



YOU ARE IN THE C-IED

# CHESSBOARD

INSIGHTS FROM NATO's C-IED EXPERTS

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# C-IED IN THE MULTIDOMAIN



C-IED Centre of Excellence

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Centre of Excellence**

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# NEWS FROM OUR WATCH

## C-IED CoE

### Director's Letter

As the Director of the C-IED NATO Centre of Excellence, it is my privilege to introduce this special issue of our magazine, dedicated to addressing the intricate challenges of Counter-Improvised Explosive Device (C-IED) efforts across multiple domains. In today's complex security environment, the threat posed by IEDs transcends traditional battlefields, necessitating a comprehensive approach that integrates land, air, sea, cyber, and space. Our focus is to enhance our preparedness, develop robust regulatory frameworks, and foster educational initiatives that are pivotal in crafting an effective multidomain C-IED strategy.

This issue presents an in-depth analysis of the ongoing multidomain approach and its cognitive elements, underscoring the necessity for innovative solutions that leverage advanced technology and cognitive science. Through a series of articles, and the review of the Centre's day to day activities (Courses, meetings, events, publications) we explore the latest developments in C-IED tactics and technologies, the evolving regulatory landscape, and the critical role of training and education. Our contributors, leading experts in their fields, provide insights into the challenges and opportunities that lie ahead, emphasizing the importance of collaboration and information sharing among the international community of interest.

Moreover, the ongoing Ukrainian conflict, alongside the protracted situations in Gaza and Yemen, are reshaping our perspectives on multidomain C-IED strategies not just from a technical standpoint, but also from a broader strategic and operational vantage. These conflicts highlight the increasing complexity of modern warfare environments, where the integration of cyber operations, information warfare, and traditional kinetic actions necessitates a more sophisticated, agile, and comprehensive approach to C-IED efforts. The lessons learned from these regions underscore the imperative for our Centre and the wider C-IED community to adapt and evolve our strategies. It emphasizes the need for a holistic understanding of the political, social, and economic dimensions that influence the use of IEDs, thereby informing the development of more effective, multidimensional responses that go beyond mere technical solutions to address the root causes and broader implications of these threats.

Looking forward, the challenge for our Centre and the entire C-IED community of interest over the coming months is significant. We are committed to leading the way in multidomain C-IED efforts, driving forward the agenda for enhanced operational capability, regulatory excellence, and educational advancement. This issue aims to spark dialogue, foster innovation, and encourage collective action among our allies and partners. Together, we can surmount the challenges posed by IEDs and ensure a safer, more secure world for future generations.



Colonel Javier Corbacho Margallo (ESP A) is the C-IED CoE Director



# WHAT'S A COE

# CENTRE OF EXCELLENCE

**A CoE is an international military organization.**

CoEs train and educate leaders and specialists from NATO member and partner countries. They assist in doctrine development, identify lessons learned, improve interoperability and capabilities, and test and validate concepts through experimentation. They offer recognised expertise and experience that is of benefit to the Alliance, and support the transformation of NATO, while avoiding the duplication of assets, resources and capabilities already present within the Alliance.

## **Role of the Centres of Excellence**

CoEs generally specialize in one functional area and act as subject-matter experts in their field. They distribute their in-depth knowledge through four pillars:

Education, training, exercise and evaluation (ETEE),

Analysis and lessons learned (ALL),

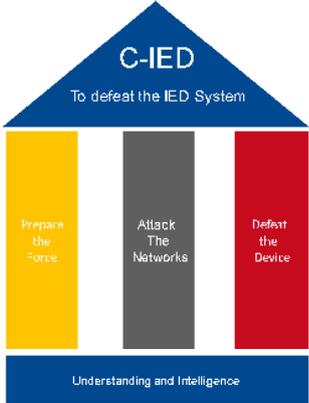
Doctrine development and standardization (DDS), and

Concept development and experimentation (CDE).

CoEs work alongside the Alliance even though NATO does not directly fund them and they are not part of the NATO Command Structure. They are nationally or multi-nationally funded and are part of a supporting network, encouraging internal and external information exchange to the benefit of the Alliance. The overall responsibility for CoE coordination and utilisation within NATO lies with Allied Command Transformation (ACT), in coordination with the Supreme Allied Commander Europe (SACEUR).

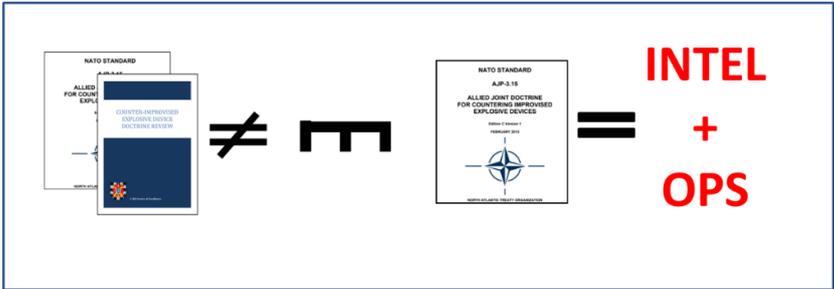
Currently, there are 29 CoEs with NATO accreditation. The working language of CoEs is generally English.

