

July 2019

C-IED CoE Newsletter



**Counter Improvised Explosive Devices
Centre of Excellence**



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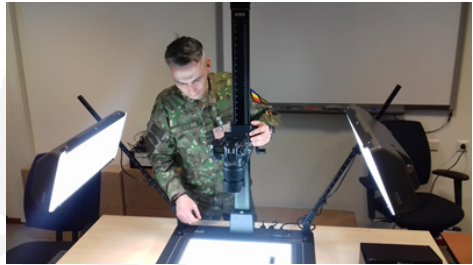
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COURSES AND TRAINING

WEAPONS INTELLIGENCE TEAM (WIT) REFRESHER FOR INSTRUCTORS

The WIT refresher for instructors took place between 18-22 February 2019 in Soesterberg, Netherlands. The training was hosted by Dutch EOD, as part of the Voluntary National Contribution Fund (VNCF) WIT Training 2019 Executing Agent Agreement. Besides the delivery of the new contents of the course, the training was designed so participants would spend some time discussing specific teaching strategies and creating a common understanding about the new teaching points.

Several technical lectures were offered and discussed in the perspective of the implementation as Post-Blast collection and record (Devices, Material, Articles and Traces



(DMAT) identification, crater analysis, collection in vehicles, infrastructures, dismounted personnel); Documents and Media Exploitation Techniques and procedures, including the awareness and manual extraction techniques in DOCEX, MEDEX and CELLEX; Unmanned Aircraft Systems exploitation; and finally Off-Scene DMAT processing techniques.

C-IED STAFF OFFICER COURSE (CSOC) 19.1

From 18-22 March 2019, the C-IED Staff Officers Course (CSOC) 19.1 was conducted in the C-IED CoE in Madrid. This was the first of three iterations in 2019. The CSOC training audience had a mix of students working in the fields of engineer, EOD, maneuver, and intelligence. Also the Spanish police attended the course. This resulted in a course in which students did not only learn from the instructors and mentors, but also from their fellow attendees.



NATO CIED ATTACK THE NETWORK OPERATIONAL COURSE (AtNOC)

Based on both CoEs POWs 2019, C-IED CoE in collaboration with the Defence Against Terrorism (DAT) CoE organized the Attack the Network Operational Course in the period of 1-12 April 2019.

This course, although it was led by the CIED CoE and supported by DAT CoE, was planned by both CoEs in order to deliver the most complete, accurate, correct and up-to-date AtN training to the attendees.

The AtNOC intends to provide NATO Intelligence, Operations, Plans, Counter terrorism and C-IED Staff Officers and Senior Staff Assistants from upper tactical (LCC, MCC, ACC, SOCC) and operational level commands with the knowledge and skills to integrate the comprehensive AtN approach across the other HQ processes. Emphasis concentrates on providing AtN related Situational Awareness, recommending ways to engage all networks and an assessment on the engagement effects.



MOBIL TRAINING TEAM (MTT) AT NATO HQ OF THE MULTINATIONAL CORPS NORTHEAST (MNC NE)

On 21-23 May 2019, a C-IED CoE led Mobil Training Team (MTT) conducted a C-IED training event at NATO HQ of the Multinational Corps Northeast (MNC NE) in Poland. The MTT consist of three SMEs from the C-IED CoE staff and additional externals from NATO JFC Brunssum and the Netherland national C-IED center (NLD DEC C-IED).

The training was designed to give better understanding of the C-IED approach and to support the NATO HQ MNC NE to establish the multi-domain and cross-function mindset. Additional aim was to identify how to counter IED threat in NATO Article IV and V scenarios, and in hybrid warfare environment. The training audience came from the staff of NATO HQ MNC NE and its subordinate NFIUs, DIVs and Host Nations.

Based on the well-developed briefings and very active discussions, training achieved the intended end state.





WEAPONS INTELLIGENCE TEAM COURSE ITERATION 19.1

The first iteration of WIT VNCF 2019 took place between 09- 27 May in Râmnicu Valcea, Romania. The course was hosted by Romanian Engineering, EOD and NBC Defence Training Centre/Romania, as part of the VNCF WIT Training 2019 Executing Agent Agreement. The course has a duration of three weeks, and covers overall IED exploitation subjects, including make-up and type of IEDs, forensics, photography, terrorist tactical design, S-UAS collection, DOMEX basic

concepts and skills and post blast collection and analysis. The course includes as well a very complete practical phase, through which the instructors help developing the skills needed for WIT operators. Students pass through a complete incident



battle rhythm, starting with receiving of the task, being deployed to incident site and conducting the scene investigation, producing WIT reports and finalizing next day with a briefing for the TF Commander. VNCF instrument has proven again being a very powerful tool to fulfill the NATO Operational requirements as well to provide nations



with a high standard accredited training. The program allows nations to join in an international pool of all the needed trainers (and related knowledge) filling the existing gaps in most nations without too much burden to each one.

C-IED STAFF OFFICER COURSE (CSOC) 19.2

From 17-21 June 2019, the C-IED Staff Officers Course (CSOC) 19.2 was conducted in the C-IED CoE in Madrid. With participants from 12 different NATO and the 7 NNN (Non NATO Nations) nations – one participant all the way from Australia - and three Law Enforcement attendees, there was a lot of diverse experience in the class. This resulted in very interesting and relevant discussions during all the briefings regarding each topic. The attendees discussed the briefings from their different professional perspectives and this provided the students extra food for thought besides all training provided by the course itself. It made the course more interesting for the students, as well for the briefers.





COURSES AND TRAINING PARTICIPATION OR SUPPORTING

GLOBAL PROGRAMING COURSE

During the week of 7-11 January 2019, the Training Section Chief of the Prepare the Force Brach attended the course “NATO Global Programming Analysis”.

This course has essential for the Department Head of an ETF’s as it shows the most updated information regarding the Global Programming.

The course was divided in two parts, one theoretical and one practical.

