

C-IED COE Newsletter



Counter Improvised Explosive Devices
Centre of Excellence



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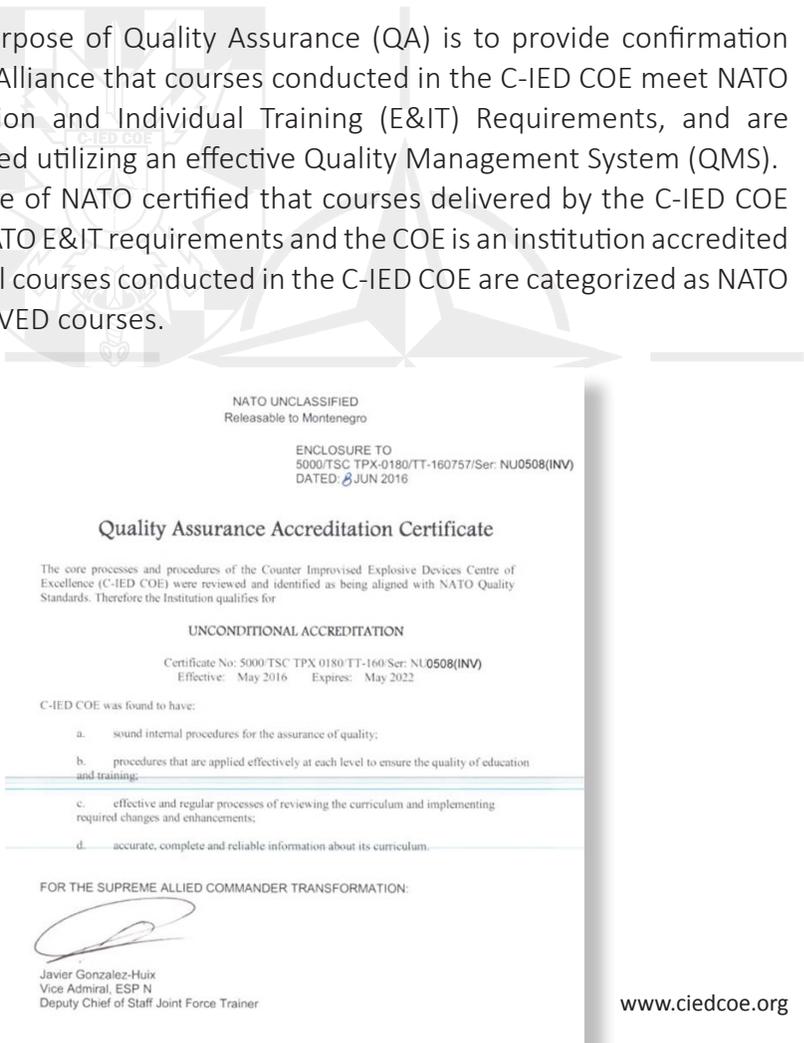
Upcoming Events 2017

MILESTONES

Quality assurance accreditation

Since 2016 C-IED COE is accredited by NATO as a training institution, providing orientation, defining procedures and methods for CIED COE efforts to follow up, support and develop the education in the C-IED discipline.

The purpose of Quality Assurance (QA) is to provide confirmation to the Alliance that courses conducted in the C-IED COE meet NATO Education and Individual Training (E&IT) Requirements, and are delivered utilizing an effective Quality Management System (QMS). Because of NATO certified that courses delivered by the C-IED COE met NATO E&IT requirements and the COE is an institution accredited by it, all courses conducted in the C-IED COE are categorized as NATO APPROVED courses.





COURSES

Weapons Intelligence Team (WIT) Course 4/16 Hungary

From 13 to 29 September 2016 the Weapons Intelligence Team (WIT) Course 04/16 took place in Szentendre (Hungary). This course aims to provide students with the basic skills performing the duties of a Weapons Intelligence Team to accomplish C-IED Level 1 exploitation (field exploitation).

Twenty-one students from twelve different Nations (Belgium, Czech, Germany, France, Hungary, Ireland, Italy, The Netherlands, New Zealand, Portugal, Romania and Ukraine), as well as five internal instructors from the NCOA and five external instructors from Czech, The Netherlands, Ireland, Romania and Spain, have participated. It was the first time that New Zealand joined the WIT course supporting the “Partnership for Peace” (PfP) program of NATO, as well as personnel from Italian National C-IED COE.



According to the feedback from the attendees and the evaluation sheets, the course met the expectations of students. The course content was revised specifically regarding reporting procedures. The WIT course 04/16 is the ninth iteration of the 2015-16 NATO Fund National Voluntary Contribution (VNCF) project led by the C-IED COE. This Project is supported by thirteen nations (Austria, Spain, USA, Finland, Hungary, Ireland, Latvia, Luxembourg, Norway, Netherlands, Czech Republic, Romania and Sweden), which are providing funds, facilities, instructors and/or other operational and logistical support.

Internal Train the Trainers Course in COE Premises

According to the Program of Work (POW) 2016 of the C-IED COE an internal Train the Trainer training (T3-training) event was conducted in the period of 13-15 September 2016, in the C-IED COE venue. This training event was the first occasion in our training facility when the C-IED COE personnel were trained to develop, improve their skills and capabilities to be able to prepare C-IED related lectures or facilitate classes and syndicates. The idea to develop and conduct an internal training in order to teach our personnel is also part of the internal Quality Assurance (QA) process

This event was supported by US Joint Improvised Threat Defeat Agency Organization (JIDO) and US Army Europe (USAREUR). Their instruments provided lectures and generated discussions to relay valuable teaching tools and techniques to the C-IED COE members.

As the follow on activities the assigned COE personnel had a chance the practice and rehearse their presentation with a contracted native English speaker teacher. This practice is going on in 2017 and very beneficial for our future events.



Attack the Networks Interagency Exploitation and Analysis (ATIX) Course 16.2

According to the Program of Work (POW) 2016, the CIED COE hosted the Attack the Networks Interagency Exploitation and Analysis Course (ATIX) course in the period of 26-30 September 2016. This course is a project developed in collaboration with European Defense Agency (EDA) and focused on operationalizing IED exploitation process, products and analysis to support AtN using both military and law enforcement techniques and procedures.

The course addressed to: Staff Officers, senior NCOs from upper tactical and operational level HQs (including J2, J3, J5), Legal Advisors and Interagency Liaison roles; C-IED personnel (Staff and those who perform exploitation and analysis); Law enforcement (Police, Justice) that could support military operations or benefit from exploitation. The course was attended by 18 students from different structures and nations (LANDCOM HQ, BEL), six sponsor nations (ESP, DEU, NLD, USA, SWE) and C-IED COE.



The course development team incorporated new and relevant topics to the schedule to increase the student's understanding and comprehension. For this iteration the new lectures such as Financial Exploitation Activity Support to Counter Threat Finance, briefed by Liat SHETRET (Global Center on Cooperation and Security), Identity Operations and Intelligence briefed by Nigel BAKER (NCIA), Belgium Law enforcement perspective on Brussels attack from March 2016- Investigation aspects, briefed by Chief Insp. Rony VANDELE (BEL Federal Police), Operationalize Law Enforcement Exploitation – Support to Investigation and Prosecution- Technical aspects of the attack briefed by OR-8 Stephane D'HULSTER (BEL EOD) and Operationalize Law Enforcement Exploitation – Support to Investigation and Prosecute- US perspective on Boston terrorist attack, briefed by Aaron JOYNER (FBI), were very well received by target audience.

For next year, C-IED COE planned to conduct a single iteration, in May.

C-IED Staff Officer Course (CSOC) 16.2

According to the C-IED COE's Program of Work for 2016 the second iteration of C-IED Staff Officer Course was delivered from Monday, 17th to Friday, 21st of October 2016 at the C-IED COE. This iteration was conducted as the pilot version was executed successfully in April 2016.

The aim of the CSOC is to provide C-IED Staff Officers and Senior Staff Assistants, at upper tactical- and operational-level-Headquarters with the knowledge and skills to facilitate, manage and lead the C-IED effort by drawing together and coordinating the expertise and



efforts of the other staff branches, and to become the Commanders' primary C-IED Subject Matter Expert (SME) and operations advisor. The course covers an understanding of IED threats within the operational environment; an appreciation of NATO C-IED publications [AJP 3.15 (B) and STANAG 2294 (ACIEDP-01)] and an understanding of operational headquarters capabilities, requirements and concepts for countering IED networks in theatres of operation.

The CSOC training audience had limited C-IED experience at operational level, however consisted of a few MILENG and EOD experts, experienced staff members and some C-IED instructors. The Training Audience (TA) includes students from five C-IED COE's sponsoring nations (DEU, FRA, NLD, SWE, USA), from four NATO commands (NCS, NFS – JFC Brunssum, JFC Naples, MARCOM and NRDC-GR), from two other NATO nations (BEL, CAN), from the C-IED COE, and at the very first time from the so called "7NNN" NATO partner nations (FIN), all together 24 attendees participated.

