Joint Chemical, Biological, Radiological and Nuclear Defence Centre of Excellence

CBRN Defence Response

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2023

CONTENT/Articles

Director's Editorial

JCBRN Defence COE – Support to NATO

1. JCBRN Defence COE Annual Conference 2022; Author: Mr Milan Novotný

2. Clean Care 2022: CBRN & Medical Community in Working Harmony; Author: LTC Radek Tomáš

3. JCBRN Defence COE Supports Annual Exercises; Author: LTC Jaroslav Rybák

4. TEP Chairperson's Key Roles and Responsibilities; Author: LTC Jaroslav Rybák

6. CBRN Support to Technical Exploitation and its Role in the Commander's Understanding of the Operational Environment; Author: MAJ Miroslav Labaška

7. JCBRN Defence COE Trained Jordanian First Responders on CBRN Terrorism Attack Response; Author: MAJ František Pavlásek

8. 2022 VIP Visits ; Author: CAPT Zuzana Králíková

9. Education Mission Complete; Author: MAJ František Pavlásek

10. CBRN Reachback Activities; Author: LTC Petr Valenta

11. Use of Emerging & Disruptive Technologies in the War in Ukraine; Author: MAJ Bruno Ferrandes

JCBRN Defence COE Outreach – Cooperation with the European Union (EU) & CBRN Engagement

12. JCBRN Defence COE is Becoming Front-runner in NATO-EU Cooperation; Author: COL Wolfgang Karl- Heinz Reich

13. JCBRN Defence COE Internship; Author: Aleks Kozuchowski

14. Letter of intent with the Hague University of Applied Science; Author: Mr Zdeněk Hýbl

JCBRN Defence COE Internal

15. Greetings from the Great White North; Author: MAJ Warren Deatcher

16. Thanks for the Opportunity; Author: SFC Lukáš Pazdera,

17. Defence Meritorious Service Medal for COE Member; Author: COL Aleš Mynařík

18. After 19 994 700 Minutes - Mission Accomplished; Author: LTC Veronika Dočkalová

19. Overview of Planned Courses for 2023; Author: WO Roman Schindler

DIRECTOR'S EDITORIAL

Dear Readers,

Human history is full of events with significant impacts on humankind. The past year was one of them. The world was and still is influenced by the reverberations of the COVID-19 pandemic. However, the main breaking point was unprovoked Russian aggression in Ukraine since February 2022. The conflict reminded us that future conflicts may not be a clash between society and non-state actors such as terrorist groups as we anticipated during last 30 years. We should be prepared for a conflict between states with a full range of military capabilities. Since the beginning of the conflict in Ukraine, no CBRN weapons were used. On the other hand, CBRN weapons including nuclear weapons were used as a part of hybrid warfare and threatening tool. Russia accused Ukraine and the USA of biowarfare programs development or using nuclear weapons threats. No need to mention Russian military activities on the territory of the Zaporozhye nuclear power plant.

During the year 2022, we witnessed various impacts on our society, neighbours, and our families. There are also concerns for the future and actions to deal with all these challenges.

Yet, I also see opportunities. Not only for our society but also for our Centre. NATO introduced a new CBRN Defence Policy. In addition, it pays particular attention to technology. The JCBRN Defence COE does not want to stay behind. We took a part in those activities and used the emerging opportunities for our benefit to improve our capability. The JCBRN Defence COE will continue this approach in 2023 as well.

David MARTÍNEK
Colonel, CZE-A
Director JCBRN Defence COE

JCBRN DEFENCE COE ANNUAL CONFERENCE 2022

The JCBRN Defence COE Annual Conference traditionally touches the most important NATO strategic documents and has an ambition to prepare solid outcomes that might be considered by relevant NATO bodies, and further developed into CBRN defence policies, concepts, doctrines, etc.

The Conference took place in Prague from 4 – 6 October 2022 aiming to discuss the NATO 2022 Strategic Concept and NATO's CBRN Defence Policy and how the JCBRN Defence COE can contribute to the overall implementation of NATO´s CBRN Policy. Areas discussed included how to strengthen NATO and national resilience to respond to CBRN threats; identifying capability gaps, whilst focusing on the rapidly changing security environment we currently face and the corresponding new challenges and threats.

The Conference was opened by Deputy Minister of Defence Daniel Blažkovec and Ambassador MG (ret.) Petr Voznica, who chaired the Conference. In total the Conference was attended by representatives from NATO Headquarters (HQ) (International Staff (IS) and International Military Staff (IMS), both Strategic Commands (Supreme Headquarters Allied Powers Europe (SHAPE) and HQ Supreme Allied Commander Transformation (SACT), NATO Science and Technology Organization (STO), 11 NATO member countries (CZE, CAN, HUN, DEU, USA, BEL, POL,

GBR, ITA, LTU, SVK) and one (1) invitee (FIN), and the JCBRN Defence COE.

The JCBRN Defence COE as the Conference host authority, was represented by COL David Martínek, COL Wolfgang Karl-Heinz Reich, COL Grzegorz Szymanski, COL Aleš Mynarik, COL Michael Firmin, COL (ret.) Milan Novotný, LTC Andreas Steinert, LTC Radek Tomáš, MAJ František Grmela and Mr Zdeněk Hýbl.

The Conference agenda was divided into two days. The first day was devoted to panels and presentations. The second day was dedicated to open discussion, conclusions, and recommendations.

The keynote speaker Ms Eirini Lemos-Maniati (NATO HQ – Political Affairs and Security Policy Division (PASP) – Arms Control, Disarmament and WMD Non-proliferation Centre (ACDC) focused on the Conference's main topic "NATO 2022 Strategic Concept and NATO´s CBRN Defence Policy". Ms Eirini Lemos-Maniati:

- appreciated the effort of the JCBRN Defence COE for organizing such a very important activity and taking the time to explore the future,
- pointed out that the CBRN environment was changed dramatically, and 10-year-old policy might not be sufficient to react to the rapidly changing environment,
- stressed that states are now the predominant driver of CBRN threats,
- highlighted that for the first time, NATO has a policy that puts CBRN defence at the heart of NATO´s overall deterrence and defence posture,
- underlined more visible civil-military cooperation and interaction in the CBRN policy,
- appreciated JCBRN Defence COE unique role in support of all strategic enablers (shared understanding, capacity-building, partnership and outreach, StratCom, S&T collaboration, and medical support),
- informed about the next steps towards policy implementation (NATO's CBRN Defence Policy Implementation Plan).

