

NATO STANDARD

AJP-3.18

**ALLIED JOINT DOCTRINE
FOR EXPLOSIVE ORDNANCE DISPOSAL
SUPPORT TO OPERATIONS**

Edition B, Version 1

SEPTEMBER 2023



NORTH ATLANTIC TREATY ORGANIZATION

ALLIED JOINT PUBLICATION

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NATO LETTER OF PROMULGATION

27 September 2023

1. The enclosed Allied Joint Publication AJP-3.18, Edition B, Version 1, ALLIED JOINT DOCTRINE FOR EXPLOSIVE ORDNANCE DISPOSAL SUPPORT TO OPERATIONS, which has been approved by the nations in the Military Committee Joint Standardization Board, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2628.
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4. This publication shall be handled in accordance with C-M (2002)60.



Dimitrios SIGOULAKIS
Lieutenant General GRC (A)
Director, NATO Standardization Office

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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 underwater EOD.
CZE	CZE will not implement paragraph 1.20., article b. concerning Maritime domain.
DEU	Germany has not implemented ATP-3.12.2 Allied Tactical Doctrine for Military Search. EOD FE may support Military Search but not necessary in accordance with ATP-3.12.2.
ESP	Paragraph 2.23 of Section 3 of Chapter 2. and 6.3: « If the incident being investigated affects Spanish victims or the judicial procedure may pass to the Spanish jurisdiction, the contribution of the Spanish EOD teams to the crime investigation processes will be carried out exclusively in accordance with Spanish legislation.»
HUN	HDF EOD units do not execute CBRN EOD activities.
USA	<p>With regard to Humanitarian Mine Action (HMA), US law prohibits member of the US armed forces, while providing HMA or stockpiled conventional munitions assistance, from engaging in the physical detection, lifting, or destroying of landmines (or other explosive remnants of war or stockpiled conventional munitions) unless the member does so for the concurrent purpose of supporting a United States military operation. Nor will US military personnel provide such assistance as part of a military operation that does not involve the armed forces. This reservation will be lifted when the AJP language conforms to applicable US law (refer to 10 USC 40) and joint doctrine (JP 3-42).</p> <p>In accordance with JP 3-34 Joint Engineer Operations and JP 3-42 Joint Explosive Ordnance Disposal the United States does not consider explosive ordnance disposal to be a function of joint engineer operations.</p>
BGR	Due to the lack of capabilities, the EOD units will not implement CBRN EOD activities as well as underwater EOD.
<p>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.</p>	

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Summary of changes

From the Data Fusion Workshop and Writing sessions the following recommended changes have been introduced in this edition:

- a. Adds introduction of military engineering (MILENG) function and the position of the explosive ordnance disposal (EOD) as an area of expertise within MILENG function.
- b. Updates the description of the explosive ordnance threat.
- c. Reflects the latest doctrines changes (environment was replaced by domain; EOD operation was replaced by EOD activity).
- d. Updates for the description of the EOD force element and EOD staff and their position within structure reflect the latest practice.
- e. Adds new cyberspace domain in accordance with AJP-3, *Allied Doctrine for the Conduct of Operations*.
- f. Updates EOD linkages with the other stakeholders to reflect the latest practices and doctrines.
- g. Adds section on lesson learned.
- h. Updates command and control for EOD structure at all levels of command and within MILENG staff.
- i. Updates terms and definitions to reflect the latest status of NATOTerm and ongoing terminology changes.

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Related documents

- A MC 0133/5, *NATO's Operations Planning*.
- B MC 0020/11, *Policy for Military Operational Standardisation*.
- C MC 0458/3, *NATO Education, Training, Exercises and Evaluation Policy*.
- D MC 0560/2, *Policy for Military Engineering*.
- E ACO DIRECTIVE 084-001, *Allied Command Operations Directive Military Engineering*.
- F PO(2020)0315, *NATO Battlefield Evidence Policy*.
- G PO(2020)0316, *NATO Technical Exploitation Practical Framework*.
- H PO(2016)0315, *NATO Policy for Standardisation*.
- I AJP-2.5, *Captured persons, materiel and documents*.
- J AJP-3, *Allied Joint Doctrine for the Conduct of Operations*.
- K AJP-3.5, *Allied Joint Doctrine for Special Operations*.
- L AJP-3.8, *Allied Joint Doctrine for Comprehensive Chemical, Biological, Radiological, and Nuclear Defence*.
- M AJP-3.12, *Allied Joint Doctrine for Military Engineering*.
- N AJP-3.14, *Allied Joint Doctrine for Force Protection*.
- O AJP-3.15, *Allied Joint Doctrine for Countering Improvised Explosive Devices*.
- P AJP-3.22, *Allied Joint Doctrine for Stability Policing*.
- Q AJP-4.10, *Allied Joint Doctrine for Medical Support*.
- R AJP-5, *Allied Joint Doctrine for the Planning of Operations*.
- S ATP-3.12.2, *Allied Tactical Doctrine for Military Search*.
- T ATP-3.18.1, *Allied Tactical Publication for Explosive Ordnance Disposal*.
- U AIntP-10, *Technical Exploitation*.
- V NATOTerm.

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Preface

Context

1. Allied Joint Publication (AJP)-3.18 (B), *Allied Joint Doctrine for Explosive Ordnance Disposal Support to Operations* describes the explosive ordnance disposal (EOD) area of expertise of military engineering function and how EOD principles are applied during the planning and conducting of joint operations. This publication is also overarching NATO doctrine for the conduct of all aspects of EOD support to operations. It provides guidance for operational level commanders to plan, conduct and monitor EOD support to operations.

Scope

2. AJP-3.18(B) builds on the principles described in AJP-3 *Allied Joint Doctrine for the Conduct of Operations* and AJP-5 *Allied Joint Doctrine for the Planning of Operations* to plan and conduct EOD support activities in a joint and multinational framework. This AJP provides the basis for taking account of EOD when developing both strategic and operational plans and for effective implementation of EOD principles through directives and instructions. AJP-3.18(B) provides doctrine reflective of existing organization, capabilities and best practices to meet the challenges of the evolving security environment at the strategic and operational level.

Purpose

3. This publication provides commanders and staff with the principles and guidance necessary to plan and conduct EOD support in joint operations. It describes the characteristics, joint EOD capabilities, organization, and command and control of EOD support, in order to enhance effectiveness and ensure interoperability during NATO-led multinational operations. It provides commanders and staff with guidance for the assignment of EOD force elements (FE)¹ as an operational enabler. It further describes the placement of EOD staff² within the joint staff organization at operational and strategic levels and provides staff planning, responsibilities, capabilities, and requirements in support of EOD FE across the NATO operations.

Application

4. AJP-3.18 is intended primarily as guidance for joint NATO commanders and staff. However, the doctrine is instructive and provides a useful framework for operations conducted by a coalition of NATO members and partners.

¹ Explosive ordnance disposal (EOD) force element is the unit conducting the EOD tasks (EOD team, EOD platoon, EOD company, EOD battalion).

² EOD staff provides specialized advice and support on each level of command within the EOD area of expertise. Namely the combined joint EOD cell, the EOD coordination cell, the EOD cell and the national point of contact EOD.

Structure

5. This publication consists of three chapters. Chapter 1 describes the fundamentals of EOD in the context of the explosive ordnance threat, explosive ordnance awareness skills and general EOD principles. Chapter 2 details the EOD in the joint operating environment. Chapter 3 describes Allied joint EOD command and control organization and structures, considerations for EOD planning and EOD tasking and reporting.

Linkages

6. AJP-3.18 is directly subordinated to AJP-3 within the hierarchy of standardization. The doctrine is directed and guided by *MC 0560/2, MC Policy for Military Engineering* and has strong relations to AJP-3.12 *Allied Joint Doctrine for Military Engineering*. Allied Tactical Publication (ATP)-3.18.1, *Allied Tactical Publication for Explosive Ordnance Disposal* is directly subordinate to AJP-3.18.