An officer from the French Joint Explosive Ordnance Warfare Center (PIAM) observed the course during the week.

Attack the Network Operational Course (ATNOC) 16.2

According to the POW 2016 of the CIED COE the 2nd iteration of Attack the Network Operational Course (AtNOC) has been conducted in the period of 28th November to 2nd December 2016, hosted by the CIED COE in Madrid, Spain. The pilot course was previously conducted in April 2015 and the 1st iteration in May 2016 and, based on students feedback the 2nd iteration was adjusted in order to better meet the TA requirements.

The course had an Advance Distance Learning (ADL) portion, where students could find eight lectures, in pdf format and general information about the scenario prepared for the practical exercise.

The COE received more than 30 applications, and accepted 24. Finally 25 students attended the course from NATO HQs, sponsor nations and other nations (BEL, AUT). All attendees came from J2, J3, J5 or C-IED positions, but the vast majority of them didn't have any Intel experience before. As an observer the Defense Against Terrorism (DAT) COE in ANKARA (TUR) was invited because of our cooperation with this partner COE in this kind of course (both COEs conduct "AtNOC"). Therefore the Branch Chief of DAT COE INTEL branch, COL (TUR A) Kemal OLCAR attended the course week.

The course was structured in two main parts, one day theoretical and four days of practical exercise. During the practical exercise, before the most important moments, there were planned to be conducted RECAP sessions. The briefings during the course were delivered by both internal and external lecturers. Internal lecturers were used for theoretical part of the course, whilst external lecturers were used for theoretical and practical part. The external briefers were very well qualified and experienced in the topic they delivered.

The Practical Exercise (PE) and the scenario were excellent developed to face a PE on the NATO operational level. The facts and events contained by the PE were designed in a very logical and coherent way, and reflected without any doubt the reality encountered in NATO Theaters of Operations. Moreover, the scenario was based on a full spectrum of documents that covered NATO, interagency and Host Nation perspective. In order to offer to students a real feedback, PE planner established a Request For



Information (RFI) team that answered to TA questions on a daily basis. This should be maintained for future AtNOC iterations.

Guiding students among main PE moments, and achieving the daily outcomes were responsibilities that fell on US Army Europe (USAREUR) syndicate mentors. For this course, C-IED COE received the support of two highly experienced and trained USAREUR members that successfully drove the syndicates to the final goals.

Nevertheless the main challenges identified for PE were caused by: lack of time during preparation and lack of INTEL experienced students.



Wit Course Refresher

From 28 November to 2 December 2016 the Refresher Training for Weapons Intelligence Team Instructors took place at the C-IED COE (Spain). This course aims to improve the skills related to Scene Photography for NATO WIT Training instructors. The expanded refresher training will improve the quality of future WIT courses by creating a robust pool of national WIT instructors updated with the most advanced technical and forensics photography procedures. It will support the development of NATO C-IED exploitation procedures and will foster information sharing among peers/organizations.

In order to capitalize on the previous multinational experiences, the last two days the course was focused on collecting the most relevant experiences from actual missions and VNCF WIT 2015/2016 training experiences, in order to procure a “WIT Best Practices Handbook” for the benefit of NATO/PfP C-IED community.



Cardinals picture in NO LIGHT conditions



Twelve students from eight different Nations (Belgium, Denmark, Germany, Hungary, Ireland, The Netherlands, Romania and Spain), as well as two instructors from FBI and one instructor from France, have participated in the training.

The WIT refresher course 05/16 is the tenth and last iteration of the 2015-16 NATO Fund National Voluntary Contribution (VNCF) project led by the C-IED COE. This Project is supported by thirteen nations (Austria, Spain, USA, Finland, Hungary, Ireland, Latvia, Luxembourg, Norway, Netherlands, Czech Republic, Romania and Sweden), which are providing funds, facilities, instructors and/or other operational and logistical support.

C-IED COE participation on: NATO Joint Electronic Warfare Course

The C-IED COE taught a class on Electronic Defence against Radio Controlled IEDs (RCIEDs) during the NATO School Oberammergau (NSO) Joint Electronic Warfare (EW) Course in Oberammergau. It was the first time the COE supported this course. The feedback provided by students indicated that the COE's presentation filled a vital gap in the curriculum. Additionally, this is a good opportunity to instill C-IED knowledge in a closely linked field that may not have a full understanding of how they impact the overall C-IED effort. The C-IED COE's 2017 program of work includes specific support to the NATO School Oberammergau (NSO) Joint EW course during the next year.

NATO Global Programming Analysis Course

NATO HQ Supreme Allied Command Transformation (SACT) is responsible for the overall management of NATO Education and Training (E&T), and this is achieved through a governance structure. Within this governance structure a Requirements Authority (RA) and a Department Head (DH) are appointed for each discipline. The RA and the DH support the centralized coordination and decentralized execution of NATO E&T activities and events. The C-IED COE is the DH for C-IED discipline within NATO. On behalf of the Director of the C-IED COE the Branch Chief Prepare the Force (PTF) Branch has to take the responsibility as DH C-IED. NATO School Oberammergau (NSO) is NATO's premier individual training and education facility at the operational level and offer with that course an opportunity to learn more about NATO GLOBAL PROGRAMMING.

The aim of the course is to provide students foundational knowledge and skills in contributing & managing NATO's Education and Training requirements in Global Programming, as described in BI-SC 75-2 NATO Education and Training (E&T) Directive. This one-week course is comprised of an overview of the Global Programming framework by focusing on the five distinct steps of the development methodology in the Global Programming core processes (Requirements collection, Strategic Training Plan (STP), Training Requirements Analysis (TRA), Training Needs Analysis (TNA), Annual Discipline Conference (ADC)). Within each core process, roles, responsibilities, activities, templates and examples will be presented and examined. Lessons will be conducted through interactive lectures on concepts, principles and procedures and will be followed by scenario-based, performance-oriented syndicate work. Because the training audience is primarily composed by military officer in a E&T management position (OF-2 thru OF-6), NCO (OR-7 thru OR-9), and or civilian equivalent who are



assigned, or selected for assignment to the NATO Command and Force Structures, NATO Education and Training Facilities (NETF) and those Centers of Excellence (COE), Partnership Training and Education Centers (PTEC) and National Training Institutions (NTI) affected by the Bi-SC EDUCATION AND INDIVIDUAL TRAINING DIRECTIVE 75-2 it's a outcome oriented opportunity to establish a network in that area.

With the knowledge of the course students are able to describe the Global Programming role and place within NATO Education and Training spectrum and to outline the conceptual framework of Global Programming. Furthermore they can describe the roles and responsibilities of key actors, to identify the appropriate connections and implications between the processes of the Global Programming. At least they are able to identify appropriate connections and implications between the processes of the Global Programming.

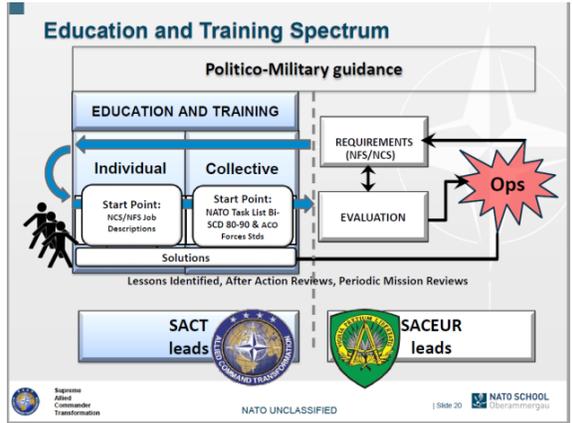
E&T is just one potential solution for eliminating the multitude of causes of a performance gap, a difference C-IED between an actual and desired performance. If a performance gap can be translated into an E&T gap, the competent RA has to identify it as a NATO E&T requirement. The DH will check the requirement against the available



NATO Global Programming Analysis Course

M7-135-B-16 | NATO SCHOOL Oberammergau | 31 October - 04 November 2016

E&T opportunities and match this with E&T solutions that exist, leveraging all possible contributors to NATO E&T solutions and ensures partner involvement IOT coordinate an appropriate solution. The C-IED COE coordinates E&T solutions with the E&T Solution Providers and triggers the mechanism to engage stakeholders in the development of new E&T solutions.



NATO Systems Approach to Training Course

As the NATO Department Head (DH) for C-IED, C-IED COE fills an important role to support the institutionalization of C-IED within NATO, which includes the whole process from individual training and courses to collective training and exercises. As part of our solutions to cover educational gaps in C-IED we are responsible to develop training solutions along the NATO guidance in education and training. NATO School in Oberammergau (NSO) offer a course with the aim to develop the necessary skills and knowledge in order for students to apply the NATO SAT processes necessary to produce Course Control Documents (CCDs) supporting the delivery of NATO certified Education and Individual Training (E&IT) solutions and ensure the deliverables are consistent with BI-SC E&ITD 075-007. This one-week course is comprised several modules which build upon each other according to the Systems Approach to Training (SAT) in NATO. Within each module, discrete steps in the SAT are



first explained then illustrated with in-class examples and end-of-row / table-top exercises. Students are then required to produce instructional design products using a detailed and realistic NATO scenario.