The Conference's first panel topic was focused on JCBRN Defence COE contribution to NATO´s CBRN Defence Policy implementation (concept, doctrines). The panel was chaired by COL Grzegorz Szymanski, supported by panelists that are important stakeholders in the policy implementation process representing NATO HQ and both NATO Strategic Commands. **Mr Paul Rushton (NATO HQ – PASP – ACDC), LTC Petr Škopec (NATO HQ IMS Policy and Capabilities Division (P&C)), LTC Andreas Schneider (SACT Strategic Plans and Policy (SPP) – Nuclear Strategy Policy – CBRN and LTC Andreas Steinert (JCBRN Defence COE).** During their discussion, the following points were highlighted:

- NATO, led by the Joint CBRN Defence Capability Development Group (JCBRND-CDG), will further develop and refine the common doctrines, standards and policies that underpin our CBRN defence capabilities and forces and support the interoperability of our CBRN defence units. The JCBRN Defence COE has an important role regarding the standardization and harmonization of existing and future documents,
- NATO should be responsible for inter-

operability, but nations should provide forces, capable of CBRN protection, and the role of NATO's CBRN defence community of interest (COI) should be to facilitate compatibility of units from different nations and to support capability development in CBRN defence,
- NATO´s CBRN Defence Policy expands the responsibility from CBRN defence units to all military forces,
- regarding "CIV-MIL" related terminology, JCBRN Defence COE has a significant role to unify terms for clear crisis communication,
- it was outlined that the JCBRN Defence COE provides important support to the upcoming review of MC 0603/1 and AJP-3.8 which need to be reviewed in parallel.

In short, the output from this panel was that JCBRN Defence COE was to provide support to revision of existing concepts, together with development of new concepts, doctrines, and standards, together with standardization and harmonization, as well as analysis.

The second panel focused on the JCBRN Defence COE projects related to science, technology, and NATO Defence Planning. The panel's chair, **COL David Martínek, was joined by the panellists Dr. Pavel Zůna (member/national coordinator of the NATO STO Science and Technology Board, and LTC Radek Tomáš from the JCBRN Defence COE).** Discussion was opened by the panel chair providing a short retrospective of NATO's effort in the fields of technology. Dr. Pavel Zůna then provided his view on the impact of technological trends on CBRN defence towards 2030, and the important role of innovations. LTC Radek Tomáš focused on the current JCBRN Defence COE activities and projects related to science, technology, and NATO Defence Planning. He also provided possible JCBRN Defence COE support to enhance CBRN defence Community of Interest understanding, information sharing and awareness about projects and developments in the Emerging Disruptive Technologies (EDT) area. The panel discussed the further involvement of the CBRN defence COI and its industry links. The discussion was focused on capability development and the process of defining requirements for capability development in light of EDT.

The output from this panel was that JCBRN Defence COE will provide support to:
- participating in groups related to science and technology development (Defence Innovation Accelerator for the North Atlantic (DIANA), STO, etc),
- enhance interaction with industry and provide technology watch function,
- information sharing among relevant groups and panels (STO, JCBRN CDG).

The topic of the third panel, chaired by **COL Michael Firmin**, was the JCBRN Defence COE approach to NATO Exercise, Training and Education. During their discussion, the panellists **COL (Ret.) Randy Smith (US EUCOM) and LTC Ilona Chylíková (SHAPE/ J5)** raised the following points:
- traditionally commanders have seen CBRN scenarios as an obstacle to their ability to meet their overall exercise objectives. Because of this, CBRN is oftentimes marginalized in exercises, at all levels,
- despite the challenges, CBRN defence elements should be incorporated into NATO exercises and training,
- any CBRN incident will impact both the civilian and military communities. Because of this, there must be a concerted focus on civilian-military training, bringing these two communities together to ensure a coordinated CBRN incident response,
- the JCBRN Defence COE should serve as a memory of CBRN knowledge and provide this knowledge to training audiences at exercises on NATO as well as nations.

The output from this panel was that JCBRN Defence COE will provide support to:
- Strategic Training Plan revision,
- training requirements based on identified capability gaps,
- realistic CBRN scenario input into exercises and training at all levels, based on threat analysis,
- increased reach out to both the military and civilian CBRN committees to ensure both are represented in CBRN training and exercises as required.

The fourth panel dealt with the NATO 2022 Strategic Concept and the issue of NATO's CBRN Defence Policy correlation with operational domains and civ-mil interaction and was chaired by **COL Aleš Mynařík (JCBRN Defence COE). The panellists BG Roman Hlinovský (Czech Fire Resuce Service Liaison Officer to JCBRN Defence COE) and COL Vratislav Osvald (DEU Framework Nations Concept (FNC) CBRN Cluster Protection Cell)** tackled the topics at hand in a context of new international security environment with a focus on war and crisis response scenarios. During the discussion, the following was pointed out:
- the CBRN Defence Policy must be implemented not only for CBRN defence documents but also for a full range of non-CBRN defence documents.

The output from this panel was that JCBRN Defence COE will:
- be more effective and keep up with the development and changes in the security environment,
- focus on novelty, analytical trends and methods such as horizon scanning,
- support scientific and technical collaboration,
- support civil preparedness as a central pillar of Alliance resilience.

The final panel preceding the concluding discussion tackled the NATO 2022 Strategic Concept, NATO's CBRN Defence Policy, and NATO Partners from the perspective of JCBRN Defence COE. Co-chaired by **COL Wolfgang Karl-Heinz Reich (JCBRN Defence COE) and Mr Zdeněk Hýbl (JCBRN Defence COE), who were joined via video teleconference by BG Didier Polome (ACOS SPP)**, the panel focused on the question of how NATO 2022 Strategic Concept and NATO´s CBRN Defence Policy deals with partnership and outreach together with the role JCBRN Defence COE is playing and can play in the future. Several points were accentuated during the discussion:
- JCBRN Defence COE outreach activities (cooperation with EU, UN, other organizations, academia and industry),
- NATO's cooperation with the EU is of paramount importance as the EU is a unique and essential partner for NATO,
- JCBRN Defence COE's role in CBRN defence NATO-EU cooperation is irreplaceable,
- JCBRN Defence COE is an important stakeholder and, according to HQ SACT Flag Officer/General Officer (FOGO) Champion, a benchmark for all other COEs for cooperation with EU,
- JCBRN Defence COE offers the opportunity to provide independent analyses and should embrace this role to help address

emerging issues,
- JCBRN Defence COE is a unique platform to accommodate and deepen EU-NATO cooperation.