Chapter 1 Fundamentals of explosive ordnance disposal

Section 1 – Introduction

1.1. Allied Joint Publication (AJP)-3.18, *Allied Joint Doctrine for Explosive Ordnance Disposal Support to Operations*, describes the fundamental aspects of explosive ordnance disposal (EOD) and provides guidance for its planning and conduct in support of joint operations.

1.2. EOD comprises those particular actions taken by personnel qualified to counter the hazards of explosive ordnance (EO), regardless of condition, using specific procedures in accordance with Allied explosive ordnance disposal publication (AEODP)-10, *EOD Principles and Minimum Standards of Proficiency*.

1.3. AJP-01, *Allied Joint Doctrine* is the NATO capstone publication for all Allied joint publications. AJP-3, *Allied Joint Doctrine for the Conduct of Operations* and AJP-3.12, *Allied Joint Doctrine for Military Engineering* cover aspects of EOD in the context of joint operations. Additional publication information is included in the related documents section of this document. The different levels and relationships of current EOD related publications can be seen in Figure 1.

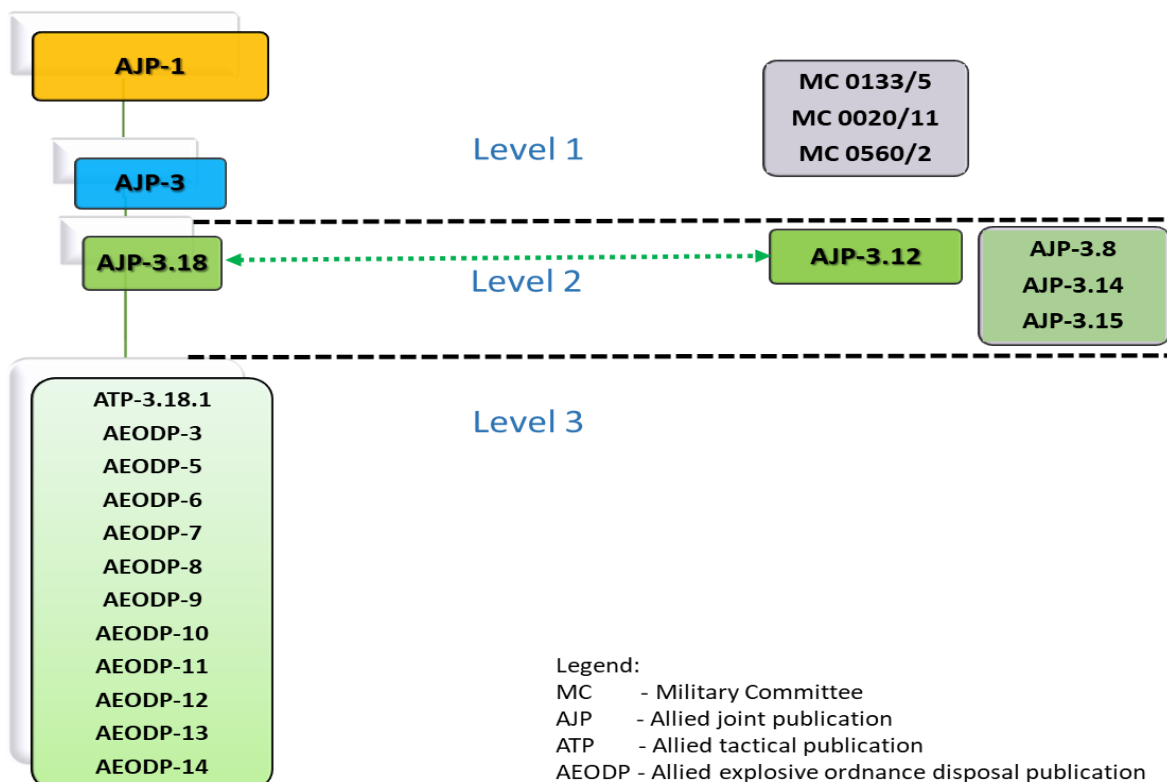


Figure 1: Explosive ordnance disposal publication architecture

1.4. Military engineering (MILENG) is a function in support of operations to shape the physical operating environment (POE). The MILENG function exists at all levels of command, in any mission, campaign or operation, and in all phases coordinated by

a MILENG staff. MILENG achieves the desired objectives by enabling or preventing manoeuvre or mobility; developing, maintaining, and improving infrastructure; and supporting the survivability and sustainability of forces. MILENG incorporates areas of expertise, such as:

- engineering,
- explosive ordnance disposal,
- environmental protection,
- military search and
- management of infrastructure, including contracted civil engineering.

1.5. MILENG function is an inherent part of every joint function as each of them links to POE. MILENG expertise and advice are required during all phases and processes within all products related to those joint functions, especially when the POE is affected. A special relationship, due to major contribution, exists with the function of countering improvised explosive devices, protecting the force and providing life support³. Functional approach of MILENG and the status of the EOD within the MILENG can be seen in Figure 2.

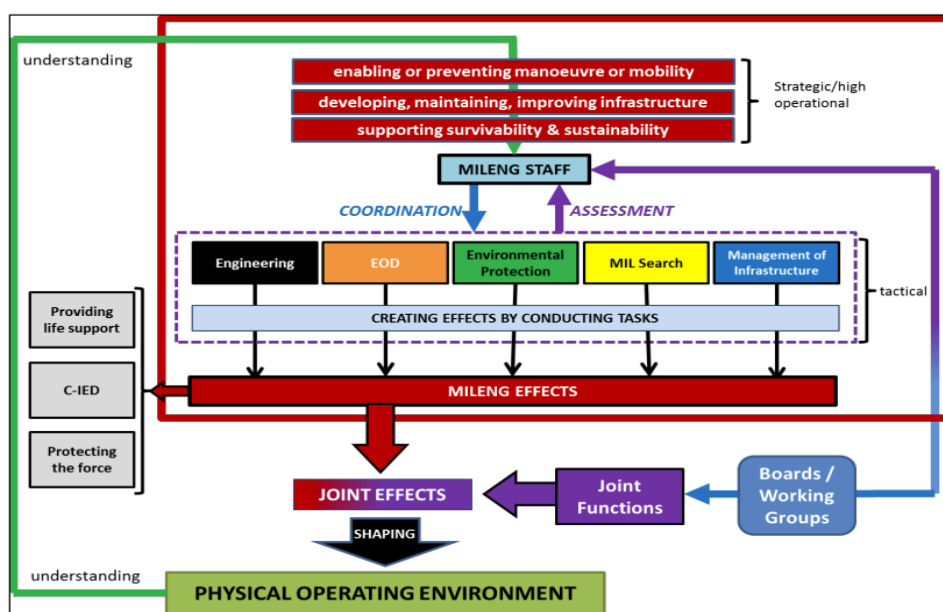


Figure 2: Functional approach of military engineering

1.6. EOD as one area of expertise within the MILENG function keeps a strong relationship with all other areas of expertise of MILENG, in order to provide a comprehensive approach to shape the POE. The MILENG effects created by EOD actions are major contributors to force protection, intelligence (countering improvised explosive devices and technical exploitation) and chemical, biological,

³ Further guidance on military engineering can be found in MC 0560/2, *Military Committee policy for Military Engineering* and AJP-3.12, *Allied Joint Doctrine for Military Engineering*.

radiological and nuclear (CBRN) defence⁴. The EOD tasks require specific support from electromagnetic warfare, medical, military police and special operations forces elements.

1.7. EOD missions are hazardous by their nature and EOD operators risk their lives while countering the EO threat. This AJP provides operational level considerations to minimize risk during EOD activities.