The main audience consists of military officers and NCOs, or civilian equivalent, assigned to NATO Command and Force Structure positions as well as contractors directly hired to support NATO. Additional personnel (with same rank level) consists of other NATO ETFs and those serving in NATO accredited Centres of Excellence (COE), Partnership Training and Education Centres (PTEC) as well as National Training Institutions (NTI) and other NATO agencies affected by BI-SCD E&T 75-2 and BI-SCD E&ITD 075-007.

After the attendance at the course participants are able to create a proper military driver training for SHAPE (that was the topic of the syndicate work during the course) and to understand the analysis, design, development, implementation and evaluation process in order to create trainings solutions.



NATO Systems Approach to Training

M7-136-B-16 | NATO SCHOOL Oberammergau | 07 - 11 November 2016

EXERCISES

Bison Counter 2016

During the period 15-26 August C-IED COE supported European Defense Agency (EDA) and Swedish Armed Forces during the multinational Counter Improvised Explosive Devices (C-IED) exercise Bison Counter 2016 (BC16). BC16 was a highly successful exercise with more than 1,000 participants from 21 countries and organizations as well as non-European observers. This included a large number of different C-IED enablers ranging from Military Search, Military Working Dogs, Explosives Ordnance Disposal (EOD) and Improvised Explosive Devices Disposal (IEDD), EOD divers, Chemical Biological Radiological Nuclear and explosives (CBRNe) experts, Level 2 exploitation laboratory (from Joint Deployable Exploitation and Analysis Laboratory (JDEAL)), Weapons Technical Intelligence (WTI) analysts, Military Engineers and Weapon Intelligence Teams (WIT) from land, maritime and air domains organized in a multinational C-IED task Force. Maneuver units, ISR assets and boarding teams did also participate in the exercise. The main aim of the exercise was to evaluate and train the full C-IED concept/system from the first responders' to the delivery of C-IED related intelligence production that resulted in targeting of the threat network.

BC16 was a very good exercise to highlight the importance of approach C-IED as a comprehensive and not stove-piped approach on the tactical level and C-IED COE support to BC16 was of the utmost importance in order to ensure that Exploitation and Attack the Network portion of the exercise was coherently and realistically implemented in the exercise.



Northern Challenge 2016

NORTHERN CHALLENGE is a Multi-National Bomb Disposal Exercise hosted annually by the Icelandic Coast Guard on Keflavik Air Base in Iceland, currently in its 15th year. The exercise is funded by the NATO Emerging Security Challenges Division (ESCD) Defense Against Terrorism Program of Work (DAT PoW) and brings together IED Defeat (IEDD) teams from across NATO and Partnership for Peace nations. This year, 10 land and 12 maritime teams from the USA, Germany, Denmark, Great Britain, Norway, Sweden, Belgium, Italy, France, Poland, and the Netherlands participated from 12 to 22 September 2016. It also incorporated two advanced search teams from the Netherlands and Great Britain.

The NATO C-IED COE previously participated in the initial and main planning conferences held earlier this year to develop the threat timeline and scenario based on current IED threats faced all over the world. During the exercise, the COE provided subject matter expertise in Level 1 Exploitation within the J2 cell. While the NLD DEC C-IED provided leadership and Level 2 Exploitation capability to the J2 cell, two members of the 2nd MI Battalion Danish Army Intelligence Center were responsible for conducting the triage on devices, materials, artifacts, and traces (DMAT) and U.S. Navy intelligence personnel from Mobile Unit 8 (Rota, ESP) supported the team by developing numerous injects, flash reports, police bulletins, and updates that were critical for the teams to develop their threat assessments and highlight how their actions support Attack the Network operations in the preparation phase.

Prior to the exercise start, the COE participant raised the understanding for the importance of tactical level DMAT collection by providing a briefing about the NATO Exploitation System and

emphasizing its value for all disciplines of the C-IED process.

Northern Challenge is one of the largest IEDD centric multi-national exercises held anywhere in the world. The NATO C-IED COE looks forward to being part of the team that continues to refine and improve this world class training event.

Trident Juncture 2016

During the period 5-15 October 2016 C-IED COE attended the Trident Juncture 2016 (TRJE16) Main Event List/Main Incident List (MEL/MIL) scripting Workshop at NATO Joint Warfare Center in Stavanger, Norway. TRJE16 is the validation exercise of NRF 2018's JTF HQ. The MEL/MIL scripting workshop was very successful and well-coordinated event, where the main part of C-IED COE's Lessons Identified from Trident Jaguars 16 MEL/MIL scripting workshop were implemented in this event. This resulted in that i.e. the CBRN, SOF, INTEL, FP, STRATCOM, Targeting, sustainment and C-IED activities was cross-functionally, comprehensively and coherently scripted. The COE participants coordinated the C-IED and threat network related scripting within the counter threat scripting/storylines in a way that will enable and encourage the NRF HQ to conduct the full spectrum of C-IED activities on the joint operational level during TRJE16.

C-IED COE successfully supported the Trident Juncture 2016 Command post exercise (CPX) during the period 17 Oct-02 Nov 2016 in order to enhance JFCNP C-IED capability on the joint operational level. TRJE16 was the certification and validation of NATO



Response Force (NRF) Joint Headquarters' (JHQ) 2017, replicating real life Crises Response Operations. C-IED COE contributed to the exercise by supporting JWC Training Teams, SHAPE J7 Eval Group (EG) and EXCON at JWC. C-IED COE supported JWC Training Team with a C-IED trainer/observer who assisted and advised JFCNP & JLSG regarding C-IED coordination matters, but also by providing periodic feedback on training audience performance and progress related the training objectives. C-IED COE support to SHAPE J7 Evaluation Group assessed the NRF JHQ ability to execute C-IED in an Article V Major Joint Operation Scenario in accordance with ACO Force Standards and NATO doctrine.

The C-IED COE participants at EXCON at JWC coordinated all IED and C-IED related activities (including AtN) within the Counter Threat domain (including unconventional and Proxy related threat networks utilizing IEDs) in a way that will enable and encourage the NRF HQs' to conduct the full spectrum of C-IED activities on the joint operational level during TRJE16.

C-IED COE support to TRJE16 resulted in that C-IED was realistically and comprehensive implemented in the exercise in a way that enabled NRF to Cross-functionally integrated C-IED within their HQs'.

C-IED COE participation in TRJE16 provided the opportunity to directly influence a broad audience within NATO HQs (including directly engagement with COM NRF), validate their C-IED capability and encourage the institutionalization of C-IED within HQs.

EVENTS

C-IED Senior Iraqi Leadership Engagement (SLE) delivered to Ministry of Defence (MoD) and Ministry of Interior (MoI) and coalition key leaders

The objective of the Senior Iraqi Leadership Engagement Meeting was to engage Iraqi leadership to understand and document their specific needs and requirements for the upcoming nine week Counter IED training course, scheduled for 17 Sep 2016 at the King Abdullah II Special Operations Training Centre (KASOTC) Training Center in Amman, Jordan. The overall focus of the course was urban IED clearance before re-occupation by the civilian authorities and population.

The meeting consisted of two days of discussion of the Iraqi requirements for level of training and specific skills based on the IED threats currently present in Iraq. These discussions also included





observations, lessons learned, and suggested improvements from the previous training course, also held at KASOTC during the summer of 2016.

At the conclusion of the meeting, the Iraqi MoD and MoI leadership, NATO Science for Peace and Security (SPS), NATO Support and Procurement Agency (NSPA), Combined Joint Task Force – Operation Inherent Resolve (CJTF-OIR), Counter IED Centre of Excellence (C-IED CoE), the contractor of the training in Amman agreed on several aspects of the upcoming training course, including the training program structure, requirements for the trainees, the Iraqi certification requirements, the provision and distribution of EOD equipment that will be procured by NATO SPS, and the tasks to be completed before the start of the course.



NATO EOD Demonstrations and Trials 2016

The NATO EOD Demonstrations and Trials 2016 were held in Bratislava, Slovakia over September 7th and 8th. For the first time, it was co-hosted by the EOD COE and C-IED COE as a continuation of the long-term collaboration MOU signed between the COE's in December 2014. The event was sponsored by NATO's Emerging Security Challenges Division and brought together over 200 EOD focused practitioners from military units, international organizations, industry, and academia.