The theoretical part was focused in the NATO Bi-SC Education and Individual Training Directive (E&ITD) 075-002. The course reviews the Global programming and some phases in the SAT procedure and Quality Assurance.

The practical part was focused in practicing how to develop a TRA document (Training Requirement Analysis).

The interaction, not only with others responsible in Global Programming of different ETF’s, COE, etc., but also with the personnel of ACT-JFD involved in this matter, was very useful to understand and improve the skills in Global Programming.



JOINT IMPROVISED DEFEAT ORGANIZATION (JIDO) INTRODUCTION TO COUNTER- UNMANNED AIRCRAFT SYSTEMS

A member of the C-IED Centre of Excellence was invited to be a guest observer of the Joint Improvised Defeat Organization (JIDO) Introduction to Counter- Unmanned Aircraft Systems course. The course took place at the Jordanian Armed Forces EOD Battalion 13-17 January 2019. Students were introduced to multiple UAS platforms capabilities/limitations. Students learned how to identify UAS threats and how to detect and counter the UAS threat. Students were excited to use their knowledge and experience on the borders of their country.



CELLULAR EXPLOITATION COURSE

A member of the C-IED Centre of Excellence participated in a course from 4- 15 February 2019 regarding “Cellular Exploitation”, as organized by NATO Special Forces Headquarters (NSHQ) in their training facilities sited in Chièvres Air Base in Chièvres, Belgium. The referred course provided knowledge about:

- Mobile devices and networks, how they function and communicate, learn telecommunications fundamentals, mobile device data structure, how to identify and correct corrupted data, file carving, and the manual digitization of data residing on mobile phones that cannot be extracted.
- Interpretation of extractions.

- Knowledge of the various open sources mobile forensic solutions available on the market.
- Reporting of results.
- Use of different freeware forensic tools.

In addition, this course has increased the level of experience of C-IED CoE staff in an important and relevant area for C-IED when it comes to Technical Exploitation.



As a result, the level of experience of our instructors has increased in the same positive way, in order to improve the quality of the training that the CoE provides

NETWORKS ENGAGEMENT & TARGETING COURSE

A member of the Centre has attended the NETC (NETWORKS ENGAGEMENT & TARGETING COURSE) in Chievres Air Base in Belgium, from the 18- 22 February 2019. It has been a very good experience for the officer who has attended it. The limited number of attendees joined to the instructors' professionalism and experience has contributed to the high quality of this course and a profitable acquisition of knowledge in SNA (Social Network Analysis).



This course improves the vision of the fight against the IED's network by:

- continuous knowledge exchange between students and teachers;
- daily controversial debates related to social networks' studies and the application for military purposes;

- optimums sharing of personal experiences on SNA's activities and their methods to defeat the threats.

Besides, it has been a very good military experience due to improving the vision of the fight against the IED systems.

BRIEFER SUPPORT FOR EOD STAFF OFFICER COURSE

Based on close cooperation among the Community of Interest, C-IED CoE had been invited to support the EOD CoE's training activity for EOD Staff Officer Course which takes place at their premises from 01 – 12 April 2019. C-IED CoE contributed one SME providing two lectures that took place in Trenčín/Slovakia on 01 April 2019. The lectures were focused on the "C-IED Concept and Doctrine" according to AJP 3.15(C) as a main topic and "The Impact of IEDs on NATO Operations".



SUPPORT TO DAT CoE "DEFENCE AGAINST SUICIDE ATTACKS" COURSE

In support of Defence Against Terrorism Centre of Excellence (DAT CoE), a representative from C-IED CoE was contributing as a guest briefer for the "Defence Against Suicide Terrorism" course.





CRITICAL INFRASTRUCTURE PROTECTION (CIP) FROM TERRORIST ATTACKS COURSE

The C-IED CoE attended to the “Critical Infrastructure Protection from Terrorist Attacks Course” organized by DAT CoE in Ankara, Turkey, from 20-24 May 2019. This course deals with all strategic, operational and tactical levels of Critical Infrastructure Protection from terrorist attacks from both national and international perspectives. It aims to advise an applicable framework to establish a CIP structure at local, national and international levels, including civil and military cooperation, public-private sector partnership with interagency approach, considering mainly IED and cyber threats.



EXERCISES

NORTHERN CHALLENGE EXERCISE INITIAL PLANNING CONFERENCE

The exercise NORTHERN CHALLENGE is a Multi-National Bomb Disposal Exercise at the top of Europe, which takes place at the Icelandic Coast Guard facility in Keflavik, Iceland. This year the exercise is scheduled in the period from the 8- 20 September 2019. The purpose of Northern Challenge is to train response to real-life terrorist incidents involving improvised and military explosive

devices, similar to those that have occurred in recent NATO missions. Harbor security and facility protection are factors that will be incorporated into this year's edition of Northern Challenge. As the terrorist threat evolves and changes so will the exercise. It will try to foresee and challenge the participants in future IED problems around the globe.

The initial planning conference (IPC) was conducted from 04-07 of March 2019. During the conference, there were discussions of the organizational aspects needed for carrying out the exercise.



SUPPORT AND ASSESSMENT FOR JOINT C-IED SPANISH EXERCISE

Based on close cooperation among the C-IED CoE and the Spanish Minister of Defense, the Centre was invited to collaborate in the National Joint C-IED Exercise "Sangenís". The collaboration was maintained from 01-03 April 2019 in Salamanca during the Main Planning Conference. It consisted of providing advice and guidance to prepare the scenario and develop the procedures in order to send evidence between the exploitation levels.

ARDENT DEFENDER 2019, MAIN PLANNING CONFERENCE

C-IED CoE participated to the preparation of Ex Ardent Defender 2019 planning procedures with one member of the Centre. Main Planning Conference was organized and hosted by the Canadian Armed Forces Joint Counter Explosive Threat Task Force (CAF JCET TF). The



conference took place from 7 - 9 of May 2019 at Toronto, Ontario, in the premises of the CAF Base Borden. Our Centre is a committed participant of the Ardent Defender series of Exercises practicing the full spectrum of exploitation cycle. This year the main line of effort will be to support the “Host Nation” in Defence Capacity Building focusing in C-IED and contribute in creating realistic scenarios from conflict areas and ongoing international operations.