# MISSION, STRUCTURE AND MANNING



**ATTACK ON TERRORIST AND INSURGENT NETWORKS  
IT IS THE MAIN DOCTRINAL PILLAR OF C-IED...**

**... FOR THIS REASON, THE ACTIVITIES ARE GEARED TOWARDS  
INTEL'S ACTIVITIES AND OPERATIONS**



# THE CENTRE IN ACTION!

## C-IED COE HIGHLIGHTS

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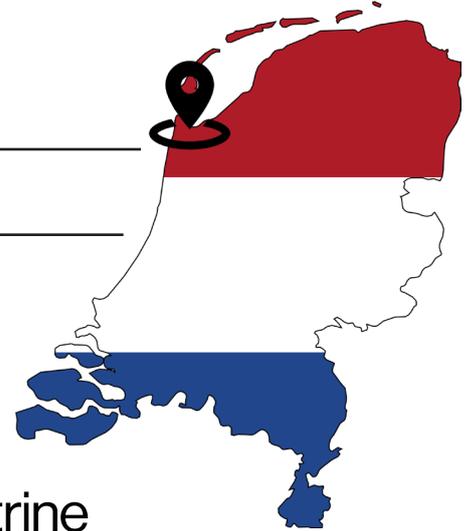
### 26<sup>TH</sup> NATO COUNTER-IED WORKING GROUP MEETING - AMSTERDAM

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The 26th meeting of the Counter-Improvised Explosive Device Working Group (C-IED WG) was held in Amsterdam (NLD) over the period 27-30 November 2023.

Organized by the NATO standardization Office, chaired by Col KAVANAUGH (US) and supported by the C-IED CoE, the aim of this meeting was to update the review of the STANAG 2294 (ACIEDP-01) on “Countering Improvised Explosive Devices Training Requirements”, present an update of the review process on STANAG 2295 (AJP-3.15), discuss on the Study Draft 2, in accordance with the Allied Joint Doctrine Campaign Plan Manager (AJDCPM), present an update of the review process of the STANAG 2623 (AMWDP-1) on “Military Working Dog (MWD) Capabilities”, and support the derived activities in relationship to the Technical Exploitation Interoperability Standardization Agreement after the approval of the NATO Technical Exploitation Policy.

It was also the place to deliver the MCLSB priorities, C-IED WG programme of work, continue to strengthen relationships between C-IED’s community.



- Doctrine
- Technical Exploitation
- Maritime Environment



# LESSONS LEARNED!

C-IED COE LESSONS LEARNED WORKSHOP 2023



The Centre of Excellence Against Improvised Explosive Devices (C-IED CoE) has brought together 40 experts from 15 nationalities for three days in its biennial Lessons Learned Workshop (LLWS) at its facilities in Hoyo de Manzanares. Inaugurated by the Colonel Director, Javier Corbacho Margallo, the workshop has had the objective of contributing to the process of Lessons Learned from NATO.

It also had the aim of increasing the knowledge of the missions that different nations/agencies carry out in countries with IED threats to facilitate and strengthen interaction in the international C-IED community.

The workshop has been structured into four panels that have dealt with the evolution of the C-IED concept, Technical Exploitation in support to Attack the Networks, initiatives and trends in Education and Training, and Research and Development in C-IED. The panels have been developed through lectures given by experts in the field and a subsequent debate and exchange of ideas.

The workshop lasted three days and the attendees highlighted the usefulness of the lessons identified



## The community of Lessons Learned from NATO

and made a commitment to disseminate the results obtained to the entire C-IED community.

The organization of this workshop is part of the firm commitment that the C-IED CoE maintains with the community of Lessons Learned from NATO, in accordance with what is established in its doctrine and policy on the matter.



Proof of this commitment, in addition to the organization of this workshop, is the close collaboration with the NATO Joint Analysis Centre and with the NATO community of Lessons Learned in Education and Training.

Additionally, the C-IED CoE contributes and supports the development of the Alliance new tools in terms of lessons learned, such as the NATO Observation Collection and Analysis tool, or the new NATO LL toolset.

# TEWE23




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## TECHNICAL EXPLOITATION IN WATER ENVIRONMENT 23 - CARTAGENA

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The C-IED CoE organized the TEWE 23 in Cartagena, Spain, from 21 - 23 November 2023. It was a VNCF-sponsored event that provided an ideal opportunity for networking and information sharing among units responsible for technical exploitation in water environment. For the first time, certain trials were conducted to test unusual TTPs employing IEDs underwater and how best to exploit them; the findings were presented at the Seminar. Other topics covered were best practices for technological exploitation in water environment, research and development activities, information exchange, and best practices analysis from exercises.

The audience included representatives from SWE (Technical Exploitation Squadron), NLD (maritime EOD), GBR (Defense EOD and search), FRA (GPD MANCHE), BEL (EOD), ESP (UBMCM, International Demining Centre, Submarines Flotilla, LEA...) and NATO STO CMRE (Centre for Maritime Research and Experimentation).

Within this event, we faced two novelties. The use of VTC, avoiding displacement for one briefer, but essential to know the state of art of semisubmersibles and the new threat not only as IED vector but for logistics purposes or intelligence intentions, avoiding traditional surveillance means. And secondly not only the opportunity to witness

## New water challenges

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### State of art of semisubmersibles and the new threat not only as IED vector but for logistics purposes or intelligence intentions

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one of the trials but to discuss with the briefers presenting the trials (both, in France and Spain) and their conclusions/assessments.

The trials' results and assessments paved the way for further trials and a new line (Enemy Course of Action) to be developed in the following Alternative Threat Scenario event.

Technical exploitation techniques are being developed, and it is vital for NATO members and the Alliance to share knowledge and experiences.