The first day had static displays and live demonstrations from many of the companies. The second day was devoted to presentations and discussions ranging from IEDs seen throughout Iraq and Syria and Electronic Counter Measures (ECM) in support of EOD operations to explosive detection technologies and efforts to integrate C-IED into NATO High Visibility Exercises. The EOD COE organized the topics and speakers for the morning session while the C-IED COE was responsible for the afternoon session.



The EOD Demonstrations and Trials 2016 were another example of what is possible to achieve when NATO entities work together to achieve a common goal. The C-IED COE looks forward to working with the EOD COE as we begin preparing for the 3rd C-IED Technology Workshop in Madrid in October 2017.



Iraqi Defense Capacity Building (DCB) Project 2016. C-IED Training in Jordan 2nd iteration

The training was conducted as a result of a Statement of Work (SOW) issued as part of a project funded by NATO's Emerging Security Challenges Division Science for Peace and Security (SPS) Program. The project is titled 'IED Disposal and Search Capacity Building for Iraq' and is codirected by NSPA and the Republic of Iraq National Security Advisor Office. Within the field of Counter IED to provide and deliver an IED Disposal (IEDDD) and Search capability enhancement for an urgent humanitarian requirement, the SOW outlined for the training of 30 students from the Iraqi Ministry of Interior. The IED phase of the training was to be delivered to an IMAS Level 3+ (IED) standard.

C-IED COE Supports other NATO DCB SPS Program: C-IED Staff Interoperability Assessment Visit (SIAV) to Tunisia

Tunisia and NATO approved an Individual Partnership and Cooperation Program focused on several priority areas, including political dialogue, cooperation in the fight against terrorism, border security, cyber defense, defense planning and management and science cooperation. The purpose of the C-IED COE support was to conduct an expert visit in Tunisia to assess Tunisia's capabilities and requirements in Countering Improvised Explosive Devices. The desired outcome of this visit is the development of SPS activities tailored to the specific needs of Tunisia based in a draft report with potential solutions to guide future NATO International Staff discussions with the government of Tunisia.



After the C-IED SIAV to Tunisia the COE team's assessment is that the increasing IED threat and the exceptionally violent regional conditions justify NATO's consideration of the Tunisian request. The final objective of this program should be scalable training aimed at developing a self-sustainable Tunisian CIED capability.





COE Directors Conference 2016

The NATO Energy Security Centre of Excellence in Vilnius hosts a conference of directors of all NATO's Centers of Excellence (COE), over October 4th and 6th. The NATO Centers of Excellence Directors Conference pulled together representatives from the 24 NATO COEs operating in 19 countries, and also from the NATO Allied Command Transformation in Norfolk (US) and the NATO Headquarters in Brussels (Belgium).

The aim of the annual COE DIR Conference is to provide the primary venue to bring together all COE Directors and, upon invitation, equivalent representatives from NATO Bodies and Multinational Organizations to inform all of recent developments, compare experiences, discuss NATO COE cooperation, provide a forum for an exchange of views on the way ahead and thus, facilitate the directors' networking in order to increase the individual and collective effectiveness of the centers.

In this opportunity, ACT provided the guidance in the process of connecting the expertise possessed by the COE with capabilities at the ACT. CD LG Logfren (HQ SACT DCOS), explained the new FOGO Champions system will include SMEs positions for each area of interest for coordination of COEs activities in order to address the challenges



that Alliance is facing. BG Sommer (HQ SACT ACOS) briefed about the Warsaw Summit impact on COEs, focused on six areas included Capability development, Partnership, Training exercises and Human capital.

Interagency Workshop 2016

The C-IED Centre of Excellence, in cooperation with the European Defense Agency and the Spanish Guardia Civil, organized the Interagency Workshop (IAWS2016), held in Aranjuez (Madrid), from 24 to 26 October.



The purpose of the IAWS2016 was to exchange views on interagency collaboration amongst military, law enforcement and civilian organizations and agencies at national and international levels, in order to facilitate the cooperation against threat networks that facilitate and employ IEDs (terrorism, transnational organized crime, etc.).



The topic for IAWS2016 was Exploitation, i.e. criminalistics, forensics and related techniques applied to the production of the information needed to neutralize IEDs and mitigate their effects, as well as to counter the threat networks that employ or facilitate the use of IEDs. IAWS2016 objectives were to contribute improving efficient cooperation in the fight against threat networks that facilitate and employ IEDs; to present the use of forensics and other exploitation techniques as tools that contribute to both military operations and internal security; and to draw lessons from experiences in those fields.



To that end, it gathered together near 120 senior experts from 14 NATO nations plus 2 partner countries (Tunisia and Ukraine), coming from the military, law enforcement and other civilian agencies, as well as from NGOs and the private sector. They were briefed and held discussions on the IED threat, on exploitation capabilities, on the status of partners' capabilities, and on exchange of information. Presentations, run by panelists from 22 institutions and organisms, were organized around seven panels and activities on the following

subjects:

- IED threat current situation.
- Adversary tactics, techniques and procedures.
- Exploitation capabilities.
- Exploitation standard procedures.
- Status of Partners' exploitation.
- C-IED cooperation with Partners.
- Exchange of information.

The IAWS2016 was officially inaugurated by the Spanish Chief of Defense, Ministry of Interior Secretary of State, General Director of Guardia Civil, and European Defense Agency Chief Executive Director, underlining the interagency character of the event.

The next edition of the Interagency Workshop is planned to take place in 2018.

C-IED Senior Leadership Seminar in Hungary

A Senior Leadership Seminar (SLS) was conducted by a Multinational Assessment Team of the C-IED COE (Director + 3 more Staff Officers) at the venue of the Hungarian Defense Forces Joint Force Command HQs in Székesfehérvár in Hungary on 3rd November 2016. The day before the COE team met with the J7 directorate of Defense Staff HQ, the Bomb Disposal Unit of the National Police (MOI) in Budapest

The objective of this SLS is to improve the understanding of C-IED among Senior Leaders and Staff Officers with regards to military and non-military implications.



NATO HQ Counter Terrorism Information Day

The Information Day on Counter Terrorism is hosted by the NATO Emerging Security Challenges Division (ESCD) Counter Terrorism (CT) Section and is conducted every two years in NATO Headquarters in Brussels. By focusing on cooperation with partners, this year's event provided an opportunity for sharing information on Defense Capacity Building capabilities and projects provided by the Allies to non-NATO/ Partnership for Peace nations.

The Information Day consisted of panel discussions during the morning focusing on Counter Terrorism topics while the afternoon's interactive session provided the opportunity for attendees to actively engage the NATO bodies and organizations involved in cooperation projects in order to learn more about the initiatives.

Other participating organizations included NATO Science for Peace and Security Program (SPS), NATO School Oberammergau (NSO), Explosive Ordnance Device Centre of Excellence (EOD COE), NATO Science and Technology Organization (STO), and many more. The C-IED COE set up a booth presenting the COE's past and current support to numerous Counter-IED related DCB projects including training for partners conducted at the COE facilities as well as Senior Leadership Seminars (SLS), Mobile Advisory Teams (MAT) and Mobile Training Teams (MTT).

PROJECTS

CIUSAT Final Delivery to the European Defense Agency

The Counter Improvised Explosive Devices Interagency Unclassified Situational Awareness Prediction Tool” (C-IUSAT) Project started in January 2015 and finally, has finished on 30 June 2016.

The general objective of the project consisted of developing a tool, given a set of space-temporal data, for the use of several techniques and algorithms to obtain a graphical representation of space-temporal located probabilities about an IED event occurrence and to share, keep, analyze and present information regarding IED incidents.

Throughout the whole process of designing and developing this project, the C-IED COE provided the expertise for the architectural design of the system and the Polytechnic University of Valencia (UPV) built up the different stages and elements of the system. They also provided periodic reports to the C-IED COE for supervision and delivered the finalized C-IUSAT software.

Once the UPV successfully completed the software development and checked the system, the C-IED COE made a revision of everything, including the following items, according to the Agreements:

- Manuals: installation, administration and user.
- Installation, following the instructions of the installation manual.
- Test of the system: the three different modules: data collection, analysis and GIS.

When a shortcoming was detected, the C-IED COE communicated it to the UPV to solve it. Once it was solved or fixed, the final version of the prototype was accepted by the COE. In this way, the final version



of the C-IUSAT was established. It was presented on 30 June by C-IED COE AtN and UPV representatives via VTC to EDA Project Officer, Mr. Francisco Javier Cifuentes. He subsequently approved the completion of the overall project to include all of the deliverables: the software in which the system consists itself and the installation, administration and user's manuals.

C-IUSAT was presented by C-IED COE on the occasion of the EDA C-IED PT meeting in Madrid last 28th of October. Further collaboration to present C-IUSAT to PMS and to promote its use is planned for 2017.