NORTHERN CHALLENGE 2019 MAIN PLANNING CONFERENCE

The exercise Northern Challenge is a multi-national bomb disposal exercise at the top of Europe, which will take place at the coast guard facility in Keflavik, Iceland. This year the exercise is scheduled from 8 - 20 September 2019. The purpose of Northern Challenge is to train response to real- life terrorist incidents involving improvised and military explosives devices, similar to those that have in recent NATO missions.

The main planning conference (MPC) was conducted from 18 - 20 of June 2019. During the conference, there have been finalized the last points for the preparation of the EX NC 19. At the same time, the bomb building seminar was conducted. The different nations supported this seminar and manufactured more than 400 different IEDs, which will be used during the EX NC 19.

EVENTS

6TH C-IED ANNUAL DISCIPLINE CONFERENCE

The 6th ADC was carried out on 27 - 28 February 2019 in the C-IED CoE facilities. There were 18 delegates participating from different NATO or national HQs and organizations that belong to the C-IED Community of Interest (CoI).

The aim of this Conference was to inform the CoI about the status of existing NATO C-IED education and training (E&T) requirements (NETRs), discuss about the new propose NETRs and align C-IED E&T with the agreed training needs. The formal output of the ADC'19 is the (annual) Discipline Alignment Plan (DAP'19), which reflects the main developments and achievements of the C-IED discipline, and outlines the way ahead.

ACT JFD (Joint Force Development Directorate; Education & Training Plans and Programmes) – dealing as an adapted branch to lead and manage NATO's Global Programming Approach; develop future E&T policies, concepts, directives- will approve the DAP'19 and provide coordination if necessary.





Governing factors for the DAP'19 are NATO's training needs based on:

- NETRs.
- NATO C-IED Action Plan (AP) Rev2.
- SACEUR's Annual Guidance on Education, Training, Exercises and Evaluation (SAGE).

The DAP'19 is going to serve as a request of the DH for assistance and as a coordination tool within the Col.

In the current year, the (new) NATO Requirement Authority (RA) for C-IED, SHAPE STREN I&E (Infrastructure and Engineering) , presented two new potential NETR:

- Operational/strategic C-IED training.
- Common C-IED forum/database.

Finally, only the first was considered as a NETR and the DH of the C-IED Discipline will try to find a solution as soon as possible after a final update of the NETR through the RA.

7TH C-IED LESSONS LEARNED WORKSHOP

The Counter Improvised Explosive Devices Centre of Excellence (C-IED CoE) conducted its 7th C-IED Lessons Learned workshop (C-IED LL WS) on 11- 13 May 2019 at the C-IED CoE, Hoyo de Manzanares in Spain. The workshop was open to NATO nations, NCS and NFS, Partnership for Peace (PfP) countries, contributing nations, European Defense Agency (EDA), UN organizations and other partners.

The C-IED CoE's intention was to achieve the following objectives:

- Update ENEMY Tactics, Techniques and Procedures (ENY TTPs) from current operations in order to gain Observations and Lesson Identified (LI).
- Real Lessons Identify and the Lessons Learned from Theaters of Operations and its implications, with focus on Exploitation since its beginning to the current experiences from Sahel to the Middle East.

- CoEs Lesson Learned process – Develop the “C-IED links” between each CoEs: Gain Lessons Identified (LI) and develop further/closer cooperation between them.
- Learn from our support in efforts in NATO exercises and discuss outcomes for the institutionalization of C-IED
- Discuss about different activities around Defence Capability Building (DCB) engagement with partners; discuss alternative opportunities to support this kind of programme/activity for the future.
- Facilitate and enhance interaction in the multinational C-IED Community of Interest (Col): “Information exchange out of theatre”
- find the gap of the C-IED LL community info sharing.

Organized every two years, this event is not only a good opportunity for the C-IED Community of Interest to gain and share information on the latest trends in C-IED but also to communicate about the Lessons Learned process and how to improve it.

The agenda, with Technical Exploitation as the main focus, was structured around 6 panels following the objectives of the WS. The event gathered 27 briefers and more than 50 attendees; it is considered an important number of experts from organizations, nations or companies, different expertise and areas of operations. Active discussion took place among them and participants could share their experiences and points of view and so attendees could learn from each other.





PROJECTS

FINAL PRESENTATION OF THE COMMON RESEARCH PROJECT ON SUICIDE VEST BORNE IED

Based on common cooperation between the Federal Criminal Police Office of Germany (Bundeskriminalamt, BKA) and the C-IED CoE, the final and official presentation of the common research project on “Suicide Vests” has been held on the 20th of March 2019 in BKA HQ. The German Bundeskriminalamt, (BKA) as leader of this project, was supported by the German Army Technical Center for Weapons and Ammunition (WTD-91) which was divided in two main phases. The first one focused on “outdoor tests” conducted in Germany and the last one on “indoor tests” in Spain. Indoor tests in ESP were supported by the C-IED CoE, ESP MoD, ESP Navy (Marines) and ESP Academia.

Six presentations regarding outdoor and indoor tests have been shown by participant organizations. Audience understood objectives, many tasks carried out along two years and also conclusions and recommendations on effects produced by suicide vests explosions in human beings, personnel protection equipment (PPE) and infrastructure.

Common Research project on “Suicide Vests” has been a real, interagency C-IED research task. It has been a short but very successful history of research cooperation among participants coming from German and Spanish Armed Forces, Law Enforcement, Governmental bodies, Academia and C-IED CoE.