The output from this panel was that JCBRN Defence COE will:
- continue being a front-runner in partnership and outreach activities in/for NATO,
- enhance outreach activities due to JCBRN Defence COE reinforced structure (industry, academia, EU, …),
- inform relevant NATO entities regarding issues on EU-NATO cooperation and other outreach activities,
- support, on request, the development of policies and concepts regarding the implementation of partnership and outreach activities.

The second day of the Conference was focused on a detailed discussion of how to support NATO's CBRN Defence Policy Implementation Plan, chaired by COL David Martínek (JCBRN Defence COE). The panel, composed of the panel leaders of the previous four blocks, as well as MAJ František Grmela (JCBRN Defence COE) focused on summarizing and formalizing the key ideas of all previous panels, as described in greater detail previously.

The Conference was concluded by the chairman Ambassador MG (ret.) Petr Voznica who outlined way ahead for the JCBRN Defence COE:
- report and brief, as appropriate, to NATO committees and bodies such as the Committee on Proliferation in Defence Format (CPD), Resilience Committee as well as Joint CBRN Defence Capability Development Group (JCBRND-CDG) on the outcomes of the conference and the JCBRN Defence COE Steering Committee,
- brief CBRN defence SMEs at an International Staff/International Military Staff meeting,
- further, develop conference proposals at the JCBRN Defence COE and inform IS/IMS accordingly,
- the JCBRN Defence COE will support NATO's CBRN Defence Policy implementation plan, based on the Committee on Proliferation decision.

In addition, the Conference insights will be part of the Conference Action Plan that will be regularly evaluated by the JCBRN Defence COE.

Author: COL (ret.) Milan Novotný

CLEAN CARE 2022: CBRN & MEDICAL COMMUNITY IN WORKING HARMONY

The Clean Care 2022 (CC22) was an incident-based exercise held from 13 to 24 June 2022 at the Military Training Area (MTA) Tisa, Czech Republic. This two-week Live Exercise (LIVEX) trained NATO interoperability at the tactical level between CBRN defence units and medical teams. The LIVEX aim was to provide CBRN medical support including the management of any casualty in a CBRN environment from the point of exposure through and to a Role 2 medical treatment facility.

The exercise setting focused on a deployed medical group and CBRN specialists in the early stages of a Peace Support Operation / Non-Article Five Crisis Response Operation (NA5CRO) with host nation support. There was a terrorist threat making use of opportunistic access to toxic industrial materials and chemical weapons. The exercise's background was also an endemic disease scenario consistent with an early insertion operation.

CC22 was sponsored by the NATO Chemical, Biological, Radiological and Nuclear Medical Working Group (CBRN Med WG) & Joint CBRN Defence – Capability Development Group (JCBRND-CDG) Training and Exercise Panel and heavily supported by the 31st CBRN Regiment (CZE), Medical Agency (CZE) and the JCBRN Defence COE. Although the CC22 planning process had been seriously hampered by COVID-19 pandemic, the Core Planning Team (CPT) delivered all required documents in accordance with Bi-SC Directive 075-003 in a very short time. The CPT organized several planning events such as an initial, main, and final conference which was considered as a site survey to the MTA Tisa for better situational awareness of all participants.

The first week of the exercise started with the initial set-up, and foundation training of both exercise control (EXCON) and the training audience. In addition, the CBRN Medical T3 course was opened for more than 20 students who gained knowledge and skills which were practically used during the LIVEX part. The execution phase consisted of the cross-over training, show, tell and teach activities and a three-day LIVEX including CBR incidents and trauma casualties' treatment. CC22 exercised the full spectrum of tactical procedures related to CBRN reconnaissance, enhanced CBRN first aid including trauma in the hot zone by non-medical responders, personnel/vehicle decontamination and ROLE 1-2 medical treatment.

A Distinguished Visitors (DV) Day was scheduled

during the LIVEX to promote this interoperability exercise. The CBRN / MED community of interest key leaders enjoyed both static and dynamic demonstrations of capabilities under various scenarios e.g., illegal chemical laboratory robotic search, casualty decontamination area procedures, ROLE 1-2 cooperation and Mobile Hospital Isolation Unit (MHIU) plague casualty management.

Undoubtedly, the Russian act of aggression against Ukraine and unprecedented CBRN threatening caused massive interest in CC22 participation. This point was underlined by the participation of more than 200 attendees from seven countries. Some nations deployed observers to report exercise findings back home and to consider their participation in the future. This unique exercise demonstrated CBRN / MED readiness to face any unpredictable situations in a CBRN environment. As a result, the Training and Exercise Panel will run this exercise every second year in order to maintain appropriate skills and not to let the interoperability procedures to be forgotten. Everybody appreciated the great effort spent while planning and executing this training opportunity which was of great value to Alliance and to NATO Partners.

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JCBRN DEFENCE COE SUPPORTS ANNUAL EXERCISES

The JCBRN Defence COE Education, Training and Evaluation Department (ETED) conducts training and evaluation in support of NATO Command Structure (NCS), NATO Force Structure (NFS), and other nations' Chemical, Biological, Radiological, and Nuclear (CBRN) defence specialists. Within this department, the Exercise and Evaluation Support Section (EESS) is responsible for supporting various collective training events and providing CBRN defence expertise for the duration of the exercise planning process. This exercise support is not only beneficial for the attending audience, but also provides the JCBRN Defence COE with critical lessons identified from each exercise. These lessons are then provided to the JBCRN Defence COE's Transformation Support Department (TSD), helping them turn a "lesson identified" into a "lesson learned".

The exercise planning process is rather long at 12-15 months. This means that the exercise planner from ETED is often jumping from one exercise to another prior to the conclusion of the first exercise. To support this high operations tempo (OPTEMPO), the exercise planner tries to get involved in the exercise planning process as soon as possible, starting with providing input during the exercise specification process. This level of involvement continues throughout the exercise planning process, with the ETED planner helping to determine exercise objectives, scenario amendments, and – based on the Training Objectives (TO) – helping to ensure realistic CBRN exercise play. Finally, during the execution phase of these exercises, ETED provides either a coordinator who ensures proper exercise play, or an augmentee to a NATO evaluation team.

Due to the high number of CBRN defence collective training events, ETED is forced to prioritize its participation. Of critical importance are the SHAPE-sponsored exercises STEADFAST JUPITER and STEADFAST JACKAL. The previous year's major joint exercises from the Steadfast series were heavily affected by COVID-19 pandemic, so we were looking forward to having a less encumbered 2022. However, the Ukrainian conflict proved just as disruptive, but made the importance of these exercises even greater.