NATO Urbanization Project

The world population is increasingly living in urban areas, and it is estimated that in fifteen years' time, around two thirds of the world's people will live in more and larger cities. To meet the potential threats and challenges of future urbanization and their impact in future warfare, NATO is reviewing the implications of urbanization at the strategic and operational level under their "Urbanization Project". The C-IED COE has taken part in this project since its inception, and has contributed to the shaping of the conceptual framework, bringing on board relevant aspects related to the use of IEDs in such environments.

The Urbanization Project's last event was the Urban Seminar Wargame Experiment, organised by ACT in Rome, Italy, from last 29 September to 7 October. The aim of the Wargame Experiment was to examine current and future capabilities in a joint full spectrum urban operation, in order to provide recommendations for further Conceptual development and insights for a Joint Urban Doctrine for NATO.

A C-IED COE expert took part in this Seminar, not only with a briefing on C-IED-related topics, but also providing inputs to the assessment of capabilities for the conceptual study, and to the further courses of action for this project. Thus, the C-IED COE intends to ensure that countering IEDs is taken on board in new NATO concept developments.





Researching the Harm of IED'S

The C-IED COE is expecting to receive by the end of the year the three research reports elaborated by Action on Armed Violence (AOAV), a London-based NGO specialized in researching on weapons and in advocacy with the aim to reduce the incidence and impact of armed violence. AOAV is very active in addressing the harm wrought by explosive weapons in populated areas.

The reports are the result of an independent research, and provide an open-source based insight of three aspects of the IED threat and the means to counter it:

- Addressing the threat posed by IEDS: national, regional and global initiatives.
- Understanding the rising cult of the suicide bomber.
- Understanding the regional and transnational networks that facilitate IED use.

By collaborating with AOAV and other NGOs, the C-IED COE intends to bring on board the point of view of a broad type of institutions, as well as to better reach out to actors which are not the usual partners to our work.

The three reports, which will be the C-IED COE's property, will be shared with the Community of Interest.

C-IED Standardization Project

“C-IED Standardization Project” is based on NATO C-IED Action Plan Rev. 2 and consists on updating and harmonizing the C-IED related doctrine in NATO through:

- Collaborating on the development and inclusion of technical exploitation interoperability standards into a current or future STANAG;
- Development of a STANAG for “Attack the Networks”;
- Review of AJP-3.15 (C) “Joint Doctrine for Countering Improvised Explosive Devices”.

Theoretical and Experimental Research into IEDS-EFPS and IEDS-DFFCS with HME

NATO Emerging Challenges Security division (ESCD) is providing 52K€ + 60K€ over 18 months to fund research into explosively formed projectiles (EFP) and directional focused fragmentation charges (DFFC) with HME main charges. The project, which is led by C-IED COE, started in September 2016 and is ongoing. The intent is to reproduce the behavior of a terrorist bomb maker, follow the criteria available in open sources for the manufacturing process and check the IED’s quality and effectiveness, through:

- Characterization of homemade explosive (HME) mixtures used by terrorists.
- Creation of EFPs and DFFCs using terrorist manuals available on the internet.
- To create a simulation model to compare with experimental results.



Destructor of IEDs

Presentation and initial field test of a prototype for an electromagnetic induction device able to detect and destroy devices (mainly electronic components). The manufacturer is working on a device prototype that is under improvement and the observed test was not very effective due to the immature stage of the prototype.

Evaluation of IED Detection System Effectiveness

NATO ESCD is funding an evaluation of IED detection systems (IEDDS) effectiveness with 70K€ over a 12 months period. The project officially kicked off in September 2016.

This project aims at evaluating IEDDS effectiveness using a common framework in terms of warning, detection, identification and classification, which will deal with representative schemes of tactical situations of interest. That information will complement the available owner commercial information and will provide actual performance and effectiveness from an end-user point of view. This study will not focus on a particular technology (open to any kind of system/technology which potentially could engage the IED) but on the IED threat and its deployment.

C-IED Research and Development Catalog

Consists of a database containing the technical & industrial data from all the C-IED related equipment and research projects all around the world.

NATO C-IED Lexicon Standardized Schema

The Improvised Explosive Device (IED) is non-standard in its very nature, but some efforts can be done in order to ensure a common lexicon across the Community of Interest (CoI) at the time of reporting and exploiting an IED event, that can make the whole process more efficient. The C-IED COE is contributing to define a NATO Standardized Lexicon Schema.

The Standardized Lexicon Schema intends to be a tool for spreading the technical IED-related data structured into two different layers of knowledge; Profile and Signature. Profile covers the basic information on the main components the IED is made of and provides a quick fix for categorization of the device. Signature goes into further technical details (such as frequencies, materials, etc.). Such information is laid out under two alphanumeric fixed-strings codification that bi-univocally provides both categorization and characterization of any IED.

The Profile is being developed using both the USA Joint Improvised Threat Defeat Organization (JIDO) Weapons Technical Intelligence (WTI) and United Nations Mine Action Service (UNMAS) Lexicon as a backbone and consisting of eleven (11) pages that can be used by the CoI for enabling a better exchange of information between different agencies and facilitating the database content management as well.

The next step is to develop the Signature part, and to do so it is necessary to count on the main national and international agencies involved directly in the IED exploitation process, in order to devise a useful tool that covers the actual gaps when reporting/exploiting. The C-IED COE will act as an international hub for the development of the tool to enable a more precise information exchange system and facilitating the spreading of knowledge among the CoI. The project will continue into 2017.



Mitigation of Seismic and Explosive Effects on Structures

This project is funded with Spanish national funds of the Ministry of Economy with 185K€ in total and it started in June 2016. The aim of this project is to identify new materials or compositions that minimize the blast effects in critical infrastructures walls. At least eight materials have been tested and the two best resulting materials will be tested in a real scale. It's currently ongoing.

CONFERENCES, SEMINARS AND WORKING GROUPS

C-IED COE Representative attended to the 2016 European EOD Network Conference

The intended purpose for the present meeting at EU level is to meet together experts (EOD, investigators, CBRN operators and others) in order to continue with the promotion of the exchange of information and latest achievements on recent cases among the member states (MS) on both domains of expertise (explosives and CBRN). Currently the forum is known as EEODN-CBRN (European Explosive Ordnance Disposal and CBRN) since 2012 when CBRN was included into the former EEODN (meeting held in Warsaw).

The event was developed jointly by EUROPOL (European Police Agency) and CEPOL (European Agency for Law Enforcement Training). The EEODN-CBRN dates back to 2008 and it is an important organization for the EC (European Commission) Directorate General for Migration and Home Affairs in the implementation of the action H38 of the Action

Plan on Enhancing the Security of the Explosives in Europe. The event was supported by the Slovak Police Force under the 2016 presidency of the Council of the European Union.

It is an excellent platform for improving the exchange of information between EU, partner nation and International Organization explosives and CBRN subject matter experts.

NDPP within EOD domain Meeting

The EOD COE hosted a “NATO Defence Planning Process (NDPP) in the EOD Domain” meeting on September 8, 2016 in Bratislava, Slovakia. The intent was to bring together those in NATO who are responsible for the NDPP as well as other communities of interest to discuss various approaches to influencing the process. Approximately ten nations as well as the C-IED and MILENG COEs, NATO Defence Investment, and Allied Command Transformation Staff Element Europe participated.

The meeting covered all steps of the NDPP, with a focus on the impact of Framework for Future Alliance Operations (FFAO) and Strategic Foresight Analysis (SFA) on political guidance, and specifically highlighted where organizations should contribute to have the greatest impact. Since the NDPP is one of the main forcing functions for institutional changes in NATO, it is highly beneficial to attend these meetings to better understand how to participate in the process and coordinate our efforts across the communities of interest.



34th Allied Joint Operations Doctrine Working Group Meeting

The 34th Allied Joint Operations Doctrine (AJOD) Working Group was held at NATO Headquarters from 14 to 16 September 2016. This is a critical biannual event held to harmonize all level 1 and level 2 Allied Joint Publications (AJP). Each AJP custodian is expected to provide an update on the current status of their doctrine review process. It is also an opportunity for Allied Command Transformation (ACT) to provide guidance from the Allied Joint Doctrine Campaign Plan as well as the Joint Warfare Center (JWC) to brief their updated doctrine validation plan for NATO exercises for the next several years.

The C-IED COE briefed the working group on the current status of AJP-3.15 (C), other C-IED related projects, and our support to NATO exercises. It was a key event for the C-IED COE and cemented our position as a solid partner that NATO can rely on for all aspects of C-IED doctrine, education, training, exercises, and evaluations.

7th US-EU Explosives Seminar

C-IED COE subject matter experts attended to the 7th EU-US Explosives Experts Seminar in Brussels from 20 to 22 September 2016. This is the second time the COE was invited to this Seminar. The first time was during the 6th Seminar in 2014 when we were invited by the US delegation. This year the COE was invited by the European Commission Directorate General for Migration and Home Affairs. The seminar's focus was on information sharing, preventing attacks, and protecting the public.