ENTRAP (ENHANCED NEUTRALIZATION OF EXPLOSIVE THREATS REACHING ACROSS THE PLOT) RESEARCH PROJECT. 2ND STAKEHOLDERS AND PRACTITIONERS BOARD (SPB) ANNUAL WORKSHOP

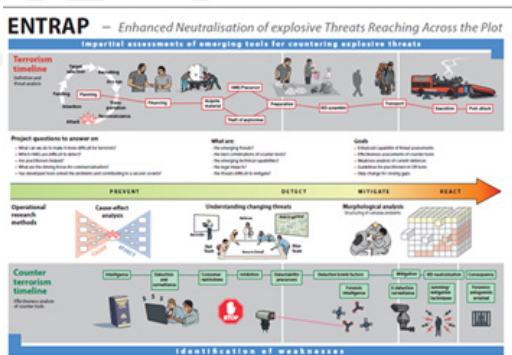
A research project funded by the European Commission under Horizon 2020 program has held its 2nd Annual Workshop on 20-21 February 2019 in St. Albans City (UK). The project is called Enhanced Neutralization of explosive Threats Reaching Across the Plot (ENTRAP).

The ENTRAP consortium is formed by 16 participants (Law Enforcement, governmental bodies, security agencies, academia, research laboratories) and is coordinated by the Swedish Defence Research Agency (FOI). The consortium includes 11 practitioners in counterterrorism, mainly supported by an advisory board of key entities whereof 18 Letter of Supports have been obtained. The C-IED CoE is one of entities supporting this project.

The 2nd Annual Workshop has been attended by 40 members from participant organizations and supporting entities (C-IED CoE, INTERPOL, EU Ministries of Interior, FOI, TNO,...) forming the Stakeholders and Practitioners advisory Board (SPB) of the ENTRAP project.

This Workshop has allowed validating works made by 11 ENTRAP working groups during last year. A

broad structure called “Capability Hierarchy” has been created across all the plot timeline in 4 levels and regarding four main top capabilities: PREVENT, DETECT, REACT and MITIGATE (1st level).



Each big capability has been split in 4 or 5 sub-capabilities (2nd level), these sub-capabilities in several dependent functions (3rd level) and finally, some counter terrorism (CT) tools (4th level) have been allocated for each function that could help to fulfill with CT ranging from intelligence, policing, legalization, financing, technology and forensics. Some CT tools such as intelligence and Training and Education are overarching capabilities and others (such as biometrics) can be applied to fulfill different functions (before or after attack) across the plot. It is a complex structure and more than 400 CT tools and European research projects on security have been analyzed during last year in order to populate this Capability Hierarchy using several scientific and operational research methods.

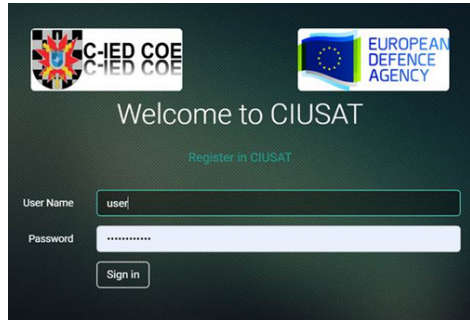


DEMONSTRATION OF THE PROJECT C-IED INTERAGENCY UNCLASSIFIED SITUATIONAL AWARENESS TOOL (CIUSAT) VERSION 2 TO THE NATION REPRESENTATIVES IN THE EUROPEAN DEFENSE AGENCY.

The Project named C-IED Interagency Unclassified Situational Awareness Tool (CIUSAT) Version 2 is delivered and ready to be use. CIUSAT Project was requested by European Defense Agency (EDA) and the CIED CoE developed it in conjunction with the Polytechnic University of Valencia. The program consists on real time open source oriented software that contributes to the analyst and to have situational awareness of the IED threat.

Within its three modules, the system permits introducing data and reports, analyzing inserted data, visualization for situational

awareness and so support decision making process or analyst in C-IED. This is an outstanding tool for analysts need to manage an important number of reports, inquiries of IED events, and so provide a clear representation in maps or graphics.



SUICIDE VESTS PROJECT – PRESENTATION TO BAM

BAM is a senior scientific and technical federal institute with responsibility to the German Federal Ministry for Economic Affairs and Energy. It invited two stakeholders of the multinational interagency project “Suicide Vests” to brief on the overall project. BAM supported this two year project with test ranges and explosives. Based on this invitation, C-IED CoE and Technical Center of German Armed Forces 91 presented a 30 min briefing during the official two day information event of BAM in front of approximately 100 attendees from industry, academia and Law Enforcement Agencies.

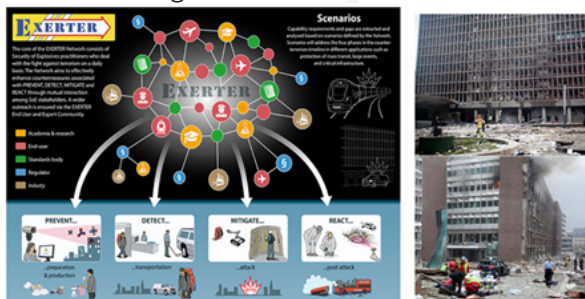


EXERTER (SECURITY OF EXPLOSIVES PAN-EUROPEAN SPECIALIST NETWORK) RESEARCH PROJECT. ANNUAL WORKSHOP (AWS) 2019

EXERTER project is a five year European Union Funded H2020 research project, which seeks to connect practitioners into a pan-European network of explosives specialists. Project aims at identifying and promoting innovative methodologies, tools and technologies; that will offer solutions in the fight against terrorism and serious crime, enhancing the overall Security of Explosives. The core of the EXERTER network brings together experts coming from Law Enforcement Agencies (LEA), Military Institutes, Governmental and Civilian Research centre, Academia and Standards Organizations. An End user and Expert Community (EEC) has been established for improvement of this aims.