STEADFAST JUPITER 2022 (STJU22) was initially planned as a strategic, operational, and tactical level major Command Post Exercise (CPX) to train the NATO Response Force (NRF) out of Joint Force Command Naples (JFCNP) in the planning and conduct of a NATO Article 5 operation. But considering the strategic

challenges emerging from Ukraine, SHAPE made the decision to limit the number of trained formations and re-scope STJU22 into a three-tiered training event with the first level (strategic) belonging to SHAPE, the second level (operational) belonging to JFCNP, and the third level (tactical) belonging to the 1st German Netherlands Corps (1GNC), which acted as the NRF23 Land Component Command (LCC). This decision had a major impact on CBRN defence as the NATO CBRN Reachback Element (RBE) and Combined Joint CBRN Defence Task Force (CJ-CBRND TF) participation at the strategic and operational levels were cancelled. EESS support to STJU22 was also minimal as we only contributed to the 1GNC scripting event organized at Joint Warfare Centre (JWC), helping to develop an exercise storyline that combined Explosive Ordnance Disposal (EOD) and CBRN defence.

The second NATO major joint exercise, STEADFAST JACKAL 2022 (STJA 22), was not as limited as STJU22 due to the former's more limited focus on training the NFS. STJA 22 evaluated NATO Rapid Deployable Corps-Italy (NRDC-ITA), its Joint Logistics Support Group (JLSG) and Joint Force Air Component Headquarters (DEU). Although the exercise objectives for STJA 22 included protection against CBRN and Toxic Industrial Materials (TIM) hazards, these events were not originally reflected in the TOs. However, due to ETED's involvement, three main CBRN defence storylines and a supportive CBRN incident to a time-sensitive targeting were eventually included. Two of these storylines incorporated the release of a TIM due to a cyber sabotage incident. The storylines were mainly aimed to initiate cross-component planning to mitigate a CBRN incident's impact on NATO's or the host nation's operations.

In addition to NATO training events, the JCBRN Defence COE's support to exercises includes national-level CBRN defence exercises with multinational participation listed in NATO Military Training and Exercise Programme (MTEP).

Considering the national exercise portfolio for calendar year 2022, ETED was heavily involved in support of exercise BRAVE BEDUIN 2022 (BRBE22). The aim of this exercise was to conduct intensive training of the NATO CBRN Warning and Reporting procedures in accordance with Allied Tactical Publication (ATP)-45 (F) "Warning and Reporting and Hazard Prediction of CBRN Incidents". The exercise was organized and controlled by the Danish Joint CBRN Centre located in Skive Barracks, Denmark. In total, more than 40 collection centres under the control of two zones and one area coordination centre participated in this exercise. ETED representatives directed the plans and data cell and supported the exercise with incident development and supported the coordination and harmonisation of CBRN play. In the long history of the BRBE series, exercise BRBE 22 was special for a number of reasons. Firstly, for the first time the NATO JJWC exercise scenario SKOLKAN was used. Secondly, the exercise hosted observers from NATO, mainly JFCNP, JFCBS and 1. GNC.

The second important national exercise we supported was TOXIC VALLEY 2022 (TOVY22). This exercise was held at the Training and Testing Centre (TTC), Zemianske Kostolany, Slova-

kia, from 5-16 September 2022. This two-week exercise used various simulants and live nerve agents to train Sampling and Identification of Chemical Agents (SICA) Teams and deployable laboratories (DLAB) from twelve nations. An ETED representative was assigned to the exercise evaluation team.

Another important exercise this year was CLEAN CARE 2022. It was organised under the Joint CBRN Defence Capability Development Group's (CDG) Training and Exercise Panel (TEP) to which ETED provides the chairperson and secretary. The focus of this exercise is on CBRN medical interoperability at the tactical level. Critical to this event was the exercising of casualty management in a CBRN environment, from point of exposure through to a Role 2 Medical Treatment Facility. The JCBRN Defence COE significantly contributed to the exercise with personnel coming from throughout the JCBRN Defence COE.

The last supported national exercise, DEFENDER 23, is a new one in our portfolio. At the time of this writing, we are still in the preparatory phase of the exercise. DEFENDER 23 is an annual large-scale U.S. Army Europe (USAEUR)-led, multi-national joint exercise designed to build readiness and interoperability between U.S., NATO and partner militaries. The JCBRN Defence COE was asked to help due to an identified training gap by USAEUR. To improve this, ETED supported the scenario syndicate by creating a general CBRN threat that will provide operational dilemmas for the participating commanders.

A new focus on the DEFENDER series seems to be in line with the JCBRN Defence COE's mission as the next iteration of this exercise will include a stronger NATO presence under the cover of SHAPE. This demonstrates an apparent trend in exercises to have CPX connected to live field exercises with more deployed forces.

Currently, ETED supports are supporting eight different exercises, a number that should increase as 2023 progresses. To be successful in this demanding task, we are planning increased cooperation with the U.S. Defense Threat Reduction Agency's (DTRA) exercise division. Our first mutually supported exercise will be Steadfast Jupiter 23; based on the experience each organization gains from this event, we anticipate our cooperation will only grow.

PROJECTED EXERCISES FOR 2023

- Steadfast Jackal (JWC, Stavanger)
- Steadfast Jupiter (JWC, Stavanger)
- Toxic Trip (Belgium)
- Defender (USAREUR)
- Yellow Cross (Czech Republic)
- Toxic Valley (Slovakia)
- Brave Beduin (Denmark)
- Precise Response (Canada)

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TEP CHAIRPERSON'S KEY ROLES AND RESPONSIBILITIES

The Joint Chemical, Biological, Radiological and Nuclear (CBRN) Defence Capability Development Group's (CDG) aim is to support the development of CBRN defence capabilities across all lines of development but focusing on interoperability, doctrine materiel and training. The Training and Exercise Panel (TEP), the permanent Level 3 Group established under the JCBRND CDG, is specifically responsible for enhancing interoperability through Education and Training (E&T). TEP provides this assistance by contributing to the development of CBRN defence-related training doctrine and publications, and through CBRN exercise support by providing requested subject matter expertise (SME) with a special focus on interoperability and coordination.

As the newly appointed TEP Chairperson (TEP CP), my service to this group began during the 19th TEP meeting, held from 07 to 10 November 2022 at the Joint NBC Defense School in Rieti, Italy. Before the meeting, it was important for me to identify the panel composition and the main responsibilities of the panel leadership.