Over the last several years there has been an emphasis on separating the details of the investigation with the details of the device and sharing the details of the device with the Community of Interest as soon as available. In that spirit, the FBI provided technical details on all of the devices that exploded or were recovered in New York and New Jersey the previous weekend. Overall, as one of only two military organizations present, it was a great opportunity to highlight the current civ-mil cooperation the C-IED CoE is conducting and develop opportunities for future information and research sharing agreements.

JET Meeting

The Joint Deployable Exploitation and Analysis Laboratory (JDEAL) is a three year European Defence Agency (EDA) project involving 12 countries with the Netherlands as the lead nation. The C-IED CoE is a member of the JDEAL Expert Team (JET) that advises and provides technical guidance to the JDEAL Management Committee (MC). The last edition (12th) of JET meeting was held in Queen Maxima Barracks, Badhoevedorp / Schiphol, the Netherlands on 27-28 September 2016 and was attended by representatives from the Belgium, Germany, Spain, Italy, Netherlands, Portugal, and France.

This meeting was focused on analyzing the outputs/lessons identified from attended exercises in 2016, and planning the further participation in exercises during 2017. Along with that, it were reviewed the technical capabilities for the second laboratory, which counts on the same functions than the first one, but installable in tents instead of containers. The JDEAL is establishing itself as the predominant multinational European exploitation capability and think tank. The mutual collaboration continues on multiple exploitation initiatives.



NATO C-IED Task Force 2nd Quarter Meeting Summary

The C-IED COE Director and Operations Officer participated in the second quarter NATO C-IED Task Force meeting, held at NATO HQ on 27 September. The ACT chairman discussed the many initiatives ongoing across the C-IED Community of Interest (CoI). Additionally, he talked about the importance of developing and refining a C-IED reporting and assessment system in order to better measure and track progress across the Alliance, Nations and Command Structure. The third area which needs to be assessed is the capability of the Alliance to detect, track, and assess threat networks in a broader manner.

ACT provided an overview of the C-IED Action Plan with the assessment that NATO still needs to build new C-IED capabilities besides what the nations already possess.

A NATO International Military Staff (IMS) representative provided an overview of the Joint Analysis Lessons Learned Center (JALLC) AtN report. ACT will evaluate if there is a need to develop a Network Identification and Engagement (NIE) Concept. IMS also provided an overview of the draft MC C-IED policy they initiated.

The EDA C-IED project officer provided a comprehensive overview of C-IED projects at EDA to include the European Centre for Manual Neutralization Capability (ECMAN) and the Joint Deployable Exploitation and Analysis Laboratory (JDEAL).

Regarding the Ukraine EOD and C-IED Trust Fund, the C-IED Task Force remains engaged in development of the project. NATO ACT advocates for recommendations that are contained in the Ukraine EOD and C-IED Assistance Plan to be included in the project.

C-IED COE Director provided an overview of the DCB initiatives that are being supported by the C-IED COE. These include efforts in support of Iraq, Jordan, Egypt, Ukraine and Tunisia. In addition, Colonel Gomez gave an update regarding activities at the C-IED COE. Some of the highlights included a discussion on the upcoming Inter-agency Workshop, 24-26 October 2016.

The C-IED COE, in its role as the theatre LL coordinator, does not receive lessons identified / learned from NATO operational commands. This is despite the C-IED COE efforts over the past year to increase collection.

Lastly, a BICES representative provided a briefing on the newly constructed C-IED portal on BICES.

Joint Intelligence Working Group

The 5th of October the DIR of the C-IED COE, in its role as chairman of the C-IED WG, participated at the JINT WG in Brussels.

The proposal to the JINT WG to take over responsibility of the AInP-10 “Technical Exploitation” by the C-IED WG was rejected by the JINT WG. reasons presented was that pure technical exploitation expertise mostly remains on technicians but not intel analysts and the C-IED community counts on wide expertise in the technical exploitation business. In fact the C-IED COE supported by Exploitation experts performed a gap analysis beginning the year with the outcome of a need for the deep revision of the AInP-10. After a fruitful discussion, further collaboration has been agreed between both WG during the future revision of the AInP-10.



AJP 3.15C Writing Session

The C-IED COE, as the custodian of AJP-3.15 (C), hosted and chaired an adjudication meeting for study draft 2 of the publication on October 5-7, 2016. The intent of the meeting was to examine and resolve the comments received from the nations regarding study draft 2 and prepare the final draft. The overarching guidance from the C-IED working group (WG) was to make AJP-3.15 (C) more focused on joint operations with fewer references to tactical level operations.

Seven nations as well as the EOD and MILENG COEs participated in the meeting in person and via VTC to collectively review and adjudicate almost 400 comments. Once completed, the custodian compiled the final draft for the C-IED WG to review and forward to the Allied Joint Operations Doctrine WG to start the harmonization and ratification process. It is anticipated that AJP-3.15 (C) will be ratified by mid-2017.

NATO Legal Practitioners Conference

The NATO Legal Practitioners' workshop builds on the strong tradition of NATO legal conferences. The aim of the workshops is to create a forum of active participation and experience sharing on the legal issues facing NATO legal community.

The second WS was held from 17 to 19 October 2016 at NATO Headquarters. The C-IED COE legal advisor participated in the workshop to discuss legal matters pertinent to current and future C-IED operations. Being a few months after the Warsaw Summit, this workshop presented a unique opportunity to discuss practical matters with Alliance leaders from decisions taken during the summit and develop future options during the implementation of those decisions.

EDA Project Team C-IED Meeting

The C-IED COE Director, Executive Officer and Attack the Network Branch Chief participated in the 21st European Defense Agency C-IED Project Team meeting, held at High Staff Defense Studies Center in Madrid on 27 and 28 October. Topics discussed during the meeting included Battlefield Vehicle Forensics Course, follow on EU Center for Manual Neutralization concept, Military Search initiative, exercise Bison Counter 2016, Pooling and Sharing initiative, Military Working Dogs, JDEAL and a EUROPOL current activities update. The C-IED COE presented information about courses executed at the COE since 2014 to include Defense Capacity Building activities (Jordan, Ukraine, Iraqi training in Amman, Tunisia, Egypt), the NATO C-IED Working Group's new tasks, the C-IED Lexicon initiative and the C-IED Unclassified Tool (CIUSAT).

The EDA C-IED project officer introduced the EDA three year Planning Framework approved in November 2016.

5th EOD Lessons Learned Seminar

The NATO Explosive Ordnance Disposal Centre of Excellence (EOD COE) invited all NATO and partner nations to attend the EOD LL Seminar in Trencin (Slovakia) on 25-27 October 2016. The C-IED COE participated with Lessons Learned and Defeat the Device subject matter experts in order to provide the C-IED expertise to EOD lessons and considerations for the future: case studies, related projects, capability developments, doctrines update and EOD personnel proficiency related to HME.



The intent of the EOD COE was to provide a platform for sharing experiences and lessons learned from real situations between EOD operators and staff officers, enhance further networking and promote mutual trust within the EOD Community of Interest.

2016 Meeting of the International Bomb Data Center Working Group

Two subject matter experts of the C-IED COE attended to the 17th Meeting of the International Bomb Data Center Working Group (IBDCWG) in Tel Aviv (Israel) from 6 to 11 November 2016.

The International Bomb Data Centre Working Group is a collaborative body of Bomb Data Centers and legitimate government agencies focused on the efficient and effective sharing of explosives technical intelligence, and associated information, as it relates to the unlawful use of explosives. The IBDCWG comprises of 43 country members, 5 observer countries and 4 observing organizations.

This is the fourth time the COE was invited to this meeting as an observing organization. During the 13th meeting in Budapest, the Spanish Bomb Data Center –CNI- proposed the IBDCWG to let the C-IED COE to join the group as an observer member, and finally it was approved by the members.

NATO Biometrics Technical Interoperability Workshop

Sponsored by the Emerging Security Challenges Division (ESCD) and their Defense Against Terrorism Program of Work (DAT POW), the NATO Communications and Information Agency (NCI Agency), hosted the Biometrics Technical Interoperability Workshop from 7 to 11 November 2016, in The Hague (The Netherlands) during 'NATO Biometrics Week'. The workshop was opened to NATO and Partner Nations, Governmental Organizations and Industry representatives. The Biometrics Technical Interoperability Workshop provided a unique opportunity for specialists to demonstrate current interoperable biometrics capabilities and to debate the future development of NATO biometrics interoperability standards. C-IED COE contribution was aligned with the need to explore technical interoperability in the biometrics domain and promoting NATO Biometric standards (STANAG 4715) and the associated Allied Engineering Publication AEDP-15.