# #WEARENATO



**CENTRES OF EXCELLENCE (COEs)  
ARE MILITARY ORGANIZATIONS  
THAT TRAIN AND EDUCATE  
LEADERS AND SPECIALISTS  
FROM NATO MEMBERS  
AND PARTNER COUNTRIES**

**MORE AT: [nato.int](https://nato.int)**

# PREPARE!

## COURSES & TRAINING

### SUPPORTING SWEDEN

#### NATIONAL BOMB DATA CENTRE SUPPORT COURSE - STOCKHOLM

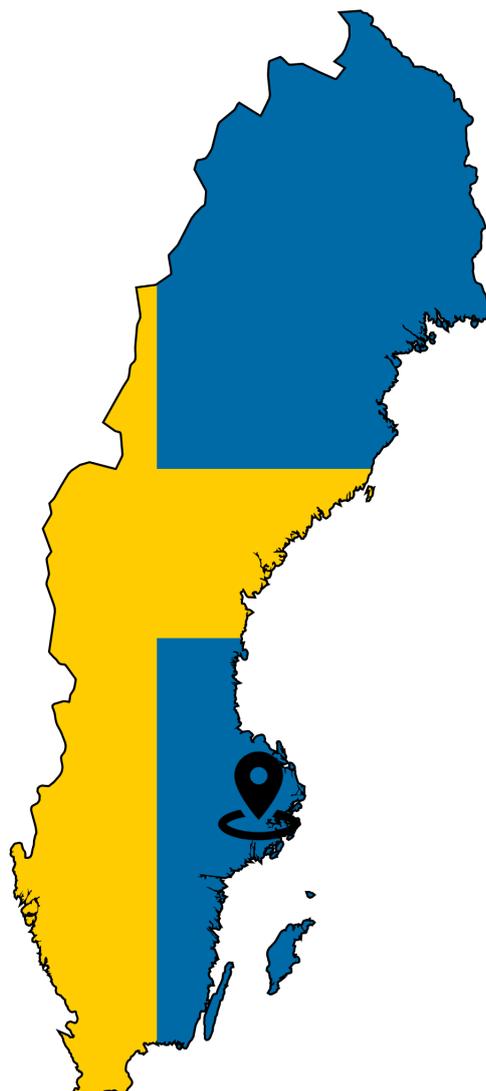
The C-IED CoE provided support to the Swedish Police Bomb Data Centre from 12 - 16 June at the NBDC HQ in Stockholm. NBDC requested support from C-IED CoE to create a better understanding of how the NATO C-IED approach can be applied to effectively defeat the IED system in Sweden.

The support was provided through an adapted course based on C-IED Staff Officers Course (CSOC) and a specific fictitious scenario for the practical part of the training tailored for LE. The training was well received by the NBDC staff and an eyeopener for them since the current CIED approach is technically oriented in a stow piped organization.

The task from the Swedish government to prevent the IED situation in Sweden was requested to several organizations including SWE police security services, Customs, Swedish Civil Contingency Agency and FOI, as the understanding of the needs is currently limited to NBDC.

The most relevant outcome of the support is that, for future initiatives, NBDC realized the necessity to implement a broader interagency approach among the organizations included in the task from the government.

## How the NATO C-IED approach can be applied



# CYBER



## TERRORIST USE OF CYBERSPACE IN GENERAL TERMS COURSE -ANKARA

The Defence Against Terrorism Centre of Excellence (DAT CoE) was holding the Terrorist use of Cyberspace in General Terms course between 18-22 September, in Ankara, Türkiye.

The aim of this course is to inform participants about key developments and emerging threats in terrorist use of cyberspace and how the cyberspace is used to support terrorist acts, enabling NATO and its partners to anticipate and get ready for emerging challenges. There were 54 attendees from 17 nations and 9 briefers from 6 countries.

Cyberspace provides a quadruple perspective, being an environment, a tool, a target, and a solution(mean). Aside from cyberspace, other terms were debated, like: Cyber Crime, Information Warfare, Cyber Warfare, Hybrid Warfare, Cyber Terrorism, Cyber Attack, Cyber Resilience, Legal aspects of Cyberspace, Geopolitics related with Cyberspace.

From C-IED perspective, there are some connections between Cyber Crime and IED:



## Emerging threats in terrorist use of cyberspace

- Malevolent Creativity, meaning designing and planning carefully with bad intentions.
- Use of Cyberspace for both activities (communication, funds raising, intelligence gathering, collective planning).
- Heavy reliance on human network.
- Failure of imagination on one side promotes the other side as winner.
- To counter both, Intelligence plays an important role, use of technical exploitation is essential and targeting the brain behind the action is crucial.



# ALTERNATIVE ANALYSIS FOR DECISION MAKING

## NATO ALTERNATIVE ANALYSIS COURSE - MADRID

This course consisted of a training activity that lasted 5 days, from 2 - 6 October 2023, where 39 attendees (MIL-CIV) from NATO nations assisted. Not many students had extensive experience in AltA and INTEL analysis, although speakers were assigned to said NATO posts.

The battle rhythm of the course was focused on practice, dividing the schedule into 50-50% theoretical lectures and syndicate work. The structure of the course had a perfect balance between lessons and related practices during the whole day. Moreover, all working groups carried out their tasks individually and gathered, all students interacting with each other.

The hub of the course was the NATO Alternative Analysis Process. This course was created to develop and maintain an alternative analysis capability within NATO.

Alternative Analysis capability enables NATO staff members to apply alternative independent analysis at the request of commanders to problems faced by the Alliance either separately or in conjunction with ongoing processes. This capability introduces ideas that, when effectively implemented, will assist in ensuring success from the results of decision-making processes (plans, policies, procedures, etc.).