1.8. Standing operating procedures and priorities for EOD should comply with the wider and higher objectives of the supported operation, applying standardization in order to enable interoperability.

Section 2 – The explosive ordnance threat

1.9. The EO threat is broad, diverse and evolving. It should be considered both in terms of an adversary's general capability, as well as the potential to carry out significant individual acts. The EO threat can create a spectrum of effects ranging from the tactical to strategic level.

1.10. Adversaries are likely to conduct operations in any and all operating domains, often using asymmetric methods. Technological diffusion, including the export of modern military equipment and its subsequent proliferation, as well as innovative use of existing technologies, underpin current conflicts.

1.11. Conflicts are characterized by an increasing complexity requiring a more sophisticated, non-linear model, with all types of operations⁵ existing simultaneously, each coming to the forefront at certain times. Campaign themes are warfighting, security, peace support and peacetime military engagement. In all these campaign themes, the threat from conventional munitions, improvised explosive devices (IED) and CBRN EO has impacted NATO forces and their freedom of manoeuvre, as well as the civilian population. Dealing with such threats requires a long-term approach.

1.12. The immediate military contribution, however, is to re-establish and maintain sufficient security, especially by a wide range of coordinated, outcome-oriented measures. Amongst them, EOD activities are fully integrated and a key part of planning and enabling activities in joint operations.

1.13. As shown in Figure 3, the range of EO threat on land, air and maritime environment includes:

- a. **Explosives:** Regardless of use, explosives with all associated effects pose a significant hazard for Allied forces and public safety.

⁴ The disposal of nuclear weapons is not addressed in this document. However, NATO Explosive ordnance disposal force element should agree to exchange necessary information within the limits of national security policies in time of emergency.

⁵ For types of conflict see AJP-3, *Allied Joint Doctrine for the Conduct of Operations*.

b. **Munitions:** Munitions range widely in both technology and quantity. Various types of munitions can now be delivered over long ranges, either to a wide area or to precise targets. Their effects can both destroy and disrupt. The severity of EOD challenge depends on many factors, including (but not limited to) their targets, prior usage, complexity, and size. Munitions which have not been functioning yet, or those that may remain functional but in an unknown status whether to time of detonation, or reason of non-function create EO threat scenarios. Munitions could enable violence for terrorist groups and organizations, as well as affiliates or inspired groups or networks.

c. **Improvised explosive devices:** The use of IEDs is so widespread that they have become a global and enduring threat. NATO personnel should assume that the IED threat will evolve and persist even though better countermeasures are developed.

d. **Other explosive items:** Other devices that contain explosives and do not fall into Explosives, Munition and IED definition and pose a threat⁶.

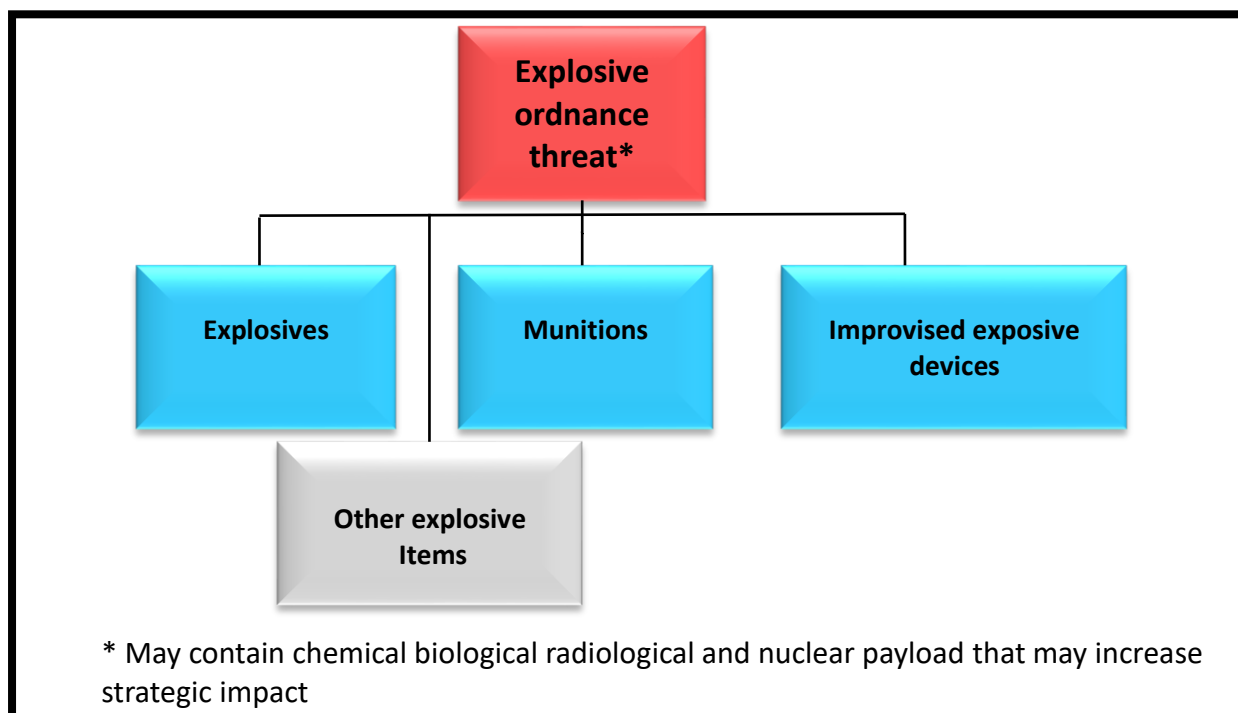


Figure 3: The explosive ordnance threat

⁶ More info about Chemical, biological, radiological and nuclear Explosive ordnance threat can be found in Allied Explosive ordnance disposal publications AEODP-7, *Explosive Ordnance Disposal Equipment Requirements and Equipment* and AEODP-8, *Interservice Chemical, Biological, Radiological and Nuclear Explosive Ordnance Disposal Operations on Multinational Deployments*.

1.14. EO may occur as abandoned explosive ordnance (AXO) and/or unexploded explosive ordnance (UXO) during and in a post-conflict scenario as well. In a post-conflict scenario, both AXO and UXO are called explosive remnants of war⁷.

1.15. **Environmental factors:** In order to determine the level of threat against Allied nations, the accessibility of EO, EO condition, presence of chemical, biological and radiological agents or toxic industrial materials should be considered.

Section 3 - Joint explosive ordnance disposal capabilities

1.16. It is important to understand the EOD capabilities that each service can provide at the joint level. EOD is based on the same principles and minimum standards of proficiency, but its application may differ across the services and nations.

1.17. EOD capabilities can be applied across the whole range of EO threats, supporting joint functions (force protection, intelligence, manoeuvre, sustainment, civil-military cooperation and fires) in order to achieve the joint force commander's operational objectives. The joint EOD capability subsets are shown in Figure 4. They are applicable throughout the all NATO operations and by all services, using different procedures and equipment:

- a. explosive ordnance reconnaissance;
- b. explosive ordnance clearance⁸;
- c. conventional munition disposal;
- d. improvised explosive device disposal;
- e. chemical, biological, radiological and nuclear explosive ordnance disposal⁹.

⁷ The definition of explosive ordnance, abandoned explosive ordnance, unexploded explosive ordnance and explosive remnants of war in this document should not be confused with the definition of the same term provided by Article 2 (4) of the 2003 protocol V to the Convention on Conventional Weapons.

⁸ For example, explosive ordnance clearance is conducted on land, air and maritime environment, using different procedures and equipment. The execution of explosive ordnance clearance missions varies considerably from nation to nation. Some nations assign the explosive ordnance clearance mission exclusively to explosive ordnance disposal force element, whereas other nations assign the explosive ordnance clearance mission to units with varying levels of explosive ordnance knowledge and expertise.