The workshop included a live demonstration and evaluation of technical capabilities:

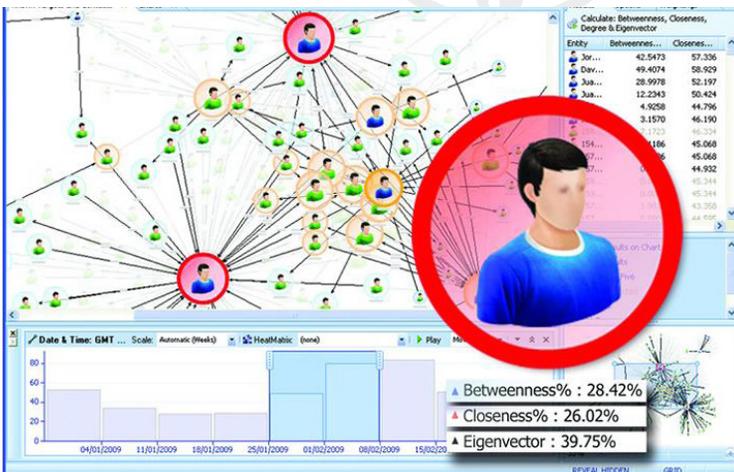
- Multimodal Biometric matching engines (faces, iris, fingerprints, DNA, voice);
- Capabilities to produce and execute transactions;
- Capability to disseminate transactions;
- Capability to nominate persons recorded in an ABIS to form a biometric enabled watch list and to manage it.



NATO Intelligence Fusion Center Counterterrorism Conference 2016

NATO Intelligence Fusion Center (NIFC) Counter Terrorism Branch organized the Annual Counter Terrorist Conference at their RAF Molesworth facilities. This conference is designed to bring together analysts and subject matter experts in counter terrorism from many NATO commands and member nations' intelligence services as well as academics and other research institutions. The conference served as a useful venue for participants to discuss a multitude of terrorism issues with experienced and well versed colleagues. The conference consisted of lectures about terrorist groups, their Tactis, Techniques and Procedures (TTPs) and strategies. After each presentation, we held discussions and questions where participants brainstormed to find options to share opinions.

The C-IED COE was represented by one lecturer on the IED threat and HNAT among these important briefers and organizations. The C-IED COE once again solidified its role as an active participant on counter terrorism issues and the analysis of threat networks.



MCLSB NATO C-IED Working Group

The C-IED Working Group (WG) is established by the Military Committee (MC) through the Military Committee Land Standardization Board (MCLSB) to contribute to the effectiveness of NATO forces through standardization in the field of countering improvised explosive devices as it supports joint and combined operations on land. To improve NATO interoperability, the C-IED WG advises the MCLSB and through the MCLSB the Military Committee on countering improvised explosive devices topics and issues. The WG reviews and recommends countering improvised explosive devices concepts, and develops doctrine and tactics covering all of these areas from the tactical to the strategic levels, which are essential for current and future NATO operations. The C-IED WG counts on several panels dealing with specific issues, as they are; Interoperability, Doctrine & Terminology, Military Working Dogs, & C-IED in Maritime Environment.

The C-IED Centre of Excellence Director takes the role of C-IED WG Chairman. The core of the C-IED WG consists of representatives from NATO nations, although NATO C-IED specialists, and some other bodies representatives use to attend the meeting too.

The last edition (16th) of C-IED Working Group meeting took place over the period 15-18 November 2016 at the Kromhoutkazerne, in Utrecht, the Netherlands. The WG was focused on the review and coordination of doctrinal initiatives directly or tangentially affecting C-IED; accordingly proposals for two new STANAGs (“Attack the Networks” & “Exploitation Interoperability”) were presented by C-IED COE) to the C-IED WG, looking for agreement before them to be proposed to MCLSB. In that occasion, only Interoperability , and Doctrine & Terminology panels took place.



Team of Experts on Technologies for Military Search Meeting

C-IED COE was invited to attend to the first meeting of the Team of Experts on Technologies for Military Search, under the NATO Military Engineering Working Group. The meeting was held on 15 and 16 November in Amsterdam. The goal of the group is: “to develop work on detection and/or neutralization of explosive hazards, especially in the context of Route Clearance.” The meeting requested delegations that consist of a military representative with operational search experience and a scientist or technical engineer working on R&D and/or T&E of search equipment.

NRDC ESP Holds a C-IED/ CBRN Seminar

The C-IED COE contributed to the Seminar “MANZANARES 16”, organized by NRDC-ESP and held at the thier facilities in Valencia from 21 to 23 November. This seminar aimed to bring together analysts and subject matter experts on C-IED and CBRN from both NATO Commands and Member Nations.

The Seminar was organized by the Force Protection Branch in the NRDC-ESP and intended to combine the two threats in one single event. The event consisted on different lectures about C-IED and CBRN stressing all the common issues to these two threats, especially incident management and exploitation. The C-IED COE briefed on enemy TTPs current situation and future trends, as well as on C-IED Doctrine.

BKA Symposium

The International Symposium 2016 for Bomb Investigators and Bomb Disposal personnel hosted by the German Federal Criminal Police Agency (Bundeskriminalamt) is an annual event (18th iteration) in which experts (police and military) from all over the world present IED incidents, IED investigations and research projects. This year's event was held from 29 November to 01 December in Magdeburg, Germany.

More than thirty presentations were provided by different agencies and organizations. Some of the most relevant ones to the C-IED community of interest (CoI) were:

- Response to IED incidents and ERW.
- Operational tactics and techniques as well as new technical developments with regards to disposal of IEDs and incendiary devices.
- Developments in the field of crime scene work.

The COE's attendance was extremely valuable. Apart from discussing new possible projects under already existing cooperation agreements, the COE also established new contacts within the law enforcement community that will further enhance our information sharing efforts across the entire C-IED CoI.



COE Lessons Learned Workshop and JALLC Lessons Learned Conference

The C-IED COE was invited to participate in the NATO Lessons Learned Conference 2016, hosted by the Joint Analysis and Lessons Learned Centre (JALLC), from 29 to 30 November 2016 at the Portuguese Military Academy, Amadora (Portugal).

The aim of this Conference was to assess how NATO's Lessons Learned Capability supports the Alliance's capacity for improvement and innovation. Accordingly, the theme for this year's Conference was: "The Future of Lessons Learned: Improvement and Innovation".

EU Explosive Detection Dog Working Group Meeting

The C-IED COE attended the European Commission Directorate General of Migration and Home Affairs (DG HOME) – EU – US Explosive Detection Dog (EDD) Working Group Meeting, held in 29 November and 01 of December in Brussels, Belgium.

The Working group was held to share best practices on training the canines to detect Homemade Explosives (HME) mixtures and highlight the challenges associated with the detection of tri-acetone tri-peroxide (TATP) with different types of "recipes" (precursors). The TATP was the homemade explosive used as main charges employed by the terrorists in the most recent attacks with Improvised Explosive Devices (IED) occurred in European ground (Paris, France terrorism attack in 13 November 2015 Stade de France and Bataclan Theatre, were killed 130 persons and Belgium, Brussels coordinate three suicide bombing attack at the Zaventem Airport and one at Maalbeek Metro Station on the

morning of 22 March of 2016, were killed 32 civilians and more than 300 injured.

Representatives from almost European countries were present at meeting (the generality were represented by delegation of national Law Enforcement agencies) and some representatives from United States Agencies (Federal Bureau of Investigation – Joint Program Office (FBI-JPO), Alcohol Tabaco and Fire Arms (ATF) and Transportation Security Agency (TSA)) and invited to be present the C-IED COE.

The main purpose of this meeting was primarily focus on security of critical transportation infrastructures (airport, underground/metro and railway stations) and law enforcement EDD capabilities, training methodologies, sharing some lessons learned from national exercises EDD conducted and finished some working group documents.



SCI-286 Task Group Meeting

The 3rd meeting of the SCI-286 task group, titled “Technology Roadmaps Towards Stand-off Detection in Future Route Clearance” was held at the Bundeswehr Technical Center for Protective and Special Technologies (WTD 52), in Oberjettenberg, Germany on 29 November – 1 December 2016. The objective of this three-year Task Group is to create a roadmap of stand-off IED detection capabilities for future mounted route clearance operations, suitable for all relevant environments and evolving threats.

The 3rd meeting included 19 attendees from: AUS, CAN, DEU, FRA, GBR, ITA, NLD, SWE, USA, MilEng COE and C-IED COE. During the 2nd meeting, the group split into three sub-groups tasked with creating their own draft future technology roadmaps, presentations, and considerations for the group. The results from the sub-group efforts during the preceding six months were presented and discussed during this 3rd meeting. The outcome was a plan to combine and refine the three approaches to create a unified 5, 10, and 20-year roadmap of future IED stand-off detection technologies and implementations.

The 3rd meeting also included presentations on French and German national Route Clearance technologies and systems, an overview of on-going explosive detection and neutralization programs at the USA Office of Naval Research (ONR), and a draft presentation on a “Future C-IED Capabilities Vision” which will be presented at the NATO C-IED Briefing Day hosted by NATO Emerging Security Challenges Division (ESCD) in December 2016.