Based on the TEP Terms of Reference (TOR) - which are endorsed by CDG – the TEP Chairman and the TEP Secretary are provided by the JCBRN Defence COE. The TEP Vice-chairman is provided by a NATO nation on a voluntary basis, currently manned by a representative from the United Kingdom. Members are delegated by NATO nations and appropriate bodies as required.

The TEP Chairperson's responsibilities include, but are not limited to:

- Attending CDG meetings to report the panel's work and receive guidance from the CDG;
- Leading the conduct of the discussions in an impartial manner;
- Seeking decisions for all questions examined and summarize these decisions at the end of agenda items for inclusion in the decision sheet (DS);
- Drawing attention of members to all comments, proposals, and related documents;
- Reviewing, amending, and endorsing the DS and other correspondence produced by the Secretary;
- Monitoring the progress of activities in accordance with the program of work;
- Remaining neutral in all matters (it is normally not possible to chair a meeting and represent a nation at the same time).

If the Chair is absent, the Vice-chair may take over temporarily. If a Vice-chair has not been appointed, the Secretary can chair the meeting.

The TEP Secretary's responsibilities include, but are not limited to:

- Providing assistance and advice to the Chair as required;
- Coordinating the meeting schedule;
- Supervising the administrative arrangements for the meetings;
- Producing the meeting DS / Meeting Report with Action List (AL) for the Chair's review and agreement prior to publication;
- Posting meeting DS / Meeting Report with AL and other documents related to their respective group/panel forum on the NSO website in coordination with the NSO forum contact.

From the described responsibilities it is apparent that the success of the TEP meeting often depends on cooperation between the Chairperson and Secretary. Other CDG panels do not have this similar benefit of both positions being manned by members of the same organization. This fact greatly helps in the creation of an exceptional working environment within the TEP meetings. I am convinced that we will succeed while keeping the same cooperative, professional, and friendly atmosphere during the upcoming meetings.

Author: LCT Jaroslav RYBÁK, CZE-A

CBRN SUPPORT TO TECHNICAL EXPLOITATION AND ITS ROLE IN THE COMMANDER'S UNDERSTANDING OF THE OPERATIONAL ENVIRONMENT

The chemical, biological, radiological and nuclear defence (CBRN) should not be seen as an isolated and stand-alone domain. CBRN defence-related aspects are also part of the responsibilities of other military branches. This article will give an insight on how the CBRN affects selected military branches, particularly explosive ordinance disposal (EOD) and counter improvised explosive disposal (C-IED) through support to Technical Exploitation (TE). We will try to understand how their responsibilities overlap with the JCCBRN Defence COE field of expertise and area of responsibility and why it is crucial to maintain close relationships and coordination with these specialised units.

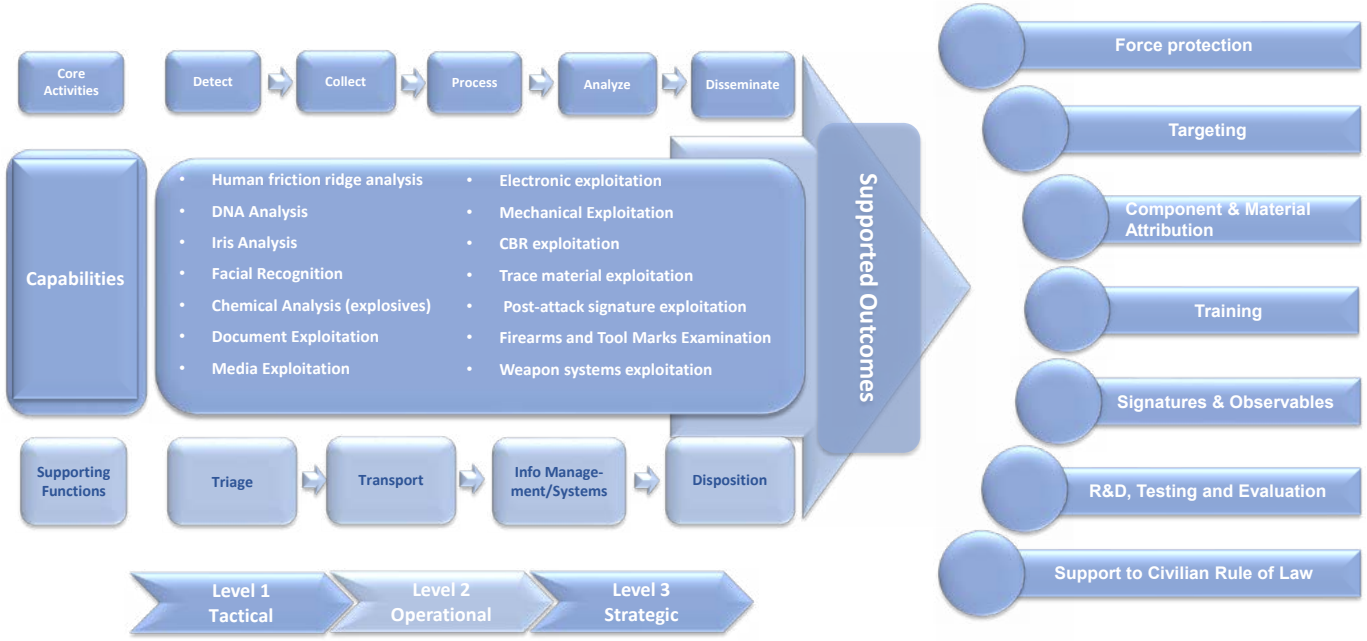
The use of weapons of mass destruction, especially chemical, biological or radiological, will always be closely connected to the means of their delivery. To defeat "conventional" CBR ammunition or CBRN-laden improvised explosive device, CBRN, EOD and C-IED will always work hand-to-hand. Of course, once the CBRN weapons are successfully deployed, the need for EOD or C-IED decreases, and the whole responsibility (mainly for mitigation of the effects) falls to CBRN defence. However, this is the point where technical exploitation can provide essential information that can help recover, reduce the adverse effects or even prevent future attacks.

The NATO Technical Exploitation Group (NTEG) is one of the three groups of the Defence Against Terrorism Program of Work (DAT POW) that plays a crucial role in enhancing NATO's contribution to the international community's fight against terrorism under the auspices of the Emerging Security Challenges Division (ESCD).