Each year, EXERTER Workshop will focus on a real scenario with connection to Security of Explosives, and this first year has been the Oslo bombing attack on 22 July 2011. Along workshop, it has been received and discussed information on all phases of explosive attack, rising gaps and shortfalls in prevent, detect, mitigate and react phases. Current EU actions such as more strict explosives precursors legislation and better international LE coordination could have reduced or prevented the Oslo attack.

Next EXERTER annual workshop will be held in Madrid 2020 focused on Madrid train bombing attack on 11 March 2004.



CONFERENCES, SEMINARS AND WORKING GROUPS

MILENG CoE 3RD ANNUAL DISCIPLINE CONFERENCE

On invitation of MilEng CoE, the C-IED CoE attended the Annual Discipline Conference (ADC) for Military Engineering on 28 January 2019 at the MilEng CoE in Ingolstadt (Germany). SHAPE ACOS JENG is the Requirement Authority (RA) for MilEng and the MilEng CoE is the Department Head (DH).

It was the third ADC for MilEng and the C-IED CoE supported with Lessons Identified and recommendations from our own experiences in this area in the past because the C-IED CoE as DH conducted five ADCs in the meantime. Our participation at the ADC has the potential for a closer cooperation in the future between both DH because Military Engineering and C-IED cannot be disconnected.





NATO AND UNMAS STAFF TALKS

The C-IED CoE participated in the NATO and United Nations Staff Talks at the NATO Headquarters in Brussels, Belgium on the 13th of February 2019. The two groups discussed cooperation on five main topics.

- Cooperation between NATO with regards to the UN IED Threat Mitigation Team of Experts (ToE).
- The UN UNMAS IED Threat Mitigation Technology Roadmap.
- Cooperation between NATO Science and Technology Organization (STO) on new technologies and scientific research.
- The MILENG Route Clearance E-learning project.
- The C-IED CoE Common C-IED Training Model (CCTM).

The outcome of the meeting resulted in continued support, efforts and discussions on the future relationship between NATO and the United Nations and how best to support each other with regards to the five main topics, and with three specific items as it relates to the CIED CoE. The United Nations has informally requested the CIED CoE conduct a Research Project on Magnetically Attached IEDs, the continued support of the UN lectures and their addition into the Common C-IED Training Model.

2ND ANNUAL MEETING FOR NATO COE CIS SPECIALISTS & SECURITY OFFICERS

The second annual meeting for NATO CoE CIS Specialist & Security Officers took place in the Italian city of Vicenza on 12 - 14 February 2019.

Personnel coming from eighteen CoEs, participated in the two-day meeting were, among others, many aspects about NATO Security policies and procedures, and Cyber Defence were treated to get a common understanding between HQ SACT and CoEs. Two C-IED CoE members attended to this meeting.



DEFENSE AGAINST TERRORISM PROGRAM OF WORK WORKSHOP 2019

The C-IED CoE attended on 05-06 March 2019, the yearly DAT PoW Workshop to present the projects being developed during the year 2019: Protection of Infrastructures and Systems Against Explosions (PRINSE) and 4th Technology Workshop 2019. The Workshop was held in the framework of the Security & Counter Terror Expo (SCTX) in London.

OPERATIONAL CAPABILITIES CONCEPT (OCC) EVALUATION & FEEDBACK PROGRAMME (E&F) LEVEL 1 CHECKLIST (CL) UPDATE WORKSHOP (WS)

C-IED CoE participated during ACO 1st WS OCC Level 1 Checklist Update Workshop in March 2019 in Chisinau/MOLDAVA in their role as SME for C-IED. The Operational Capability Concept Evaluation and Feedback Programme (OCC E&F) is a practical multipurpose military tool that serves as a vehicle for closer operational relationship between the Alliance and potential contributors to NATO-led operations by supporting partner efforts to develop forces that are fully interoperable and capable of operating with NATO standards and procedures.



The Checklist update process stopped in 2013 and was restarted by SHAPE at the end of 2016. During the period of 2017/2018 three WSS have been conducted and for Land and Navy domain the OCC Lev.1 CLs have been released. The 2nd OCC Lev.1 CL Update WS took place in Sarajevo [Bosnia and Herzegovina] on 28- 30 May 2019 and update the task references in the CL.



CENTRES OF EXCELLENCE LESSONS LEARNED WORKSHOP

On 25 - 27 March 2019, a CIED CoE representative attended the CoE Lessons Learned Workshop 2019 organized in the Civil-Military Cooperation Centre of Excellence (CIMIC CoE) facilities located in The Hague, Netherlands.

During these days a well-developed lessons learned capability is demonstrated in many CoEs, where they perform its own work effectively, efficiently and enable to better support their procedures and tasks.

We had the chance to exchange knowledge to improve LL in our Centre, showing approaches and innovative ideas how to implement LL processes, possible structures, and define some roles in the respective area.

Besides we establish and consolidate good relations with our colleagues of LL in other CoEs and promote more collaboration in the future.



C-IED STRATEGY DEVELOPMENT SEMINAR

The NATO C-IED CoE participated in the United States Africa Command (USAFRICOM) Pilot Counter-IED Strategy Development Seminar at the Humanitarian Peace Support School (HPSS) in Nairobi, Kenya from 2-4 April 2019. The 20 student participants were senior military officers (Lt. Col / Colonel) and Civilians from Kenya, Uganda, Djibouti, Cameroon, Malawi, Ethiopia, Tunisia, Rwanda, and Sudan. The objectives of the seminar were to: Provide a broad and holistic understanding of the C-IED mission; Explore the principles of strategic thinking within the C-IED enterprise; Outline strategy development from an organizational, national, and regional perspective; and Provide students with an introduction to the tools, mechanisms, and processes to participate in the strategy development process.

The seminar was delivered by diverse international experts from military, police, security, and academia. The team of experts' facilitated new ways of thinking in order to broaden perspectives provided technical information, and advice to organizations, nations, and regional participants on a C-IED strategy. The presentations covered: Key Drivers of Violent Extremism; Drivers of Conflict; Transnational Threats and Information Sharing; Strategic Threat Brief; Strategic, Operational, and Tactical Lines of Effort; Doctrine





Overview; Translating Strategy into Action; and the African Peace Support Trainers Association (APSTA) overview.