## This course was created to develop and maintain an alternative analysis capability within NATO

According to this, the students used the NATO AltA handbook to follow lessons and perform workshops.

The aim of the course was to introduce students to the principles of NATO Alternative Analysis, and the application of Alternative Analysis tools and techniques in support of decision-making and problem-solving. This course also prepares the student for the role of Alternative Analysis Facilitator.



# OUR COURSE IN HUNGARY



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## WEAPONS INTELLIGENCE TEAM COURSE ITERATION 23.2 - SZETENDRE

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C-IED CoE conducted the second iteration of the WIT Course between 12- 29 September 2023, in the Hungarian Defence Forces NCO Academy, in Szetendre, Hungary.

C-IED CoE is the Executing Agent of the VNCF WIT Training 2022-23 Agreement and provides participating nations an excellent opportunity to understand the NATO exploitation process and to train their WIT operators. C-IED COE continues to support states in their national WIT capability building process, ensures the coherence of the Alliance in applied procedures and continues to enhance WIT efficiency.

## Understanding NATO Level 1 exploitation process



# JOIN UP! BE PART OF C-IED COE



YOU CAN BE PART OF OUR EVENTS AND COURSES.

VISIT: [ciedcoe.org](https://ciedcoe.org)

# INTEGRATING C-IED IN COMMAND DECISIONS

## C-IED STAFF OFFICER COURSE (CSOC) 23.3 - MADRID

The third iteration of CSOC took place in Madrid from 23 to 27 October 2023. The attendees, originating from ten nations (BEL, DEU, ESP, FRA, GBR, LVA, NLD, POL, TUR, USA), started the course with the academic foundations of C-IED throughout the first half of the week.

From the second day the group was divided into three syndicates which were tasked to solve operational problems supporting the commander's decisions either within the planning process or during the conduct of the operations.





# HYBRID

## EUROPEAN UNION FACING HYBRID THREATS CHALLENGES COURSE

From 12 - 14 December 2023, C-IED CoE personnel attended the European Union facing hybrid threats challenges Course.

Hybrid warfare is not a new concept, but it is true that it has become increasingly prevalent in modern conflicts. It is linked to C-IED by the participation of state and non-state actors, who employ a range of tactics to achieve their goals.

The lecturers and teachers focused and insisted on how misinformation tactics are used by the enemy, as well as on the increasing importance of cyberspace and how world superpowers are investing and investigating in this branch.

Regarding technology issues, the speakers mainly talked about different tools that are being implemented to fight against misinformation using Artificial Intelligence. They also mentioned that some institutions are investigating how to fight against UAS, as the use of this tool in combat has increased.

Also, the concept of NBICs (Nanotechnology, Biotechnology, Information Technology and Cognitive Sciences) was tackled in the technological part of the course. In short, NATO's adversaries are already investing in these new technologies, which

## How misinformation tactics are used by the enemy



can modify cognitive capabilities, for instance, using nanotechnology and biology to radically transform Western societies. The cognitive field will be one of tomorrow's battlefields, and it could affect C-IED.

The course was a good opportunity to increase the knowledge about this concept that has become increasingly prevalent in modern conflicts. Hybrid Warfare is linked to C-IED in many aspects, so C-IED CoE personnel have seized this opportunity to learn new concepts from the French Institute for Higher National Defense Studies (IHEDN) and the European Security and Defence College (ESDC).

# ENGAGE THE IED NETWORKS

## ATTACK THE NETWORK OPERATIONAL COURSE (ATNOC) 23.2 - MADRID

The C-IED CoE conducted on its premises another iteration of the ATNOC in the period from 27 November to 7 December 2023 with 23 students from 10 nations. They were supported by internal C-IED CoE mentors/briefers and an external lecturer from Spain National Police.

The ATNOC provides NATO Staff Officers/Senior Staff Assistants from C-IED/Intel/Ops/Plans or other Counter terrorism related disciplines, from tactical and operational level commands as well as personnel of Law Enforcement and Intelligence

Agencies with AtN related Situational Awareness.

The emphasis is put on knowledge and skills to integrate and facilitate the comprehensive AtN approach across other HQ processes and disciplines (e.g. NATO OLPP, intelligence, targeting and exploitation processes) to recommend lethal and non-lethal ways to engage all networks (threat, neutral and friendly) and to assess on the engagement effects.

**VISIT: [ciedcoe.org](https://ciedcoe.org)**





# C-IED COE LODGE

The Counter Improvised Explosives Devices, Centre of Excellence, has in its facilities a lodge with 60 single/double rooms and common areas, with living room and dining room, outdoor garden, terraces and self-service laundry. The main goal is to give accommodation to the people attending the CoE courses and events.

All rooms have TV connected to satellite, WIFI, refrigerator, study area and own bathroom with shower, as well as provision of sheets, towels and amenities.

The lodge is located inside of “Academia de Ingenieros” barracks, 1,5 km far from CoE main building, inside the Regional Park of the Cuenca Alta del Manzanares, in the municipality of Hoyo de Manzanares, at a distance of 35 km from Madrid Capital.



[billeting@ciedcoe.org](mailto:billeting@ciedcoe.org)

# C-IED ON THE FIELD!

## EXERCISES

### ADDING C-IED PERSPECTIVE

**BISON COUNTER 23 FINAL PLANNING CONFERENCE AND MEL/MIL SCRIPTING - ZARAGOZA/CARTAGENA - SPAIN**

Exercise BISON COUNTER 23 (BC23) is a European Defence Agency (EDA) sponsored Counter Improvised Explosive Device (C-IED) Live Exercise. The BC23 is built up in a Conventional Warfare scenario with asymmetric threats.