The 4th meeting of the SCI-286 Task Group is tentatively scheduled to take place on 6-8 June at the Direction générale de l’armement (DGA) facility, in Bourges (France).

NATO ESCD Briefing Day

The 13th December the COE participated at the C-IED Briefing Day organized by the ESCD. Three briefings were provided by the COE related with C-IED Support to NATO main exercises, NATO wide Technical Exploitation initiative and Future C-IED Technology.

C-IED Task Force 3rd Quarter Meeting

The 14th December the COE participated at the C-IED TF where important topics dealing with the current and future status of the C-IED institutionalization were discussed.

The COE presented the works done during 2016 and main activities for the POW for 2017. The new NATO Policy for C-IED was discussed as well as the consequent creation of the C-IED steering group with NATO Nations participation and vote.

Support to Exercise “Magic Carpet”

The exercise “Magic Carpet” took place last 14th December in Castrillo del Val (Burgos) and it was conducted in a seminar format. The audience was composed by JTAC personnel from the ESP Army Land Forces and Forward Observers from the ESP Campaign Artillery Command. A total number of 16 Officers and NCOs participated in the exercise.

The lecture presented by the CIED CoE representative was focused on providing a general overview of the IED threat and TTPs, encountering IEDs, the Attack the Network process and targeting the IED system.



PRODUCTS AND REPORTS

IED Incidents Monthly Summary

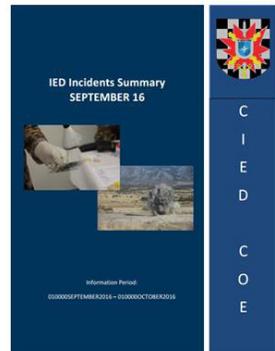
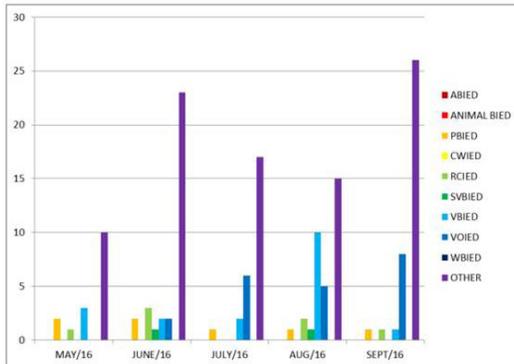
The C-IED COE Attack the Network branch analysts have started the provision of monthly IED incidents collection around the world, starting last May. This Report is designed to provide specific information on the IED attacks on 5 continents during the month. The content of this Report has been extracted from the information gathered from C-IED COE collaborators and open sources. At the end of every report appear tables that show the trends for IED types on each continent.

The Report should not be regarded as an official NATO Document

COUNTER IMPROVISED EXPLOSIVE DEVICES CENTRE OF EXCELLENCE

IED TYPES TENDENCY – EUROPE

	ABIED	ANIMAL BIED	PBIED	CWIED	RCIED	SVBIED	VBIED	VOIED	WBIED	OTHER
MAY/16			2		1		3			10
JUNE/16			2		3	1	2	2		23
JULY/16			1		0		2	6		17
AUG/16			1		2	1	10	5		15
SEPT/16			1		1		1	8		26



Report about fake detectors

Multiple companies offer these types of “Magic Wand” devices for explosives detection, promising that they can detect both small and large quantities of explosives at near and very far ranges. These so-called explosive detectors are described as handy, easy to use, and deployable by anyone after a short training class. Manufacturers commonly advertise these devices as effective for detection of concealed explosives in various scenarios such as checkpoint controls and for search measures in preparation of VIP visits.

According to the manufacturer claims, these devices can detect all kinds of commercial and military explosives at a distance of hundreds of meters. They claim that the devices are capable of detecting these threats even when explosives are hidden behind metal or concrete barriers. They also claim that there are no atmospheric limitations, and that some devices do not possess or require a power supply.

Despite the fact that there is no scientifically sound proof that any of these devices operate as advertised, as described further in the following text, they are still in use by several organizations and armed forces such as the Iraqi security forces. The distribution of some of these devices was banned in UK in 2010, but the ban only applies to devices produced by UK companies. However, companies based in other European countries are still offering the detectors on their websites.

C-IED COE Assessment: Due to the absence of scientifically proven methods of operation, unclear results after several tests of the device conducted by different agencies and organizations, and related reports, the NATO C-IED COE openly refutes the



company's declaration of detection capability, reliability, and accuracy. The C-IED COE recommends to all organizations:

1. Do not buy them.
 2. Do not use them.
 3. Remove and destroy them from military and/or law enforcement inventories.
 4. Disseminate this information among all other possible users.
- [http://www.ciedcoe.org/news/2016/Report about fake detector-Final V2](http://www.ciedcoe.org/news/2016/Report_about_fake_detector-Final_V2)

Chemical IEDs Current Status and Trend Threat Report

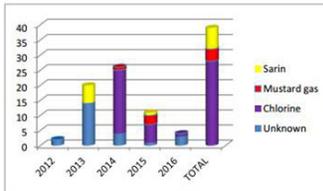
Chemical Weapons (CW) are not a new threat. In the past there have been infamous cases of countries using chemical agents to produce horrifying effects on those they were employed against. Instances range from the First World War in the early 20th century to the Iraq-Iran war in the 1980s and the recently documented use of chemical weapons in Syria.

Maybe the new challenge regarding chemical weapons is the change of users. Therefore, we can state that in the past chemical agents were or could only be used by Nations or "officials hands". Nevertheless, currently the threat is uncertain and there are real concerns about new threats from non-state actors or violent extremist organizations (VEO) using this type of unconventional weapon.

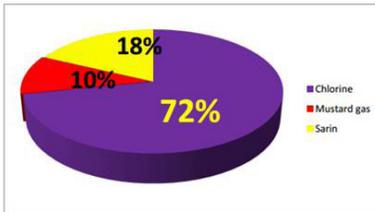
Currently the problem has become more complex. The combination of an IED with chemical enhancement is a threat terrorists are trying to develop. This combination is not easy to carry out and there are some technical issues to overcome before rendering it as an efficient weapon capable to provoke a high amount of casualties.

This report based in open sources aims to present a general approach to the use of chemical IEDs taking into account recent incidents

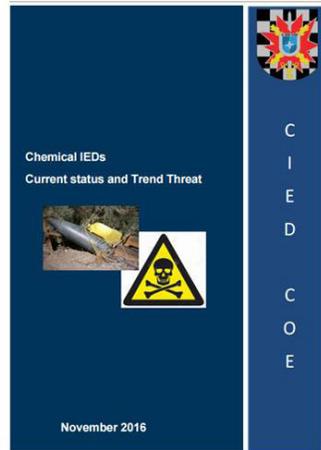
The following are statistics about the number of attacks committed in Syria from 2012 to 2016 classified by chemical agent and percentage. It is clear that the toxic industrial chemical (TIC) chlorine is the most common (72%).



NUMBER OF ATTACKS BY CHEMICAL AGENT AND YEAR IN SYRIA



PERCENTAGE OF ATTACKS BY CHEMICAL AGENT IN SYRIA



using chemical agents as a filler or enhancement to an IED. Through analysis of these incidents C-IED COE will try to identify new trends or tactics, techniques and procedures (TTPs) on the use of them by terrorist organizations.



VISITS

Dutch Defence Center of Expertise C-IED visits the C-IED COE

The Dutch Defense Expertise Center C-IED (DEC C-IED) Director, Colonel Henk de BOER and Executive Officer, Commander Will MEURER visited the C-IED COE on 18 and 19 October. The agenda of the visit was divided in two main objectives: present each other's organizations in order to develop and enhance the C-IED COE's coordination with Dutch DEC; and try to find synergy and collaboration on scientific research and other future opportunities (courses, exercises, C-IED training initiatives...).



Both parties appreciated the meeting and the open discussions between DEC representatives and C-IED COE Branch Chiefs. Colonel de Boer made an official invitation to the C-IED COE to come to visit the DEC C-IED center in 2017.



Students of the 2016 National Defense Course Visit the C-IED COE

Key personnel of the Spanish General Administration, members of parliament and senate and the media key staff, all of them students of the XXXVI National Defense Course, visited the C-IED COE on 8 November.

The purpose of the course was to bring together a group of civil and military personnel who occupy or may occupy positions related to national defense to exchange ideas and opinions and expand their knowledge on important aspects of security and defense. In that way, the C-IED COE Director, Colonel Gomez, presented a general overview of the IED threat and the NATO approach to C-IED as well as the structure, mission and vision of the C-IED COE.





C-IED COE







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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You can download the activity guide for 2017 at:

<http://www.ciedcoe.org/COURSES & EVENTS>

Counter Improvised Explosive Devices
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