The pilot seminar concluded with students participating in three small group exercises on identifying the Ends, Ways, and Means in a national strategy. Students explained examples of a strategy with regards to the Threat, Strategic Objectives, Operational Programs and Plans along with identifying C-IED solutions that would be applied through specific deliverables and outputs within a C-IED strategy.

The students gained a better understanding of the strategic and operational impacts and planning for C-IED operations and activities, and their thinking began to move further away from Defeat the Device to a more whole of government approach.

1ST MEETING (INITIAL) - SCI-321: UAV APPLICATIONS FOR MILITARY SEARCH

The 1st meeting of the SCI-321 task group, titled “UAV Application in Military Search” was held at the Swedish Defence Research Agency (FOI) and Swedish EOD & Demining Centre (SWEDEC)- Linköping and Eskjö, Sweden on 03-04 April 2019. The objective of this three-year Task Group is to assess the potential, limitations and challenges of the use of UAVs for the detection of targets in Military Search operations. A Cooperative Demonstration of Technology (CDT) in which defence R&D agencies, academia and industry will be invited to participate, can be foreseen as part of the assessment.

The 1st meeting included 16 attendees from: C-IED CoE, GBR, FRA, NLD, SWE, DEU and USA. The beginning of the first day’s meeting included 3 national presentations from Sweden, USA and Great Britain pertaining to current and developing UAV-borne documentation and detection systems. The majority of the first day was focused on the military search scenarios which included type of search, targets, and environments. The four agreed upon scenarios

were route search (defensive), building search (defensive), working at heights (defensive which include under bridges, arena/venue rafters, etc.), and outdoor area search (offensive). A subtask group, which the CIED CoE is involved in, was established to cement the details of each of the four scenarios. The second day was a site visit to the SWEDEC Test and Evaluation facilities, which include Norra Kulla mine lanes, Sensorbanan long term mine and IED field, and the EOC indoor test facility.

2019 NATO CENTRES OF EXCELLENCE FINANCIAL CONTROLLERS MEETING

C-IED CoE Staff attended the CoE Financial Controller Conference in NATO C2 CoE (Utrecht NDL) from 15- 17 April 2019. This yearly meeting is intended as a forum directed towards current and future CoE FINCONs, maintaining the established Community of Interest. Exchange of best practices and sharing lessons learned regarding financial aspects related to the administration and operation of CoEs were the fruitful outcomes of the event.



FINCON Workshop, 15 - 17 April 2019, Kroonhout Ramada Utrecht, the Netherlands
Hosted by NATO CoCoE

SPIE CONFERENCE FOR DETECTION AND SENSING OF MINES, EXPLOSIVE OBJECTS, AND OBSCURED TARGETS XXIV

The International Society for Optics and Photonics (SPIE) Conference for Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIV was held the Baltimore Convention Center in Baltimore, Maryland, USA on 15-17 April 2019. The objectives of attending this conference were: to learn about emerging technologies and new research in the field of “detection and sensing of mines, explosive objects, and obscured targets”, to network with government/academia for potential collaboration on projects at the C-IED CoE (SAFEDRONE), and to network to find panel members for the 4th C-IED TECH WS in 2019.

Many of the lectures were in-depth new ways to analyze the data of the sensors using machine learning and deep neural networks. These papers, which the CoE will obtain in a month due to attendance,



will deepen the knowledge for the DtD branch and therefore increase our ability to support projects that we are involved in, including SAFEDRONE. Multiple papers pertain to the analysis of GPR data, which could influence the methodology of the programming for the project.

Improvements and research in detection technologies were discussed, such as nuclear quadrupole resonance (NQR) spectroscopy, high-frequency electromagnetic induction (HFEMI), broadband EMI, synthetic aperture sonar (SAS), doppler-vibrometer, dual-band imaging sensor, and ground penetrating radar (GPR).

26TH EUROPEAN DEFENCE AGENCY (EDA) PROJECTS TEAM (PT) C-IED MEETING

The 26th EDA C-IED PT meeting was hosted by the Austrian Armed Forces Land Forces School in Eisenstadt, Austria on 7-8 May 2019. The nations were also updated with regards to the following key topics: Exercise Bison Counter 2020 lead by Italy, Cat B projects at EDA as Military Search Capacity Building, JDEAL Phase II, European Centre for Manual Neutralization (ECMAN) and Work Program 2020/21 and associated activities.

DIR of the CIED CoE took the opportunity to update the Nations on the CoE's main activities relevant to EU-nations/EDA and on the decision's process in the CoE.



58TH EOD WORKING GROUP

The C-IED CoE participated in the 58th NATO Explosive Ordnance Disposal (EOD) Interservice Working Group in Eksjo, Sweden from 7-10 May 2019 at the Swedish EOD and Demining Centre (SWEDEC). The Working Group began with outstanding action items from the previous meeting and was followed by broad list of liaison reports from participating members to include an ACO update.

On the second day, the group witnessed an EOD - Interagency tasking as part of the SWEDEC EOD Exercise-19. The EOD team worked closely with the local fire department and medical personnel on radio communications, safety, render safe, post blast, casualty evacuation and immediate





medical care. The afternoon sessions included panel discussion on EOD Doctrine, Policy, and Philosophy; EOD Tactics, Techniques, and Procedures Panel; and the EOD Standardization Panel.

The final day started with a visit to the SWEDEC Research and Development department with briefings on their EOD Information System (IS), EOD training area, and research area focusing on large scale Demining Equipment. The conclusion of the working group focused on panel chairs discussing their panel outcomes and way ahead.

The 59th NATO Explosive Ordnance Disposal (EOD) Interservice Working Group will take place in Kiel, Germany from 21-25 Oct 2019.