The DAT POW covers several projects from Biometrics, C-IED, EOD, counter unmanned aerial systems (C-UAS), HUMINT, large body aircraft – electronic warfare to technical exploitation. Some of these projects are beyond the scope of CBRN defence others do not yet have the full attention of the CBRN community. An example is already mentioned technical exploitation, which the Allied Intelligence Publication (AIntP)-10 defines as:

"Technical exploitation (TE) is a process using scientific methods and tools to derive data and information of potential intelligence or operational value from collected data, information, material and materials. TE aims to combine a diverse set of capabilities and expertise to derive data and/or information from all types of collected material."

As it is clear from the figure below[1] , there are capabilities which are closely related to CBRN defence[2], CBR[3] exploitation, trace material exploitation, post-attack signature exploitation



1 https://esc.hq.nato.int/CT/DATPoW/Pages/DAT-POW----NTEG.aspx
2 do not get confused by the chemical analysis of the explosives – it is a simple analysis of the energetic materials and falls entirely under the EOD/C-IED domain
3 the "N" as of nuclear should be included as well, as you might learn later in this article
4 MERT is within the responsibility of NATO CBRN Community of Interest
5 SIBCRA is within the responsibility of NATO CBRN Community of Interest
6 WIT is within the responsibility of NATO EOD Community of Interest
7 Evidence for this close relationship and coordination is given by the fact that JCBRN Defence COE has been invited to join the NATO technical exploitation group (NTEG) and to participate in the writing team for TE Policy
8 High-performance liquid chromatography coupled with high-resolution mass spectrometry (HPLC-HRMS).
9 since the obtained exact mass-to-charge ratios (m/z) of unknown analyte ions can be used – next to the isotopic pattern.

and weapon system exploitation are clearly within the scope of CBRN defence from the CBRN event/attack/incident perspective. The core activities: Detect – Collect – Process – Analyze – Disseminate, mirror the most basic capabilities of:

- CBRN Multirole Exploitation Reconnaissance Teams (CBRN - MERT)[4] ;
- Sampling and Identification of the Biological, Chemical and Radiological Teams (SIBCRA)[5] ;
- Mobile CBRN laboratories;
- Weapon Intelligence Teams (WIT)[6] .

And as it is clear from the figure, CBRN defence has not only a supporting function. Screening the collected exploitable material (CEM) for chemical, biological and radiological hazards to determine whether they are safe to handle (Triage), safely packing the material and preparing it for transportation in cases when CBRN contamination has been detected and preliminarily identified but the CEM is essential (Transport) and safe decontamination or long--term safe storage (Disposal) are only a part of the capabilities CBRN defence can provide to TE. It is generally, even by CBRN Community of Interest, accepted that TE is part of EOD/C-IED domain. However, no one can deny the CBRN defence role and its importance in it. To further include, establish and imbed the CBRN defence in the technical exploitation domain, the JCBRN Defence COE joined[7] the process of the preparation of the new technical exploitation policy to make sure that the CBRN defence has an undeniable place in defence against terrorism and in technical exploitation that follows unconventional incidents.

The CBRN support to Technical Exploitation, as defined in NATO standard AIntP-10, is not new to the CBRN community. It is based on the sampling and identification of biological, chemical, radiological and nuclear substances. It also focuses on the sampling and identification of CBRN weapons and means of delivery and other devices or material engaged in a CBRN incident. The collection, handling and preservance of the CBRN-contaminated forensic exhibits (during the EOD, C-IED or WIT missions) are also considered as CBRN support to Technical Exploitation.

CBRN support to TE is mainly provided by specialised CBRN teams, which have the capability to provide the commander with specific information about the hazardous substances and thus contribute to determining attribution for a CBRN incident (SIBCRA, Mobile CBRN laboratories, MERT). The main advantage of these teams is that they possess the capability to identify and often characterise the substances or material on site, or the team can perform authorised sampling of the hazardous material and deliver it to the mobile CBRN laboratories for more detailed analysis using more sophisticated analytical techniques and instruments.

In some cases, even the reconnaissance and decontamination can be considered as CBRN support to TE, especially during the EOD/CIED/WIT operations, even though it should be a part of the CBRN EOD operation and thus it is covered by NATO allied EOD publication (AEODP) -8.

CBRN Exploitation is partially defined in AIntP-10, but it refers to chemical exploitation, and it focuses on the detection and identification of substances related to explosives by determining their chemical signatures. Chemical exploitation also covers explosive precursors, improvised explosive device (IED)-related material, illicit narcotics and pharmaceuticals.

The identification and characterisation of the exact type and brand of explosive is hard to realise based on the analysis of the high-energy components alone. This is because most available explosives are composed of a small number of explosive compounds. On the other hand, additives can vary considerably depending on the brand (manufacturer) and the intended application of the explosive. Today, existing analytical laboratory techniques[8] allow us to analyse unknown substances in samples of forensic relevance[9].

But we all know there is more to it than just detecting explosives.

More recently, chemical forensics has been applied to the forensic investigation of highly toxic chemicals - chemical and biological warfare agents. As we are all aware, the nature of armed conflict is changing with the possibility of CWA use in asymmetrical conflicts and terrorism. Chemical forensics uses modern analytical techniques to characterise materials and retrospectively gain insights into their synthesis methods and possible source of origin. It relies on the identification of chemical attribution signatures (CAS), which can include residual synthetic precursors, impurities, reaction by--products and degradation products, metabolites and other chemical markers such as stable isotopic ratios and stereoisomeric ratios.

Nuclear forensics utilises existing analytical techniques and adapts them to draw characteristic parameters of the nuclear material (e.g., isotopic composition, chemical impurities, macro- and microstructure). These characteristic parameters can be combined into a "nuclear fingerprint", pointing at the origin of the material, for example. For instance, the isotopic composition of Pu is influenced by the neutron spectrum of the reactor (hard or soft, i.e., fast or thermal neutrons), initial uranium fuel composition (235U enrichment) and burn-up (duration and intensity of irradiation in the reactor), therefore the plutonium isotopic composition can be used for the identification of the reactor type where the plutonium was produced. Also, analysis of the natural variations in the isotopic composition of certain elements may provide clues on the geographic origin of the material, and it is, in fact, one of the methodologies used in geolocation. In natural uranium, the chemical impurities may provide information on the ore body where the material was mined.

Combining the information from the analytical data, we can characterise the material and learn, for example, the intended use of the material (e.g., power production, weapons), its age etc. To find out the origin of the nuclear material, the enrichment process, and the enrichment facility, it references data for comparison. There are existing relational databases containing information on nuclear fuel materials from the open literature and bilateral agreements with fuel manufacturers. The database contains information on pellet geometry, uranium enrichment, specified values for chemical impurities, manufacturer and reactor type and location.