⁹ Within the context of this document chemical, biological, radiological and nuclear explosive ordnance disposal includes biological and chemical munition disposal.

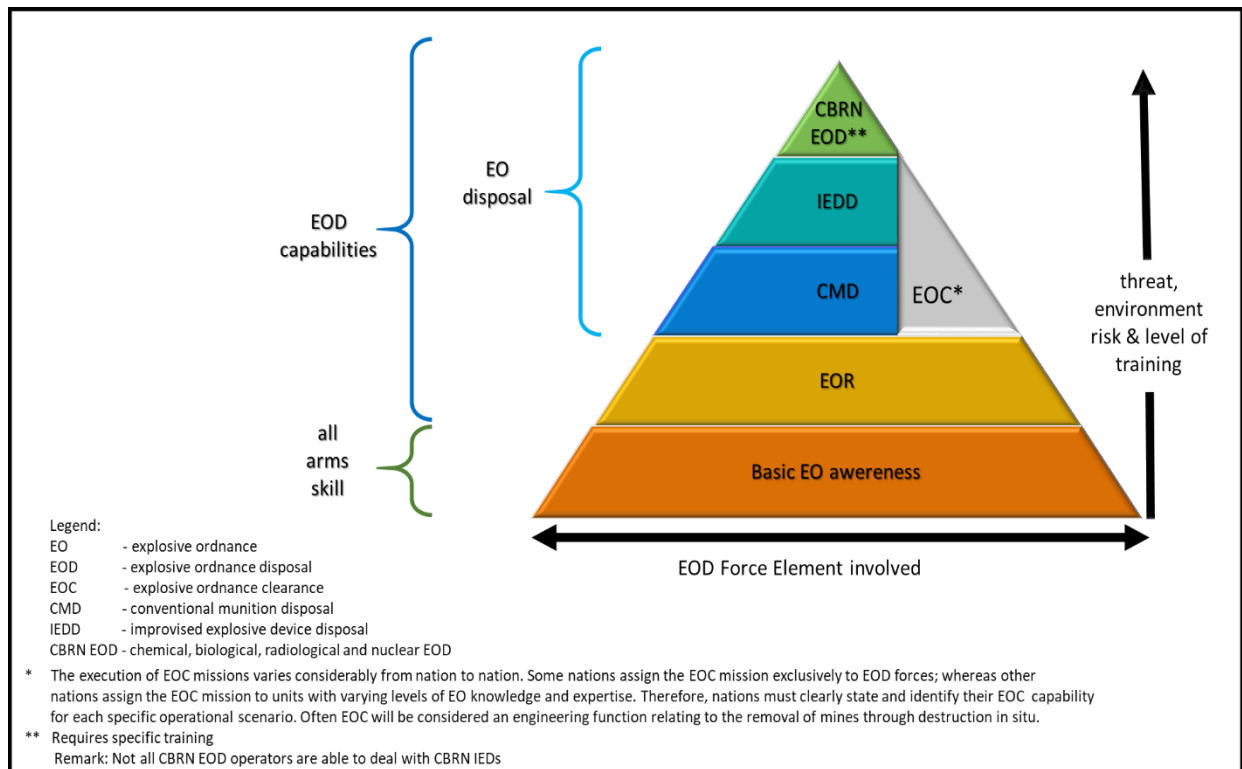


Figure 4: Explosive ordnance awareness skills and explosive ordnance disposal capability subsets

1.18. EOD main activities are:

- a. **Processing of EO incidents:** Is the combined effort of EOD and other stakeholders in order to solve EO incidents.
- b. **EOD advice:** It is a continuous activity of providing timely and relevant EOD information to support decision process of commanders.
- c. **EO recovery on fixed installations:** EOD aim is to assist in the overall plan for the recovery of the installations such that they may undertake their primary operational role in the minimum possible time.
- d. **Mine countermeasures:** EOD support for preventing or reducing damage or danger to ships, personnel, aircraft, and vehicles from mines.
- e. **Exploitation of EO incidents**¹⁰: EOD supports this process by exploiting and providing raw, EO-related data, information, materiel and materials with potential intelligence or operational value.

1.19. Other activities:

- a. **Humanitarian mine action (HMA):** EOD force element (FE) is generally able to conduct HMA but it is usually not their responsibility. HMA activities are prohibited for armed forces in some nations. HMA is mostly undertaken by

¹⁰ More information regarding the exploitation of explosive ordnance can be found in Allied Intelligence Publication AIntP-10, *Technical exploitation*

international organizations, non-governmental organizations or commercial organizations under the lead of the United Nations or the National Mine Action Authority. Proper planning/readiness for procedures at different levels needs to be established prior to any cooperation, coordination or collaboration.

b. **Logistic disposal:** Constitutes the removal of EO from stockpiles, utilising a variety of methods that may involve destruction. Logistic disposal may be performed by personnel with special qualifications other than EOD. EOD and other qualified personnel can conduct range clearance of EO, as well as remove munitions from their own stockpiles or from other friendly-forces stockpiles.

1.20. EOD capabilities and activities are incorporated or contribute to operations in:

a. **Land domain:** The nature of land operations reflects the diversities and complexities of the operating domain. They have a wide variety of participants and various missions may be executed, ranging from support of military contribution to stabilization and reconstruction, up to combat operations¹¹. EOD FE provides support for the operations considering the multitude of activities and rapidly changing situations.

b. **Maritime domain:** The threat in the maritime domain is especially complex as it can reside in both surface and subsurface conditions, including installations offshore or in port. The nature of the maritime domain requires unique skills for EOD FE to conduct reconnaissance, clearance, and disposal. EOD activities are complicated due to ship sailing and a maritime infrastructure that needs to stay intact. Some NATO militaries have mine countermeasures as a function of their naval EOD activities. Maritime EOD FE conducting littoral, coastal, and ocean mine countermeasures, may not be able to support amphibious operations, due to specialized training and equipment requirements. Conduct of Maritime EOD activities, including underwater, onboard vessels or in the vicinity of maritime vessels and infrastructure requires appropriate underwater EOD skills.

c. **Air domain:** EOD FE protects fixed, contingency and forward-deployed air force installations against EO threats and supports their recovery after attacks. EOD is also required to respond to extraordinary situations involving aviation explosive hazards integral to the aircraft or its armament.

d. **Cyberspace domain**¹²: Cyberspace activities are actions in or through cyberspace intended to preserve friendly freedom of action in cyberspace and/or to create effects to achieve commander's objectives. EOD contribution to cyberspace activities is inherent to the MILENG support to operations in this domain, as detailed in the AJP-3.12. MILENG staff will coordinate and cooperate at all levels and across components in order to deliver suitable capabilities in support of operations in cyberspace.

¹¹ Some nations only have land component explosive ordnance disposal and these units might be tasked to support other component commanders, (for example, explosive ordnance disposal activities in seas, inland waterways, coastal regions, ports and at air force installations).

¹² For more details on cyberspace domain see AJP-3, *Allied Joint Doctrine for the Conduct of Operations*.

Section 4 - Explosive ordnance awareness skills

1.21. Countering the EO threat demands awareness and application of appropriate skills for all personnel. This applies to both EOD and non-EOD forces. This should be achieved by appropriate and comprehensive individual and collective training at all levels. It is a key element of preparing the force.

1.22. EOD personnel need to be trained to mitigate EO threats (by defeating the device) to an acceptable, agreed level. They need to have a specific variety of skills and specialized equipment to fulfil the EOD capability requirements¹³.

Section 5 - General principles of explosive ordnance disposal

1.23. In countering the EO threat, the general principles of EOD should be considered, although the priority can vary depending on the operational situation:

- a. preservation of life,
- b. minimizing damage to health, property and environment,
- c. identification, technical exploitation, and reporting of first seen or novel EOs without unnecessarily compromising personnel safety,
- d. restoration of freedom of movement/continuity of operations as quickly as possible.