5TH MEETING OF THE SCI-298 RESEARCH TASK GROUP (RTG)

The 5th meeting of the SCI-298 Research Task Group (RTG), "Identification and Neutralization Methods and Technologies for C-IED," was held at the USA Consulate General in Frankfurt, Germany on 8-9 May 2019. The meeting included a total of 10 participants representing 6 nations, DEU, FRA, NLD, TUR, USA, and 3 NATO Centres of Excellence (CoEs), Counter-IED (C-IED) CoE, Explosive Ordnance Disposal (EOD) CoE, and Military Engineering (MilEng) CoE.

Most of this meeting was spent accomplishing the assessment of both identification and neutralization for one scenario/threat. After the assessment, it was decided to pare down the list which resulted in ten scenario/threat combinations. The RTG also discussed the final report and its classification. User input on technologies was debated but a path forward was not finalized, only that the RTG would not engage the user community at the C-IED CoE TW. The group is progressing but will probably not be completed in the three year allotted timeframe so an extension will be requested by the chairperson.

6TH AFRICAN UNION - NATO MILITARY TO MILITARY STAFF TALKS

The C-IED CoE participated in the 6th African Union (AU) – NATO Military to Military Staff Talks in Addis Ababa, Ethiopia from 14-15 May 2019. The AU delegation was led by Major General Trust Mugoba, Chief of Staff for the African Standby Force and the NATO delegation was headed by Major General Jan Toft the Director of the IMS Cooperative Security Division.

The delegation discussed a number of topics that included the AU Conflict and Early Warning Division, Individual Courses and Mobile Training Teams (MTTs) for 2020, Regional Exercises in 2020, Trident Jackal 2019 and 2020



NATO Exercises, African Standby Force

leadership training, NATO Centers of Excellence, Counter Terrorism, C-IED, Security Sector Reform (SSR), Building Integrity, Lessons Learned, and a multitude of other topics.

The NATO delegation identified 19 actions to be carried back to NATO Headquarters for action with one specifically related to C-IED. The AU will invite NATO to provide input to the development of the AU C-IED strategy, as part of consultations with international partners, before a validation meeting tentatively scheduled in September 2019.

At the conclusion of the event, Major General Toft conducted a back brief with the NATO Working Group along with Defense Attachés and Military Advisors that support military efforts within the AU. Additionally, the NATO Counter Terrorism Section discussed Countering Improvised Explosive Devices, Security Sector Reform and Building Integrity as promising areas of collaboration between NATO and the AU.

A future meeting is being planned for AU representatives to meet



in Brussels at the NATO Headquarters to continue enhancing the NATO-AU relationship.

7TH MEETING - SET-238: SIDE-ATTACK THREAT DETECTION STRATEGIES, TECHNOLOGIES AND TECHNIQUES

The 7th meeting of the SET-238 Research Task Group (RTG), “Side-Attack Threat Detection Strategies, Technologies and Techniques,” was held at the DLR, Microwaves and Radar Institute, Weßling, Bavaria, Germany on 15-16 May 2019. The meeting included a total of 6 participants representing 4 nations, DEU, GBR, NLD, USA, and Counter-IED (C-IED) CoE.

DLR presented an overview of the organization and capabilities. The group was also taken on a tour of the facilities and given more in depth presentations of projects being researched. Final results of some of the technologies were presented. The introduction, TTPs and threat sections of the report have already been written. The Netherlands and one of the German technologies already has a draft of their respective technologies. All draft pieces are due to the chairperson by mid-October so that the report can be compiled and an executive summary can be drafted. The final report is expected by the Spring of 2020.

FIRST INDIVIDUAL TRAINING AND EDUCATION PROGRAMME (ITEP) PLANNING BOARD (IPB I) AND DEPARTMENT HEAD FORUM

The first Individual Training and Education Programme (ITEP) Planning Board (IPB I) for 2019 as well as the annual Department Head forum were hosted and held at the NATO Energy Security Centre of Excellence (ENSEC CoE), Vilnius, Lithuania 21- 23 May 2019 at the military compound of Gen. Jonas Zemaitis Military Academy of Lithuania (MAL) where the NATO ENSEC CoE is located.

The purpose of the IPB is to support the NATO Education and Individual Training (E&IT) Production Planning Process (PPP) by

facilitating the production of the annual NATO ITEP and by providing a forum for the stakeholders to discuss related issues.

The purpose of the DH forum is to support the Global Programming (GP) Approach by providing the DHs an interdisciplinary meeting to discuss common topics, to coordinate interdisciplinary issues and to exchange good practices.

One of the main outcomes of the DH F was the information regarding the new developed and installed e-ITEP system version 3.1/3.2 and the intent of ACT JFD to finish the update on version 4.0

at the end of 2019. With the emplacement of version 4.0, NATO's ETEE world will have a system in place that allowed the availability of all relevant information across the disciplines in NATO.



4TH MARITIME OPERATIONS ANNUAL DISCIPLINE CONFERENCE (ADC)

On 27 - 28 May 2019, the Maritime Operation Annual Discipline Conference (ADC) meeting took place in the CoE for Operation in Confined and Shallow Waters (CSW CoE) in Kiel (Germany). This meeting consisted in assess the adequacy of the E&T Program, the current individual and collective solutions used to satisfy up-to-date NATO Educational and Training requirements in Maritime Operations discipline. During the event, there were no new NATO E&T requirements in the Maritime Operations Discipline and the TRA (Training Requirement Analysis) was reviewed and updated with the support of all the stakeholders' representatives.





4TH C-IED STEERING GROUP MEETING

The 4th meeting of the C-IED Steering Group was held at the Karlberg Castle, Military Academy, Stockholm (Sweden) on 27-29 May 2019. The meeting included 11 nations, ACT/capability monitor, SHAPE Infrastructure and Engineering, NATO IS/ESC, JFCBS, Defense Threat Reduction Agency, EOD CoE and Counter-IED (C-IED) CoE.