As by now, it should be more straightforward for the readers that there is more to the CBRN defence than just what "meets the eye", especially regarding some of the operational but primarily strategic capabilities the CBRN defence has. It is obvious that any EOD or C-IED operation or any evidence collection inside the CBRN contamination requires CBRN support. In addition, CBRN can even contribute to the commander's understanding of the operational environment through the support to Technical Exploitation or through CBRN exploitation itself. We can confidently state now that the CBRN-EOD-CIED-NTEG relationship is in a good way to establish a strong foundation for future inseparable cooperation.

Author: MAJ Miroslav LABAŠKA, SVK-A

JCBRN DEFENCE COE TRAINED JORDANIAN FIRST RESPONDERS ON CBRN TERRORISM ATTACK RESPONSE

For 2022, the training was planned and executed for Jordanian first responders within the framework of a joint project between the United Nations Counter Terrorism Centre (UNCCT) and NATO's Defence Policy and Planning Division. This training occurred from 23 to 27 May 2022.

The course was developed a few years ago through a collaboration between the JCBRN Defence COE and NATO's Defence Policy and Planning Division, one designed to assist NATO's initiative to support partner nations in improving their emergency preparedness and response arrangements, complement national training systems, and improve co-operation between first responders.

The UNCCT/NATO project on Enhancing Capabilities to Prepare for and Respond to a CBRN Terrorist Attack in Jordan delivered this five-day training for 20 Jordanian officials using NATO's International CBRN Training Curriculum for First Responders. The training covered topics such as operational implications between civil-military interaction, preparedness, detection, response, decontamination, and security implications. It also included two days of simulation response exercises to chemical and radiological incidents, conducted at the Fire Protection and Training Centre Brno, Czech Republic.

The attending first responders welcomed this theoretical and practical course, one that greatly enhanced their abilities to response to any potential CBRN incident.

Author: MAJ František PAVLÁSEK, CZE-A


POLICIE

2022 VIP VISITS

German Military Defence Attache Visit

Ministry of Foreign Affairs of the Czech Republic Visit

U.S. Dugway Army Providing Group Visit

EU Political Security Committee Visit

U.S. Joint Staff J7 Visit

Chief of the General Staff of the Czech Armed Forces Visit

Chief of the General Staff of the Slovak Armed Forces Visit

CZE CSM Visit

Military Attache of U.S. Embassy Prague Visit

ACOS Strategic Plans and Policy Visit

USEUCOM Visit

EDUCATION MISSION COMPLETE

Critical to the JCBRN Defence COE's mission is to provide NATO accredited and qualified education and individual training for NATO, its Partners, and Non-NATO entities. The JCBRN Defence COE plans and organizes highly specialized courses and training events (NATO approved and listed) for CBRN defence specialists, some of which are done through Mobile Training Solutions (MTS), classes provided at a remote location from the JCBRN Defence COE in Vyškov.

Because of the disruptions caused by COVID-19, the JCBRN Defence COE developed the capacity to deliver its educational products through Advanced Distance Learning (ADL) solutions, using both asynchronous and synchronous e-learning environments.

Asynchronous e-learning is delivered through a self-paced online learning format, one that is accessed through the JCBRN Defence COE's Training Portal. These classes are usually used as a course prerequisite, focusing on the theoretical part (introducing the necessary terminology and definitions) to give the student the needed introductory knowledge required to succeed in the practical part of the course.

Synchronous e-learning is a complete substitute for a residential course. These courses are administered through an online platform, enabling live remote lectures through a virtual classroom. Syndicate work is critical to this training, enabling the course attendees to share ideas and ask more tailored questions within a small group environment. Synchronous online courses are usually completed over a five-day period, with lectures in the morning session and scenario-based practical work in the afternoons.

Through these e-learning solutions, students continued to receive exceptional training from the JCBRN Defence COE. As always, their hard work was rewarded with a certificate of course completion, even if the ceremony was completed in a virtual environment.

In 2022, the JCBRN Defence COE provided the following courses:

1. NATO CBRN Defence Evaluators Course (4 - 8 April 2022, JCBRN Defence COE premises, a combination of residential and synchronous e-learning delivery).

2. International Radiological and Nuclear Training for Emergency Response (I-RAD) (9 - 13 May 2022, MTS - The Hellenic Armed Forces CBRN Joint School, Athens, Greece, residential delivery).

3. Training for the First Responders to the CBRN Incidents (23 - 27 May 2022, JCBRN Defence COE premises and Fire Protection and Training Centre, Brno, tailored for the Jordanian first responders, residential delivery).

   - International Radiological and Nuclear Training for Emergency Response (I-RAD) (11 - 15 July 2022, MTS - The Austrian CBRN Defence School, Korneuburg, Austria, residential delivery).

4. CBRN Warning and Reporting Centre Management Course (6 - 8 September 2022, JCBRN Defence COE premises, residential delivery).