The BC 23 exercise took place in November 2023 in Zaragoza and Cartagena and involved the deployment of a tailored Combined Joint Task Force Headquarters (CJTF-HQ), a Task Force (TF) C-IED, a manoeuvre Unit and the Joint Deployable Exploitation and Analysis Laboratory (JDEAL), reinforced by Navy and Air Force capabilities.

The aim of the BC23 is to train the full spectrum of the C-IED concept in multi-level and multi-domain scenario with a complete panoply of activities covering the three C-IED pillars.

C-IED CoE attended the BISON COUNTER 23 final planning conference 27 to 30 of July and MEL/MIL scripting 12 to 15 of September with 4 SMEs to support the planning process and implement a full spectrum C-IED approach in the exercise.

### Multi-level and multi-domain scenario covering the three C-IED pillars

C-IED CoE attendance to BC 23 FPC and MEL/MIL permitted to script inputs in order to link the tactical exercise vignettes with operational level C-IED approach in the execution phase of the exercise.



# C-IED AT THE TACTICAL LEVEL

## STEADFAST DAGGER 24 EXERCISE MEETING GROUP

STEADFAST DAGGER 24 (STDA 24) Exercise Meeting Group was held on 29 - 30 August 2023, with the support of C-IED COE. STDA 24 is a SHAPE sponsored operational and tactical level Command Post/Computer Assisted Exercise (CAX/CPX) that will train the Allied Reaction Force (ARF) 2025 in planning and executing Multi Domain Operation (MDO) against Terror Groups and Militias contesting NATO and NATO partners in the Western African region. STDA 24 is the first of a series of exercises, training NATO Crisis Prevention-Management and Cooperative Security out of SACEUR's area of responsibility.

### Enable implementation of C-IED at the tactical level

C-IED CoE provided support to SHAPE JENG Division in the Exercise Meeting Group 1.2 in order to ensure C-IED implementation in the exercise objectives.

Success and traction for C-IED implementation were found within the two main capability areas (MCA): Protect and Inform (Intel). The exercise objectives established for Protect and Inform will at least enable the implementation of C-IED at the tactical level.

## SUPPORT TO EXERCISE

### TECHNICAL INTEROPERABILITY EXERCISE 23 INITIAL PLANNING CONFERENCE

The C-UAS Technical Interoperability Exercise (TIE)-23 occurred during the period 12-22 September 2023 at the Lieutenant General Best Barracks, in The Netherlands.

C-IED CoE attended the Counter UAS Technical Interoperability Exercise (TIE 23) initial planning conference in order to identify possibilities to support C-IED components in the exercise.

UAS systems are frequently used as delivery method of IEDs and pose a threat to own troops and third parties. C-IED CoE monitors this new reality closely to support the development of countermeasures and TTPs.



### C-IED CoE monitors this development closely

# ARDENT DEFENDER 2023

## Providing C-IED feedback



The Canadian Armed Forces hosted Ardent Defender 2023 in order to build international cohesion and share/ demonstrate different tactics techniques and procedures amongst CIED professionals of different nations. The exercise took place at in Gagetown, New Brunswick, Canada on 11 October - 5 November 2023.

The DTD section took a targeted approach to attending the exercise and only focused on attending part of the tactical phase (27 October- 3 November 2023 - 7 Days). This is because we did not want to embed ourselves in the planning phase and wanted to provide feedback on purely what was witnessed with the exercise in full swing.

The exercise was measured as a great success from the lens of the Centre. This is because of the

## Feedback on purely what was witnessed with the exercise in full swing, great success from the lens of the Centre

way in which the organizer managed the exercise including current trends and including aspects of all three pillars of C-IED.

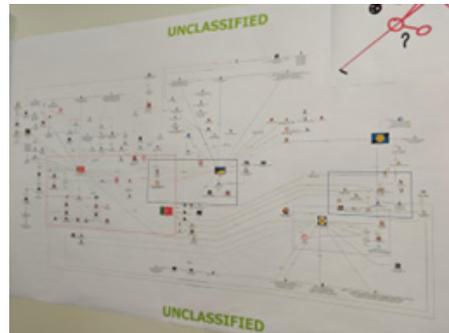
# ARDENT DEFENDER 2023



## PREPARE THE FORCE (PtF)



## DEFEAT THE DEVICE (DtD)



## ATTACK THE NETWORKS (AtN)



The first three days of the exercise was the Force Integration Training (FIT) phase.

The main effort of FIT was to provide an opportunity for exercise participants to practice/refresh on key EOD skillsets and to understand level 1 and level 2 exploitation amongst peers.



There were over fifty tracked incidents from the Excon control from hoax devices to UAVs. The exercise was setup to mimic a situation similar to that of the current Ukrainian conflict, where the area was semi permissive and limited the teams to do what was needed versus what they would normally do to speed up a mission.

After every mission evidence was collected, dropped off at a fully functioning level 2 laboratory, and full reports were submitted to the operations section for further administrative work.



From each incident and from the intel gathered locally, the intelligence sections began creating a network that linked many individuals together. From buyers to potential employers, full webs were created utilizing the Analyst Notebook.

Having no targeting element, this was as far as the exercise could reasonably go without including further assets into the exercise.