1.24. The safety of both allied forces and civilians is the primary concern when planning and executing EOD activities. The general EOD principles should always be applied, noting that national safety regulations vary widely across NATO.

1.25. There is a need to balance safety and security against the requirement to maintain operational tempo. When EOD support is provided to operations, it should be delivered in such a way as to balance the risk, threat mitigation and the potential intelligence value against the operational tempo.

¹³ For details see AEODP-10 *Explosive Ordnance Disposal (EOD) Principles and Minimum Standards of Proficiency*

Chapter 2 - Explosive ordnance disposal in the joint operating environment

Section 1 – Introduction

2.1. The ability to counter the explosive ordnance (EO) threat, inclusive of explosives, munitions, improvised explosive devices (IED), other explosive items and chemical, biological, radiological and nuclear (CBRN) EO, is the rationale for the employment of explosive ordnance disposal (EOD) force element (FE). Alongside with other capabilities that operate within the military engineering (MILENG) function, the EOD FE contributes to the protection of military and civilian personnel, critical assets, infrastructure and public safety. EOD supports the friendly forces' operational freedom of movement across all NATO operations and in the restoration of normality subsequent to a conflict. Consequently, EOD is a specialized operational enabler.

2.2. EO threats may be present during some or all phases of all NATO operations, irrespectively of the type of the operation. Based on a threat assessment, EOD capabilities should be identified at the earliest stage of the planning process. The EOD FE should be among the first forces deployed to the theatre. EOD FE should be employed to eliminate the EO threat from the land, air and maritime environment.

2.3. The role of EOD support to joint operations. Through the Chief MILENG (CMILENG), EOD staff coordinates EOD activities at all levels and provides support to operations. Threat and risk assessment should be considered before EOD FE is employed.

2.4. EOD contributes to all joint functions. In particular, EOD focuses on four key joint functions. These are intelligence, force protection (FP), manoeuvre and command and control as shown in Figure 5.

2.5. EOD FE supports the intelligence cycle and the commanders' critical information requirements by collecting, preserving, and analysing collected exploitation material. EOD staff provides a comprehensive picture of the EO threat and supports a more robust intelligence picture of the adversary's capabilities.

2.6. Important links exist between EOD area of expertise and technical exploitation and wider intelligence including surveillance and reconnaissance capabilities. It is vital that the EOD doctrine is harmonized with other doctrines.

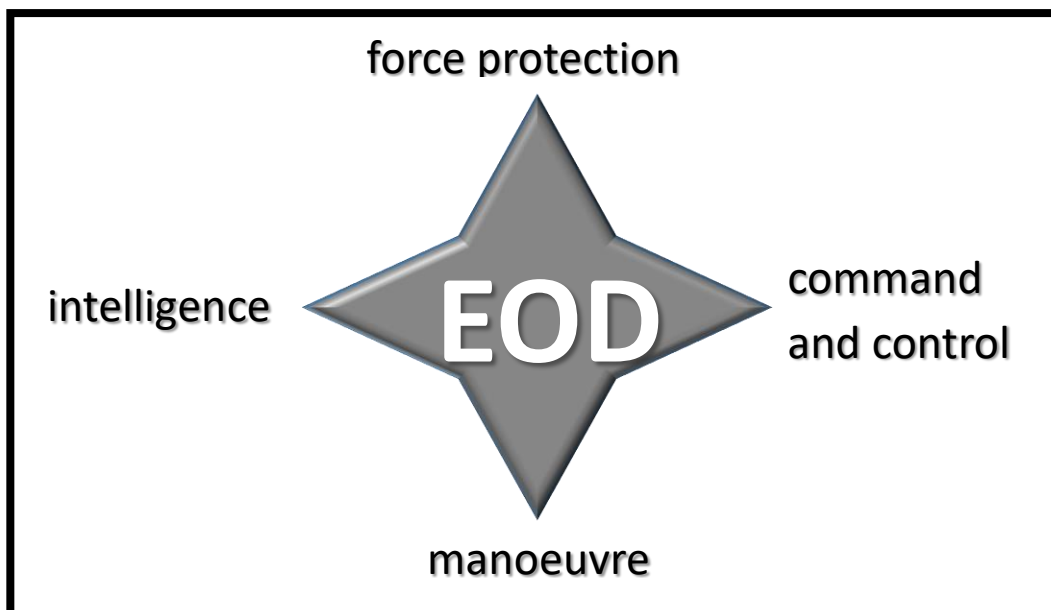


Figure 5: Primary explosive ordnance disposal contribution to joint functions

2.7. Engagement in the land and maritime activities and in support of air operations will create joint capability areas, principally in understanding and intelligence. An example of where this is pertinent to EOD is the rendering safe of EO for subsequent exploitation for intelligence and material needs where the threat and tempo permit. This results in EOD being essential to supporting freedom of action. With strong links to the wider intelligence community, EOD contributes to FP and supports manoeuvre by minimizing the vulnerability of personnel, their activities, facilities, materiel and the operation itself.

2.8. The military services (e.g., army, air force and navy) are confronted with specific EO threats; consequently, they possess particular expertise in EOD. Generally, all services keep an EOD capability which has to be trained, manned, equipped and held at an appropriate degree of readiness to fulfil its specialist role and likely activities. No single service generally possesses the full range of EOD capabilities. Besides, EOD FE and other specially trained units like engineers or Special Operation Forces can execute activities like explosive ordnance reconnaissance (EOR) or explosive ordnance clearance. When planning for the full range of EOD capabilities, services should consider resources available through the Combined Joint Explosive Ordnance Disposal Cell (CJEODC).

2.9. Combined cooperation may be required because of the volume of EO in the joint operation area. Since the individual national EOD FE provides different capabilities, these should be coordinated. At all levels of command and control, the effectiveness and clarity of the combined EOD structures are of crucial importance. It is imperative that national limitations and restrictions for EOD FE are reported to and fully understood by the CJEODC.

2.10. Commonly understood and agreed guidelines, processes, national caveats and general safety regulations are absolutely essential for combined EOD support to operations. Commanders at all levels should understand EOD capabilities and limitations to effectively utilize EOD FE¹⁴.

Section 2 – Explosive ordnance disposal support to joint operations

2.11. **Scope.** The nature and extent of EOD support varies according to the level of operations¹⁵, the nature of the conflict, the strategic and operational environment, the scale and scope of military operations and the existing EO threat. These issues are addressed further in the following sections of this document.

2.12. **Joint force model.** The ability to implement EOD guidelines and provide advice to all levels of the NATO Command Structure needs to be a critical requirement for EOD staff work at all levels. To implement the principles of joint operations, it is essential that an EOD advisor and/or EOD staff is established and represented properly within the MILENG staff elements at each level of command. The activities provided by EOD FE should be coordinated at the operational level by the specialized EOD staff in the CJEOCD within MILENG Staff, led by the Chief Military Engineering; a liaison with the Provost Marshal/Stability Policing advisor could be required at the strategic and operational level.

2.13. **Effects of customary international law.** The conduct of military operations is shaped by domestic and international law. Individual NATO nations are independently bound to various international agreements, such as the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction; Convention on Cluster Munitions, the Chemical Weapons Convention and the Biological Weapons Convention. The EOD FE acts within the applicable legal framework, as established by both NATO and its national legal obligations. Because NATO member states may have different international obligations (or may implement the same obligations differently on a domestic level), it is important for all participants in an allied operation to establish and understand the legal boundaries of that operation.

2.14. **Explosive ordnance disposal support across all domains.** EOD activities are rarely a solitary action. Every operation across all domains confronted with EO threats needs EOD FE contributions such as:

- a. **Air domain:** EOD activities are aimed at removing EO threat to air operations on land, including armed aircraft incident assistance and aircraft battle damage repair.

