
MWD	military working dogs
NATO	North Atlantic Treaty Organization
NATOTerm	NATO terminology database
NEPS	NATO explosive ordnance disposal publications set
NCO	non–commissioned officer
NGO	non-governmental organisations
NOTAM	notice to airmen ,
NPOCEOD	national point of contact explosive ordnance disposal
NSO	NATO standardization office
NTM	notice to move
OPCOM	operational command
OPCON	operational control

PEDD	patrol and explosives detection dog
PFP	partnership for peace
POC	point of contact
QRF	quick reaction forces
QRT	quick reaction team
ROE	rules of engagement
SLP	standard language profile
SOF	special operation forces
SOP	standard operating procedure
STANAG	NATO standardization agreement
TACOM	tactical command
TACON	tactical control
TCN	troop contributing nation
TIM	toxic industrial materials
TOA	transfer of authority
TOR	terms of reference
TTP	tactics, techniques and procedures
UN	united nations
UW	underwater
UXO	unexploded explosive ordnance
VIP	very important person
WIT	weapon intelligence teams
WTI	weapon technical intelligence
WMD	weapon of mass destruction

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