# ADDING C-IED PERSPECTIVE

## NORTHERN SPIRIT 2023 (NOSP) EXERCISE

The “Northern Spirit 2023” (NOSP 23) is the Biometrics and Identity Intelligence (I2) vignette executed in the margins of the Northern Challenge 2023 (NC 23). Both events are part of the Defence against Terrorism (DAT) Programme of Work (POW) and are sponsored by the NATO HQ through the Emerging Security Challenges Division (ESCD).

The NOSP 23 Biometrics Vignette intends to provide I2 support, through exercising the Biometrics and Human Network Analysis, to the “Attack the Network” pillar of the C-IED effort executed in the NC 23 exercise.

The aim is to exercise the technical and

## The “Attack the Network” pillar of the C-IED effort executed

operational interoperability of Biometrics and I2 in a scenario simulating concurrent NATO led operations in both Maritime and Land Joint Areas of Operations (JOAs).

To attend the LIVEX part permitted to detect in which parts of the exercise C-IED CoE can support the organization of the exercise and conduct engagement with the main actors to be invited to the planning process at the initial point for the next iteration, NOSP 24.

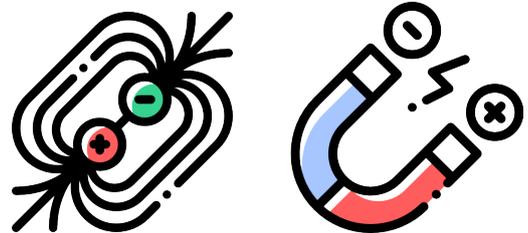
## AT SEA

### NEMO (NAVAL ELECTRO MAGNETIC OPERATIONS) 24 IPC

NATO Naval Forces must be able to operate their electronic systems within the most hostile electromagnetic environments. To assist in assuring multi-national maritime capability and interoperability, the Above Water Warfare Capability Group (AWWCG), set out a programme of NATO Naval Electro Magnetic Operations (NATO NEMO) trials.

NEMO trials can be used to evaluate the effectiveness and to validate NATO EW tactics and techniques used in Anti-Ship Missile Defence, Defence against UAS/USV and IEDs in the maritime environment.

The aim of the conference was to introduce a



common proposal from CSW CoE and C-IED CoE of FP trials with ECM for naval assets and maritime EOD teams.

The proposal from C-IED & CSW CoE was well received from the OPR and the trials will be executed in a similar set up as last time in NEMO 22 in Rota, with the difference that NEMO 24 will be focusing on harbour protection this time.

C-IED CoE participated in the initial planning conference for NATO Naval Electromagnetic Operations Trials 24 (NEMO 24) to support the planning process of the trials to implement force protection measures against IED threat in the maritime environment.



# ADDING C-IED PERSPECTIVE CONFERENCES, SEMINARS AND WORKING GROUPS

## CRITICAL INFRASTRUCTURE

ADVANCED RESEARCH WORKSHOP - CRITICAL INFRASTRUCTURE PROTECTION IN RESPONSE TO TERRORIST ATTACKS

C-IED CoE participated in the Advanced Research Workshop on “Critical Infrastructures Protection in response to terrorist attacks”, which was held in Istanbul (Türkiye), between the 23rd and the 25th of October 2023, under NATO Science for Peace and Security Programme sponsoring, co-organized by Kutahya Dumlupinar University (TUR) and the National Technical University of Ukraine (“Igor Sikorsky Kyiv Polytechnic Institute”).

This event, with participants from Azerbaijan, Latvia, Poland, Türkiye, and Ukraine, allowed

an excellent opportunity for the engagement of experts in the field of protection of critical infrastructures in response to terrorist attacks, aiming for the risk minimization / mitigation of potential emergencies at critical infrastructure facilities, and at the same time, enhancing knowledge between the participating countries and NATO.

C-IED CoE continues to support nations and partners in their national capability building process, ensuring the coherence of the Alliance.



# SHARING EXPERTISE



## TECHNICAL EXPLOITATION NTEG MEETING WITH INVITEES -BRUSSELS

The NTEG met with Invitees on 29 October 2023 at NATO HQ in Brussels, Belgium. The purpose was to review progress of work under the NATO Technical Exploitation (TE) Programme of Work Implementation Plan and share information about TE related training and events.

The agenda of the meeting was split into two sessions with different target audiences: Partner session (Open to invitees, Australia, Austria and Israel) and NATO session. The United States briefed on Serial 2.4 Flagship Activity Martial Vision TE Exercises and Experimentation Roadmap.

The United Kingdom briefed on Serial 9.2 Flagship Activity UAS Exploitation, which aims to harmonize TE of UAS activities across the Alliance. The JISD Co-chair presented the

## Two sessions with different target audiences

progress made and the schedule for the NATO Military Committee TE Policy.

Belgium briefed on the Doctrine Engagement Plan, calling attention to the importance of influencing doctrine via national representatives to the respective custodian groups.

The C-IED CoE presented its TE-related activities including the Technical Exploitation in Water Environment (TEWE) Seminar & Trials, the DOMEX and Advanced DOMEX courses, the WIT and WIT Training Developer courses and the upcoming C-IED Lessons Learned Workshop.



# ONGOING DIALOGUE

## QUALITY ASSURANCE FORUM 2023

The NATO Quality Assurance (QA) Forum 2023 was held on 17th and 18th October at the Military Engineering Centre of Excellence, in Ingolstadt, Germany.