¹⁴ For details see ATP-3.18.1, *Allied Tactical Publication for Explosive Ordnance Disposal*.

¹⁵ See AJP-3, *Allied Joint Doctrine for the Conduct of Operations*.

- b. **Land domain:** EOD activities are aimed to improve the tactical and operational mobility and to enhance force protection of own forces during land operations. EOD FE primary focus in support of the land operation is neutralizing any and all kinds of EO threat. EOD FE supports Military Search (in accordance with ATP-3.12.2, *Allied Tactical Doctrine for Military Search*), EO clearance and protection of critical infrastructure.
- c. **Maritime domain:** EOD activities are aimed to mitigate EO threat and enable maritime operations including support of amphibious operations. EOD FE also contributes to defensive naval mine warfare. EOD FE in support to the maritime component varies from other EOD FE as their actions can be performed underwater, which requires specific training, procedures and equipment.
- d. **Cyberspace domain:** EOD might be requested to provide support to cyberspace and information activities via coordinated MILENG support.

2.15. EOD staff and EOD FE contributes to other activities across all domains like CBRN defence, Civil-military cooperation (CIMIC) activities, military evacuation, training of military and civilian personnel, protection of convoys, technical exploitation, rescue and recovery, weapon storage inspections, logistic disposal, destruction of captured adversary EO and weapons, protection of very important persons and securing events, stability policing.

Section 3 – Explosive ordnance disposal linkages

2.16. **Force Protection.** FP balances the conflicting priorities of the need to preserve force capability while maximising the freedom to operate. EOD contributes to FP in both. EOD FE dispose of EO that threatens friendly forces, vital points or high-value assets, and provide operational analyses and assess the vulnerability of personnel, materiel, facilities and other assets with reference to EO threats. As subject matter experts, EOD staff or EOD FE can provide training on ordnance hazards and recognition, explosive ordnance awareness, EOR procedures and personnel protective measures¹⁶.

2.17. **Countering IED.** EOD significantly contributes to the countering improvised explosive devices (C-IED) approach, mainly in the pillar “Defeat the Device” and supportively to technical exploitation to provide critical information for C-IED network activities (pillar “Attack the Network”). EOD staff and EOD FE also provide explosive ordnance expertise to the pillar “Prepare the Forces”. Improvised explosive device disposal is an EOD FE responsibility¹⁷.

¹⁶ Guidance on FP can be found in AJP-3.14 *Allied Joint Doctrine for Force Protection*.

¹⁷ Guidance on these terms can be found in AJP-3.15, *Allied Joint Doctrine for Countering Improvised Explosive Devices*.

2.18. **Civil–military cooperation.** EOD FE might be requested to assist civilian authorities or organizations during conflict or post-conflict scenarios due to disposal of EO from the civilian area. Interaction among civilian authorities or organizations and EOD FE is conducted through CIMIC staff or element¹⁸.

2.19. **CBRN defence.** NATO's CBRN Policy¹⁹ describes the comprehensive approach to CBRN Defence²⁰, principled by integrated military CBRN defence capabilities and societal resilience against CBRN treats. This is to ensure that NATO can prevent, protect against, and recover from any use of CBRN materials against our population, territories, and forces. This may require the engagement of EOD FE to respond to EO incidents with CBRN content and CBRN devices with an improvised dispersion system.

2.20. **Special operations.** Special operations are military activities conducted by specially designated, organized, trained, and equipped forces, using distinct techniques and modes of employment. EOD FE provides support in the full spectrum of these operations. Special operation requires from EOD FE specific training and preparation based on the environment of a special operation.

2.21. **Electromagnetic warfare.** EOD support to operations can be executed in the electromagnetic environment. Electromagnetic warfare is a military action that exploits electromagnetic energy to provide situational awareness and create offensive and defensive effects²¹. As EOD operators may use jammers when countering IEDs, they operate in the electromagnetic environment. Therefore, Electromagnetic warfare personnel are involved when planning and conducting these kinds of activities.

2.22. **Intelligence.** EOD FE may provide specific input to intelligence. The staff evaluates impacts on EOD support to operations and integrates information requirements. EOD staff and EOD FE contribute to the joint intelligence preparation of the operating environment and to the targeting²². Collection, preservation and analysis of collected exploitation material by EOD FE also feeds the intelligence cycle.

2.23. **Battlefield evidence.** Without undermining security and tactical objectives, EOD FE can perform a critical role in a crime scene investigation process. By analysis of collected exploitation material, EOD may also contribute to information-sharing by the military to support law enforcement purposes and legal proceedings.

2.24. **Technical exploitation.** Technical exploitation can provide undeniable scientific associations between people, places, events and materials to help find, fix and finish

¹⁸ Guidance on CIMIC can be found in AJP-3.19, *Allied Joint Doctrine for Civil Military Cooperation*.

¹⁹ NATO's *Chemical, Biological, Radiological and Nuclear Defence Policy*, 14 Jun 2022, para.27.

²⁰ Guidance on CBRN Defence can be found in AJP-3.8, *Allied Joint Doctrine for Comprehensive Chemical, Biological, Radiological, and Nuclear Defence*.

²¹ Guidance on EW can be found in AJP-3.6, *Allied Joint Doctrine for Electronic Warfare*.

²² Guidance on Intelligence can be found in AJP-2, *Allied Joint Doctrine for Intelligence, Counter-Intelligence, and Security*.

adversaries. With respect to EOD activities, technical exploitation of first-seen ordnance and/or IEDs rely extensively on initial EOD reporting (EO100- 500 series). These raw EOD reports are analysed and fused by intelligence staff to produce technical intelligence that can enable/confirm ordnance/IED identification; determine their operational limitations, capabilities, and/or modifications; and to support countermeasure development.

Section 4 – Lessons learned

2.25. A mature and fully functional lessons learned (LL) capability is crucial to the success of ongoing and future NATO operations and to the transformation of NATO organizations and forces.

2.26. In an uncertain and continuously changing security environment, learning lessons in order to improve the performance is an essential part of being credible, capable and adaptive in warfighting and warfare development. Some lessons are spontaneously discovered without preparations while others are collected based on a guided plan made in advance.

2.27. Furthermore, the MC 0133/5, *NATO Operations Planning* refers to the importance of capturing LL as a part of the planning process.

2.28. The BI-SC Directive 080-006, *Lessons Learned* describes the LL structure, process and tools to be used within NATO, providing directions for implementing the NATO LL Policy.

a. **NATO Lessons Learned Portal (NLLP).** The NLLP is the single NATO tool for the collection, managing, tracking, monitoring and sharing of lessons. The NLLP is established and managed by the Joint Analysis Lessons Learned Center, providing the needed regulations. NLLP runs on the NATO Secret Wide Area Network and is the only place in NATO where uploaded lessons can be tracked throughout the NATO LL Process providing transparency, accountability and visibility by all others.

b. When considered relevant for sharing and staffing in accordance with the LL process to become a lesson learned or best practice, all observations related to the EOD support to operations should be inserted in this portal, using the link:

<http://nllp.jallc.nato.int/lessonlearned/Pages/SubmitObservation.aspx>

Chapter 3 - Allied joint explosive ordnance disposal command and control

Section 1 – Introduction

3.1. **Command** is defined as the authority vested in a member of the armed forces for the direction, coordination, and control of military forces. Command authority is allocated formally to a commander through orders and directives.

3.2. **Control** the authority exercised by a commander over part of the activities of subordinate organizations, or other organizations not normally under their command, encompassing the responsibility for implementing orders or directives.

3.3. Coordinated and effective explosive ordnance disposal (EOD) support to operations in the joint operating area requires not only awareness of the capabilities and resources available, but also clearly defined and effective command and control (C2) principles. Although each operation may require a different C2 structure, underlying guiding principles should be applied to each.