The main discussions focused on the importance of maintaining C-IED as an independent discipline and sending the right message to nations and NATO, despite ACO transformation. Nations must continue to implement all C-IED pillars especially Attack the Network and NATO's exercises must include C-IED in each level (Strategical, Operational and Tactical). Italy, Germany, Czech Republic, UK and Netherland provided interesting briefing on their national C-IED development.



16TH ANNUAL INTERNATIONAL MEETING OF EOD AND BOMB TECHNICIANS – INMEP 2019

The C-IED CoE participated in the 16th Annual International Meeting of EOD and Bomb technicians – INMEP 2019 in the Czech Republic from 02-07 June 2019. This event was organized and led by the 15th Engineer Regiment of the Czech Republic Armed Forces. The INMEP is a unique event which offers every participant the opportunity to share their experience directly with other specialists and subject matter experts (EOD and Bomb technicians in particular), along with researchers and industry representatives. During the meeting, there was the opportunity to experience introduction and demonstrations of new developed field equipment, explosives and related procedures.

VISITS

VISIT TO HUMINT COE, ORADEA, ROMANIA

As part of the NATO CoEs pool, the HUMINT COE and C-IED COE share common topics and fields of expertise. The cooperation between them is not only logical but also needed. On the 30th of January 2019, a delegation from C-IED CoE, led by its director, paid a visit to the HUMINT COE, Oradea, Romania. The aim of this official visit was to discuss possible directions of cooperation between the two centre of excellence. In accordance, it had been brought up the mutual support for the doctrine development, training and information sharing, through lesson learned process. Additionally, both centers will look for possible development of academia studies or projects. The visit was considered just as a normal step from the cooperation between the international military organizations, such as CoEs, in support of the Alliance and its partner nations.

CZECH AMBASSADOR'S VISIT

H.E. Mr. Ivan Jančárek, the Ambassador of the Czech Republic to Spain, visited the C-IED CoE, Hoyo de Manzanares, Madrid, on the 5th of February 2019. He was officially invited by the Director of the C-IED CoE after the Ambassador had showed his interest through Major Jan Albrecht, the Czech Senior National Representative (SNR). The main objective was to present the C-IED CoE to the new Czech Ambassador, who was welcomed by the Director and all Senior National Representatives of the Sponsoring Nations as a tradition of similar visits.

Firstly, the CoE director briefed about the main aim and task of the centre and explained to the Ambassador



the actual NATO's C-IED concept and the importance of the C-IED CoE's mission. The presentation was followed by the signing of the C-IED CoE's Book of Honor.

Secondly, the premises and the laboratory were presented during a guided tour and the Ambassador was fascinated by the variety of the different types of IEDs widely used across the world.

During the lunch, both parties opened less official conversation and have established a good relationship for the future. H.E. Mr. Ivan Jančárek stated several times that he was very satisfied with the visit and also was impressed by the importance of the C-IED CoE and its contribution to the fight against global threats.



VISIT OF HUMINT COE'S DIRECTOR

Following the visit to the HMINT CoE in January, the director of the HUMINT CoE visited the C-IED CoE on the 14th of June. Branch chiefs briefed on their activities and presented the laboratory. This visit was the occasion to continue discussions on the possible cooperation and to reinforce the links between the two Centres of Excellence.



SWISS AMBASSADOR'S VISIT

H.E. Mr. Giulio Haas, the Ambassador of Switzerland and LtC. Michel Rossier, Military Attaché, visited the C-IED CoE on the 27th of June 2019. They were welcomed by the Director and the Senior National Representatives of the Sponsoring Nations.

The CoE director briefed about the main aim and task of the centre and explained to the Ambassador the actual NATO's C-IED concept and the importance of the C-IED CoE's mission. The presentation was followed by the signing of the C-IED CoE's Book of Honor. Secondly, the premises and the laboratory were presented during a guided tour.





UPCOMING EVENTS 2019

C-IED CoE courses planned for 2019

This is the C-IED CoE planning for 2019 with regard to courses approved by the Steering Committee on 28 November 2018. Below dates may change due to unforeseen reasons. No rights can be inferred according to this schedule.

	BEGIN		FINISH			
2019	JULY	9	JULY	18	ESP	Analyst Notebook Users Course (ANUC) 19.3
2019	SEPTEMBER	9	SEPTEMBER	27	HUN	NATO Weapons Intelligence Team Course (WIT) 19.2
2019	OCTOBER	1	OCTOBER	3	ESP	TECHWS 2019
2019	OCTOBER	7	OCTOBER	18	ESP	AtN Operational Course (ATNOC) 19.2
2019	OCTOBER	21	OCTOBER	25	ESP	C-IED STAFF OFFICER COURSE 19.3
2019	NOVEMBER	4	NOVEMBER	15	ESP	NATO Weapons Intelligence Team Course (WIT) T3 Pilot
2019	NOVEMBER	4	NOVEMBER	6	ESP	STEERING COMMITTEE
2019	NOVEMBER	18	NOVEMBER	27	ESP	Analyst Notebook Users Course (ANUC) 19.3

The vision of the CoE plans to use a Comprehensive Approach to face up the challenge, with the support of not only military personnel, but also the contribution from law enforcement, police, intelligence community and civilians from research & technology industry and Academy. The synergy of all these elements will contribute to the identification of terrorist/insurgent networks.

The C-IED CoE is the natural venue for all C-IED issues in NATO arena. Its director chairs related working groups in NATO and the Centre cooperates with the European Defence Agency C-IED Project Team, in order to create synergies between both organizations.

The C-IED CoE mission is to provide subject matter expertise in order to support the Alliance, its Partners, and the International Community in the fight against IED and co-operate to increase security of Allied Nations and also all the troops deployed in theatres of operations, reducing or eliminating the threats from improvised explosive devices used or for use, in particular by terrorists or insurgents. Products and services are focused on the analysis of IED information, the investigation and development of new material and technology, and education and training.



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