More than 70 representatives from the NATO QA Community of Interest attended the Forum to share and exchange best practices, methodologies and insights related to QA. For the C-IED CoE, as an accredited CoE, the involvement in this yearly NATO Forum is

mandatory, as it highlights the organization's commitment to excellence and continuous improvement, being this Forum a great opportunity to contribute to the ongoing dialogue on how to best integrate QA principles not only into education and training but also in the realm of C-IED.

## 70 representatives from the NATO QA Community of Interest



# JOINT ACTIVITY

## EUROPEAN EXPLOSIVE ORDNANCE DISPOSAL NETWORK – CEPOL JOINT ACTIVITY WITH EUROPOL

C-IED CoE was represented in the European Explosive Ordnance Disposal Network, an onsite joint activity sponsored by CEPOL under the organization of the Spanish Directorate General of Studies and Coordination and EUROPOL.

The event was held at the Guardia Civil Officers Academy and the NH Collection Palacio de Aranjuez Hotel (Aranjuez, Spain), between the 07th and the 10th of November 2023.

This event, with 75 participants from 32 CEPOL and EUROPOL member nations, and representatives from different international organizations (including ECDC, EUROPOL, IAEA, JRC, and C-IED CoE), allowed an important opportunity for the engagement of experts, focusing on the exchange of

Engagement of experts, focusing on the exchange of technical information on recent incidents involving explosives and CBRN materials



technical information on recent incidents involving explosives and CBRN materials, and the integration of new technologies in disposal activities, being exclusively addressed to competent national authorities dealing with CBRN-E cases (e.g., bomb technicians and CBRN units).



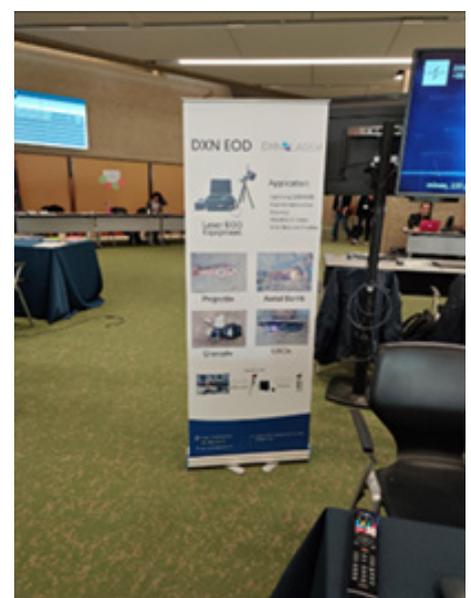
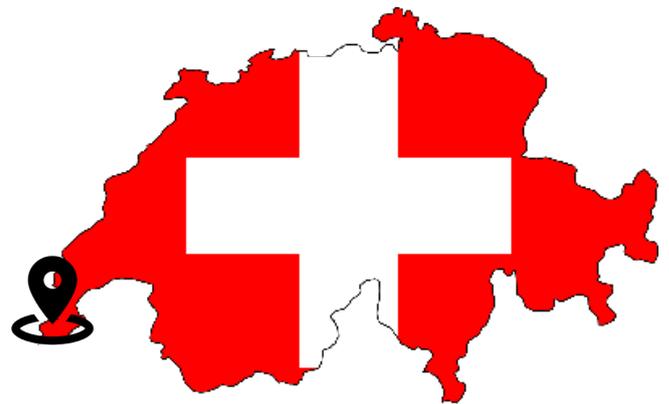
# MINE & AMMUNITION

GICHD INNOVATION CONFERENCE 2023, CBRN TRAINING AND TESTING CENTRE

The Geneva International Centre for Humanitarian Demining (GICHD) showcased new technologies and provided a unique platform to discuss current demand-driven Explosive Ordnance Risk Reduction challenges relating to mine action and ammunition management activities. The convention took place at the Geneva International Conference Centre (CICG), Geneva, Switzerland.

The C-IED CoE was invited to be a part of the Conference and during our conversations it was noticed that many of the vendors and topics had crossover with a lot of our pursued efforts (i.e. AI, AR, 3D printing, UAV). This event is not primarily C-IED focused, but there is a large amount of overlap with C-IED, as well as with the type of vendors who present the same equipment that is used in C-IED as it is EOD centric.

## Mine action and ammunition management



# VIRTUAL EOD

## EXPLOSIVE ORDNANCE DISPOSAL VIRTUAL REALITY WORKSHOP 2023

From 27-29 November 2023, C-IED CoE personnel attended the EOD VR WORKSHOP in Trencin (Slovakia).

The workshop consisted of two days in which several EOD personnel and other experts in the computing area from industry and academia worked together on creating solutions for the improvement of EOD/IED VR/XR Training and Combat Support Kit (ETACS) project.

The ETACS project expects a 3D database to be created, which is in progress by the EOD CoE. On the other part, C-IED CoE has taken the opportunity to show the ETACS project



manager the database the centre is working on, so they were very interested in it. The C-IED CoE personnel showed the audience the proof of concept of the 3D munitions & IEDs database.

# SUPPORT TO U.N.

## UNITED NATIONS COMBINED REVIEW EOD / COUNTER-IED GUIDANCE DOCUMENTS 1<sup>ST</sup> WRITING WORKSHOP

The inaugural United Nations Combined Review EOD / Counter-IED Guidance Documents Writing Workshop took place from 15-21 November 2023, at the National Defence Academy in Vienna, Austria. Organized by the United Nations Office of Military Affairs, the workshop brought together Member States, EOD Subject Matter Experts, and international police organizations to collaboratively review and develop revised drafts of key documents related to Explosive Ordnance and Counter Improvised Explosive Devices (C-IED).