Section 2 – Command and control organization and structures

3.4. Principles of joint command and control:

a. **Command and Control architecture**

(1) **Strategic level**

EOD at Supreme Headquarters Allied Powers Europe staff organization: The EOD staff responsibility is integrated into the Infrastructure & Engineering Division. It is responsible for EOD support to the command and control of all theatre operations, exercises and provides the EOD feedback on all NATO operational lessons identified/learned process, training requirements and EOD capability development.

(2) **Operational Level**

EOD at NATO Joint Force Commands: Chief Military Engineering (CMILENG) is responsible for balancing and coordinating all the military engineering (MILENG) capabilities within the joint force (JF). EOD capabilities and advice are delivered to the joint force staff via MILENG staff which is integrated and involved in the operational level planning and execution. A Combined Joint Explosive Ordnance Disposal Cell (CJEODC) is established in order to coordinate all EOD support within the joint operation in a more detailed and comprehensive manner. For maritime and air domains, the JF commander may designate a maritime

component commander or air component commander to exploit the full spectrum of capabilities available to the force. In this instance, EOD capabilities and advice would be delivered to the respective component commander via a dedicated battle staff or integrated EOD staff element.

(3) Tactical level

EOD tasks are planned and conducted to accomplish military objectives assigned to EOD force element (FE). The Explosive Ordnance Disposal coordination cell (EOD CC) should be established in the headquarters (HQ) of the multinational brigade, division and component command. The Explosive Ordnance Disposal Cell (EODC) should be established in the HQ of regiment or battalion level based on mission analysis outputs. The National point of contact (NPOC) EOD within each EODCC or EODC is responsible for coordinating their national EOD FE. Each nation participating in multinational EOD formation should appoint this NPOC within a cell. In the maritime domain, this tactical level command structure will be established at the task unit or task group level based on mission analysis outputs.

b. Integration of command

The EOD tasking authority should be clearly separated from the EOD execution level. Each EOD tasking authority should be clearly defined in national transfer of authority (TOA) letters, operational orders and within national and international directives. EOD FE are normally controlled directly by EOD staff within MILENG staff as part of the NATO joint task force command (JTF COM). Nations' TOA letters should address the EOD FE command relationship issue and their caveats for each NATO operation when any level of control is transferred to NATO. National policies for EOD may differ in requirements for compliance with procedural and safety regulations. When establishing the C2 structure, the assigned EOD FE with their TOA, capabilities and resources should be adhering to the mission.

c. Command relationships

EOD staff is a part of MILENG staff (through the combined joint statement of requirement). The design of EOD staff and EOD FE structure should be set as early as possible to enable effective C2. The staff and structure should be flexible enough to accommodate the nature of the operation and provide the most effective support to the overall commander's intent. The command status and the authority of all EOD forces participating in an operation (e.g. operational command, operational control, tactical command and tactical control) are essential for conducting successful EOD support to joint operations. The CMILENG through the EOD staff should exercise coordinating authority over national contingent EOD FE in accordance with the appropriate TOA. The agreed authorities should be adhered to when establishing the C2 structure and should be consistent with the mission.

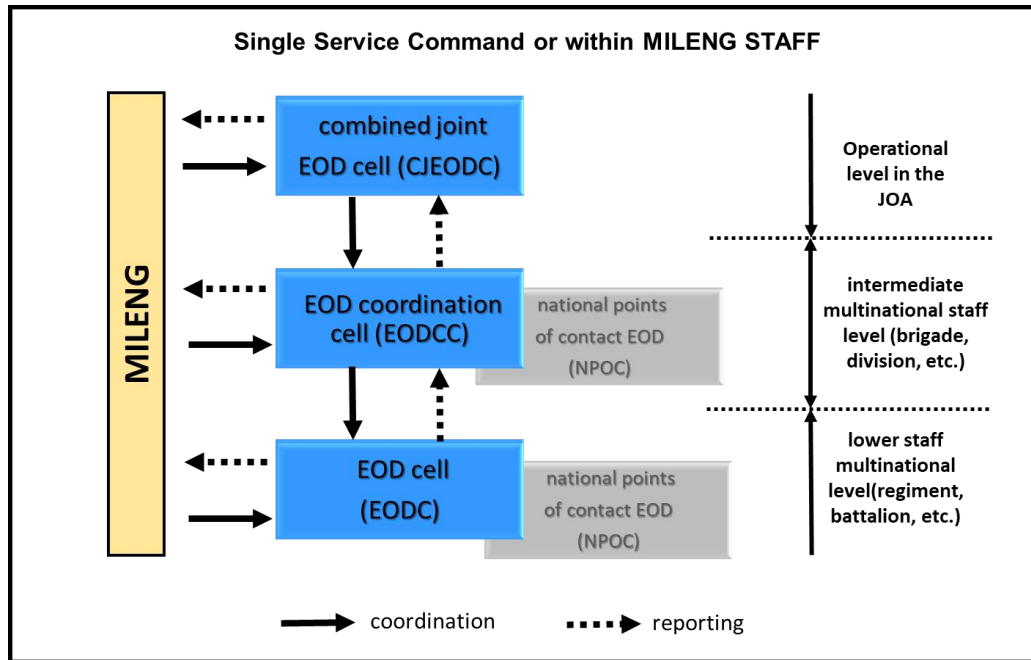


Figure 6: Generic explosive ordnance disposal staff coordination structure

3.5. EOD coordination and structures in the joint operations area:

a. The principal role of the EOD C2 structure in the joint operations area (JOA) is to facilitate joint EOD support to operations. This includes, but is not limited to, developing appropriate procedures and coordinating the efforts of allocated national EOD FE to comprehensively contribute to the joint operation.

b. Depending on the EOD FE availability and its caveats, it may be necessary to centrally coordinate national capabilities and resources operating within a JOA in order to optimize their effectiveness and concentrate effort where it is most needed.

c. While the CJEODC does not have a direct tasking authority over EOD FE, it is responsible for coordinating EOD matters with troop-contributing nations and other organizations. The broad roles of the CJEODC are to:

- (1) Give guidance on EOD support to subordinate EOD staff and EOD commanders.
- (2) Give guidance on EOD support to the joint force commander through CMILENG.
- (3) Contribute to the physical operating environment (POE) enablement.
- (4) Develop, implement and maintain the procedures and standards that define EOD support to operations across the JOA.

- (5) Coordinate the exchange of all forms of relevant EOD intelligence and information.
 - (6) Coordinate EOD effort within the JOA.
- d. When designing the composition of an HQ and the staff which will be responsible for planning in an improvised explosive device affected environment, it is desirable to link the countering improvised explosive devices (C-IED) element with EOD FE. This achieves synergy and efficiency by optimizing the coordination of the EOD activities with C-IED. The overarching intent is that the EOD staff is positioned so that the EOD FE are fully integrated in order to enable freedom of action, force protection and meet intelligence requirements.

Section 3 - Considerations for explosive ordnance disposal planning

3.6. **Planning at the strategic level.** At the strategic level EOD expertise integrated into MILENG staff contributes to force planning to ensure that appropriate EOD forces will be generated to meet EOD theatre strategic requirements in support of the operational and tactical commander`s plans. EOD planners work closely with the other staff to ensure that the EOD requirements evolve constantly and properly to make EOD fit for its purpose.

3.7. **Planning at the operational level.** EOD staff contributes to the POE at the operational level and provides the necessary EOD advice to ensure that appropriate EOD capabilities and resources are generated in a timely manner at the tactical level. EOD staff element/advisor at the joint level is responsible for identifying of requirements for EOD support. EOD planning requires coordination at the operational and tactical levels. In order to properly coordinate all the activities, it is important to get involved with all the stakeholders early in the planning process and to establish the control measures to be applied throughout the operations.

3.8. In accordance with AJP-5, *Allied Joint Doctrine for the Planning of Operations*, the CJEOCD should be involved in relevant decision-making and planning processes where EOD expertise and support are required. CJEOCD should provide input to staff products related to EOD support to operations and EOD capabilities requirements.

3.9. A comprehensive and precise update of the explosive ordnance (EO) threat assessment and the state of EOD capabilities within the respective JOA by the EOD staff is essential for POE and situational awareness.

3.10. While EOD support to joint operations extends throughout the rear areas and forward combat areas, the existence of EO incidents in civilian areas within the JOA will often have significant repercussions on the military situation, particularly in stabilisation or peace support operations. In such cases, cooperation between EOD FE and host

nation's law enforcement and civilian agencies is essential and needs to be accomplished through the civil-military cooperation staff at the appropriate command level.

3.11. Extreme care and consideration are given to all chemical, biological, radiological and nuclear (CBRN) EO incidents. In any theatre of operations, these types of incidents have the potential to inflict major casualties, including multiple fatalities, not only on Allied military forces, but also on the unprotected civilian population. The psychological and media aspects of such an incident should be considered thoroughly. The Chemical and Biological Weapons Convention, imposes limitations on CBRN EOD actions, which must be respected.

3.12. The processing of CBRN EO incidents requires highly specialized CBRN EOD, CBRN defence and medical support assets, which have limited availability²³. Additional supporting capabilities should be allocated to the specially designed CBRN EOD activity. These circumstances require a specialized CBRN EOD response plan.

Section 4 – Explosive ordnance disposal tasking and reporting

3.13. EOD tasking and reporting requirements have to be incorporated into NATO standards for EOD orders and reports. Tasking and reporting are the backbone of information exchange among forces requiring EOD support, EOD staff elements, and EOD FE. Commanders should specify standardized reporting procedures in order to facilitate information flow and the development of an overall situational picture for EOD²⁴.

3.14. Since EO awareness is principally an all-arms proficiency, it is imperative that the EOD reports are well-known among Allied forces. In case of an EO incident, it is of utmost importance to share the releasable specifics among friendly forces, while not compromising the operation itself. This requires a comprehensive assessment by the EOD staff based on the strategic impact on the operation and any other hazards related to the EO threat. This supports situational awareness and ensures that appropriate planning and action are taken. The information gained from EOD reports supports the EO threat assessment, C-IED effort and the technical exploitation activities.

²³ For details see AEODP-08, *Interservice Chemical, Biological, Radiological and Nuclear Explosive Ordnance Disposal Operations on Multinational Deployments*.

²⁴ In accordance with AEODP-06, *Explosive Ordnance Disposal Reports and Messages*.

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Lexicon

Part 1 – Acronyms and abbreviations

AEODP	Allied explosive ordnance disposal publication
AJP	Allied joint publication
AXO	abandoned explosive ordnance
BWC	biological weapons convention
C2	command and control
CBRN	chemical, biological, radiological and nuclear
CCW	convention on certain conventional weapons
C-IED	countering improvised explosive devices
CJEODC	Combined Joint Explosive Ordnance Disposal Cell
CWC	chemical weapons convention
EO	explosive ordnance
EOC	explosive ordnance clearance
EOD	explosive ordnance disposal
EODC	Explosive Ordnance Disposal Cell
EODCC	Explosive Ordnance Disposal Coordination Cell
FE	force element
FP	force protection
HMA	humanitarian mine action
HQ	headquarters
JOA	joint operations area
MILENG	military engineering
POE	physical operating environment
NATO	North Atlantic Treaty Organization
UXO	unexploded explosive ordnance
TOA	transfer of authority

Part 2 – Terms and definitions

This lexicon contains a collection of EOD related terms and definitions that are used in this document. In case of differences to the NATO Term database, the definitions in the database are valid.

abandoned explosive ordnance

Explosive ordnance that has not been used during an armed conflict, that has been left behind or dumped by a party to the armed conflict, and that is no longer under the control of that party.

(NATO agreed)

biological and chemical munition disposal

The use of explosive ordnance disposal procedures on a munition that contains a biological agent or chemical agent.

(NATO agreed)

chemical, biological, radiological, and nuclear explosive ordnance

CBRN EO

Explosive ordnance designed to cause the release of a chemical or biological agent or of radiological material onto a chosen target or to generate a nuclear detonation.

(This term is a new term and definition and has been processed for NATO agreed status via terminology tracking file 2019-0047)

chemical, biological, radiological and nuclear explosive ordnance disposal

CBRN EOD

The application of explosive ordnance disposal procedures on devices that contain chemical, biological, radiological or nuclear payloads and substances.

(This term is a new term and definition and has been processed for NATO agreed status via terminology tracking file 2019-0048)

clearance

The systematic detection, identification, marking and neutralization, destruction or removal of obstacles in a defined area to enable a military operation with reduced risk.

(NATO agreed)

conventional munition

A complete device charged with initiators and explosives, and possibly with propellants and/or pyrotechnics but without chemical, biological, radiological and nuclear substances, for use in military operations, including demolitions.

(This term is a new term and definition and has been processed for NATO agreed status via terminology tracking file 2019-0049)

countering improvised explosive devices

The collective efforts to defeat an improvised explosive device system by attacking networks, defeating devices and preparing a force.

(NATO agreed)

explosive

A substance or mixture of substances that, through chemical reaction, is capable of rapidly releasing energy.

Note: Energetic materials consist of high explosives propellants and pyrotechnic compositions.

(NATO agreed)

explosive ordnance

All devices containing explosives, nuclear fission or fusion materials and biological and chemical agents.

Note 1: The English preferred term refers to explosive munitions collectively. Examples: bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small-arms munitions; all mines, torpedoes and depth charges, demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant-actuated devices; electro-explosive devices; improvised explosive devices; and all similar or related items or components explosive in nature.

(NATO agreed)

explosive ordnance clearance

EOC

Explosive ordnance disposal procedures undertaken by qualified personnel to reduce or eliminate the threat posed by explosive ordnance in a defined area.

(This term is a new term and definition and has been processed for NATO agreed status via terminology tracking file 2019-0050.)

explosive ordnance disposal

The detection, accessing, uncovering, identification, mitigation, rendering safe, recovery, exploitation and final disposal of explosive ordnance, regardless of condition.

Note: Explosive ordnance disposal extends to explosive remnants of war and stockpiles, or other explosive ordnance that has become hazardous by damage or deterioration.

(NATO agreed)

explosive ordnance disposal in a maritime domain

Explosive ordnance disposal action to counter the explosive ordnance threat within a defined area on, under or near oceans and contiguous waters, harbours, inland waters and the coastal environment, including its infrastructure and maritime systems.

Note: maritime systems include floating constructions and weapons used in connection to this environment.

(This term is a new term and definition and has been processed for NATO agreed status via terminology tracking file 2019-0054.)

munition

A complete device charged with explosives, propellants, pyrotechnics, initiating composition or chemical, biological, radiological or nuclear material, for use in military operations, including demolitions.

Note:

1. Certain suitably modified munitions may be used for training, ceremonial or non-operational purposes.

2. In common usage, "munitions" (plural) may be military weapons, ammunition and equipment.

(NATO agreed)

render safe

To apply special methods and tools with the intention of interrupting the functions of, or separating, essential components of unexploded explosive ordnance to prevent detonation, combustion, toxic release or another unacceptable effect.

(NATO agreed)

unexploded explosive ordnance

Complete device charged with explosives, propellants, pyrotechnics, initiating composition or chemical, biological, radiological or nuclear material, for use in military operations, including demolitions which has been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or material and remains unexploded by malfunction.

(This term and definition modifies an existing NATO Agreed term and/or definition and has been processed for NATO Agreed status via terminology tracking file 2007-0190.)

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AJP-3.18(B)(1)