## Review and discuss the first drafts of two critical documents

The primary objective of the workshop was to review and discuss the first drafts of two critical documents: the Improvised Explosive Device (IED) Threat Mitigation Military and Police Handbook and the United Nations Peacekeeping Missions Explosive Ordnance Disposal (EOD) Unit Manual. These drafts, produced by a Core Working Group at the United Nations Headquarters, were subjects for comprehensive discussion and improvement. The C-IED CoE support to the UN Writing WS was worthwhile. The Centre was able to provide an abundance of input and recommendations as well as a NATO perspective from a C-IED doctrine standpoint. Additionally, we built solid relationships and contacts with other EOD SME's and international partners.



# UPCOMING EVENTS 2024

## C-IED CoE courses and events planned for 2024

This is the C-IED CoE planning for 2024 with regard to courses approved by the Steering Committee on 24 October 2023. Below dates may change due to unforeseen reasons. No rights can be inferred according to this schedule.

### **NOTE:**

- 1. THIS IS THE C-IED COE PLANNING FOR 2024 WITH REGARD TO COURSES AND EVENTS. THE DATES AND LOCATIONS COULD BE SUBJECT FOR CHANGES, THE C-IED COE CANNOT BE HELD LIABLE FOR ANY CONSEQUENCES RESULTING FROM A CHANGE OF DATES OR LOCATIONS.**
- 2. THE EVENTS INDICATED IN RED ARE IDENTIFIED AS C-IED COE'S DIAMOND EVENTS.**
- 3. THE PROPER SAVE THE DATE AND CALLING LETTER FOR EACH EVENT WILL BE RELEASED IN ADVANCE.**
- 4. THE VNCF WIT-PROGRAMME 2023-2024 HAS NOT YET BEEN APPROVED BY NATO HQ. IN CASE THERE IS NO PROGRAMME, THE MENTIONED COURSES WILL NOT BE CARRIED OUT.**

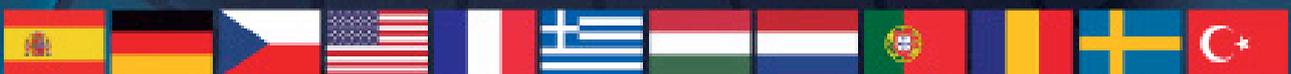
Dates/Place/Course	Availability	Duration	Details
JAN 29-FEB 02 / ESP / Analyst Notebook Users Course (ANUC) 24.1	15 seats available / Military, Law Enforcement & civilian analysts	5 days course	Not classified, no fee
MAR 04-MAR 15 / ESP / AtN Operational Course (ATNOC) 24.1	24 seats available / C-IED Staff Officers and Senior Staff Assistants	10 days course	NATO Approved, no fee
MAR 12 - MAR 13 / ESP / Annual Discipline Conference			
APR 08-APR 19 / ESP / DOMEX-Course 24.1	12 seats available / Open to military	10 days course	NATO Listed, no fee
MAY 14-MAY 31 / ROU / NATO Weapons Intelligence Team Course (WIT) 24.1	20 seats available / OF 1-3 and OR 4-8	13 days course	NATO Approved, 125€ (for non-VNCF) (TBC)
<b>MAY 28-MAY 30 / ESP / Technology Workshop</b>			
JUN 17-JUN 21 / ESP / C-IED Staff Officer Course (CSOC) 24.2	24 seats available / C-IED Staff Officers and Senior Staff Assistants	5 days course	NATO Approved, no fee
JUN 24-JUN 28 / ESP / Analyst Notebook Users Course (ANUC) 24.2	15 seats available / Military, Law Enforcement & civilian analysts	5 days course	Not classified, no fee
<b>JUN 25-JUN 27 / ESP / Lessons Learned Workshop (LLWS)</b>			
SEP 10-SEP 27 / HUN / NATO Weapons Intelligence Team Course (WIT) 24.2	20 seats available / OF 1-3 and OR 4-8	13 days course	NATO Approved 125€ (for non-VNCF) (TBC)
SEP 30-OCT 11 / HUN / DOMEX-Course 24.2	12 seats available / Open to military	10 days course	NATO Listed, no fee
OCT 21-OCT 25 / ESP / C-IED Staff Officer Course (CSOC) 24.3	24 seats available / C-IED Staff Officers and Senior Staff Assistants	5 days course	NATO Approved, no fee
NOV 04-NOV 08 / ESP / Analyst Notebook Users Course (ANUC) 24.3	15 seats available / Military, Law Enforcement & civilian analysts	5 days course	Not classified, no fee
NOV 18-NOV 29 / ESP / AtN Operational Course (ATNOC) 24.2	24 seats available / C-IED Staff Officers and Senior Staff Assistants	10 days course	NATO Approved, no fee
DEC 09-DEC 13 / ESP / NATO Weapons Intelligence Team Training Developer Course (WIT TDC)	12 seats available / C-IED Staff Officers and Senior Staff Assistants	5 days course	



# 6<sup>TH</sup> C-IED TECHNOLOGY WORKSHOP

TECH TRIUMPHS OVER THREATS:  
COUNTERING IED SYSTEM IN PROGRESS

28 | 29 | 30 May 2024 SEVILLA SPAIN



# C-IED: WE ARE ON THE LEFT OF THE "BOOM"



**C-IED COE  
IS FOCUSED ON NETWORKS  
TO PREVENT THE "BOOM".  
THAT'S WHY WE  
WORK ON THE  
"LEFT OF THE DEVICE"**



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