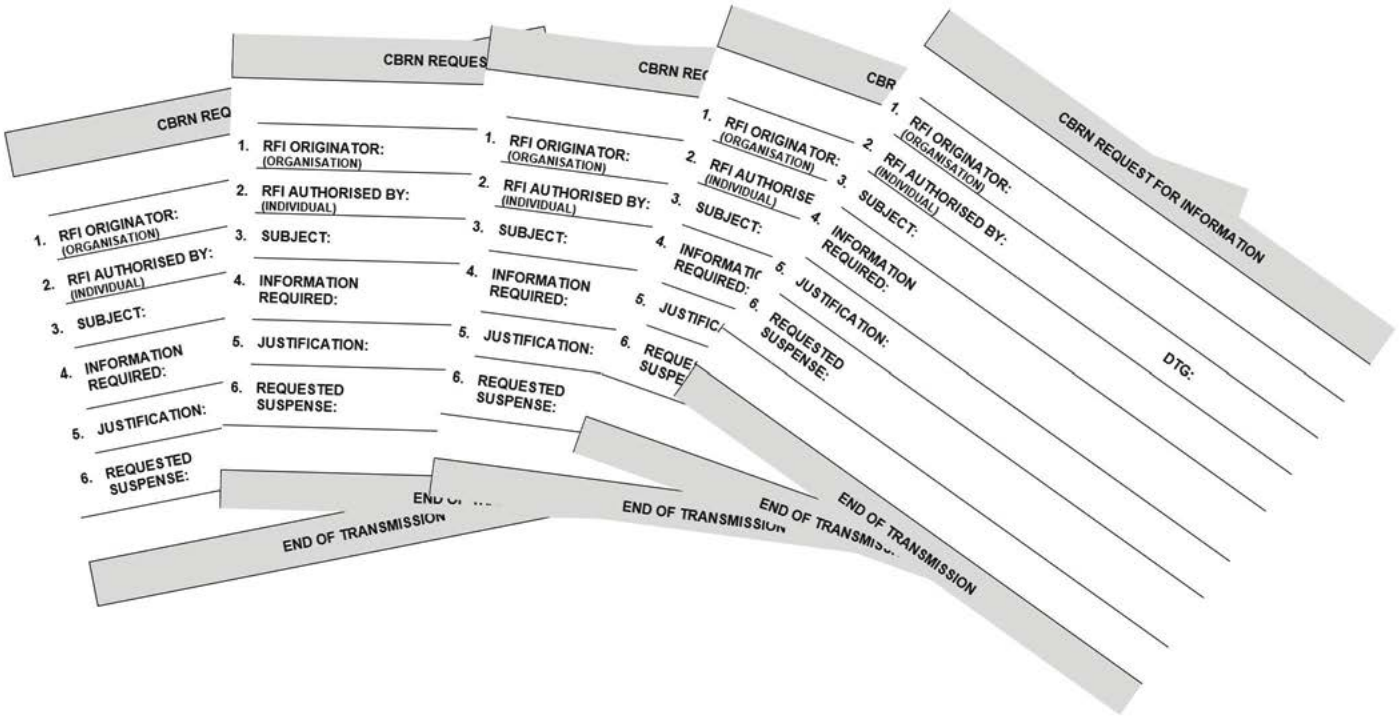
5. Live Agent Training (10 - 14 October 2022, "Stone Cottage" Training Facility Vyškov, residential delivery).

6. CBRN Consequence Management Course (21 - 25 November 2022, JCBRN Defence COE premises, residential delivery).

Without exception, the graduates of the JCBRN Defence COE courses expressed confidence that what they learned would be helpful in their operational and daily routine work, providing a fitting conclusion to the JCBRN Defence COE's training events for 2022.

Author: MAJ František PAVLÁSEK, CZE-A

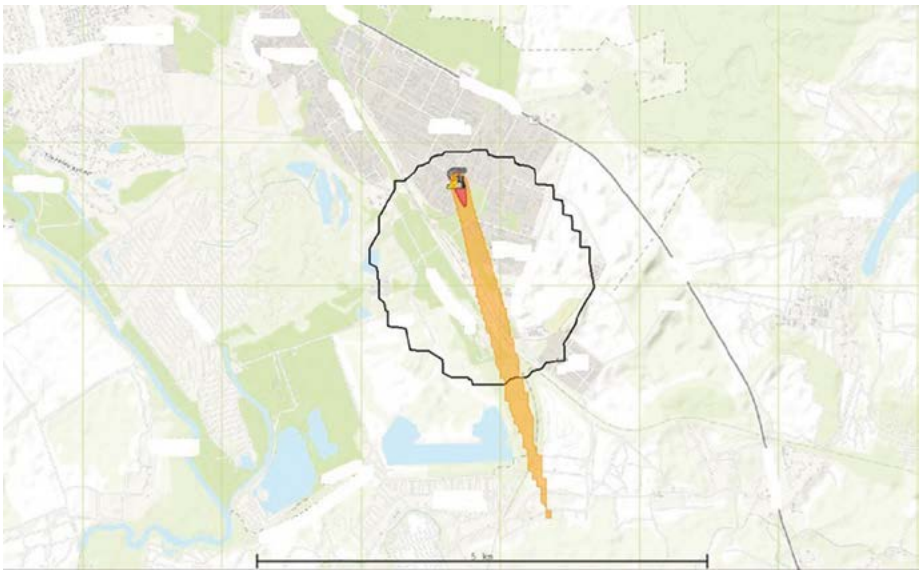
CBRN REACHBACK ACTIVITIES



CBRN Reachback is a process by which commanders, their staff, and deployed forces may be provided with timely, coordinated, and authoritative technical and scientific analysis and expert guidance on CBRN issues. This process facilitates efforts to strengthen deterrence and defence, support operations, conduct exercises and respond to CBRN incidents through a dedicated network, drawing upon expert remote sources of information. Within the Joint Chemical, Biological, Radiological and Nuclear Defence Centre of Excellence, there is a dedicated **CBRN Reachback Section (RBS)** that is permanently assigned to reachback duties and can provide expert advice when requested. The Reachback Section is also supported through technical agreements with other expert military and civilian bodies in case of reinforcement.

CBRN Reachback Section provides advice based on **Request for Information (RFI)** or **Request for Support (RFS)**. Once the request has been accepted, the team conducts an analysis based on time available and provides a scientific and technical assessment. This process can be supported by modelling and simulation to inform the Reachback Section and assist in presenting the resultant risk based on the technical assessment. Outside of completing received requests, the CBRN Reachback Section conducts activities supporting operations and exercises. This support covers a wide variety of activities from risk assessments to research and development in CBRN matters. As the situation across the world remains fluid, it is growing to be more important to detect potential threats and assess their impact for NATO and partnering nations. In such context, **Horizon Scanning** is carried out regularly which serves to identify and systematically detect any potential events, issues, developments, or trends that may be of interest. These activities are performed by subject matter experts that refine this information and highlight key events in a **weekly open-source brief** published alongside other UNCLASSIFIED products on TRANSNET and distributed to the wide CBRN network.

Subject Matter Experts (SMEs) are engaged in research activities with military and civilian institutes. These activities are a matter of personal development and help staff to stay up to date with current trends in science. The topics vary depending on the agreement set up between the SME and the research institute. For instance, two projects are being conducted in cooperation with **Czech University of Defence** on stability of first-generation agents (FGAs) on different surfaces and on the effects of matrix on the extraction of fentanyl analogues (pharmaceutical based agents). Furthermore, the Reachback Section supports the **Military Research Institute** in Brno with their project on the development of a new model of universal protective face mask. Additionally, the SMEs contribute to a number of projects within the CBRN community as members of scientific panels or working groups. The Reachback Section is currently participating in **Human Factors and Medicine Panel** within the **Science & Technology Organisation (STO)** – (HFM-359) Ionizing Radiation Bio effects and Coun-



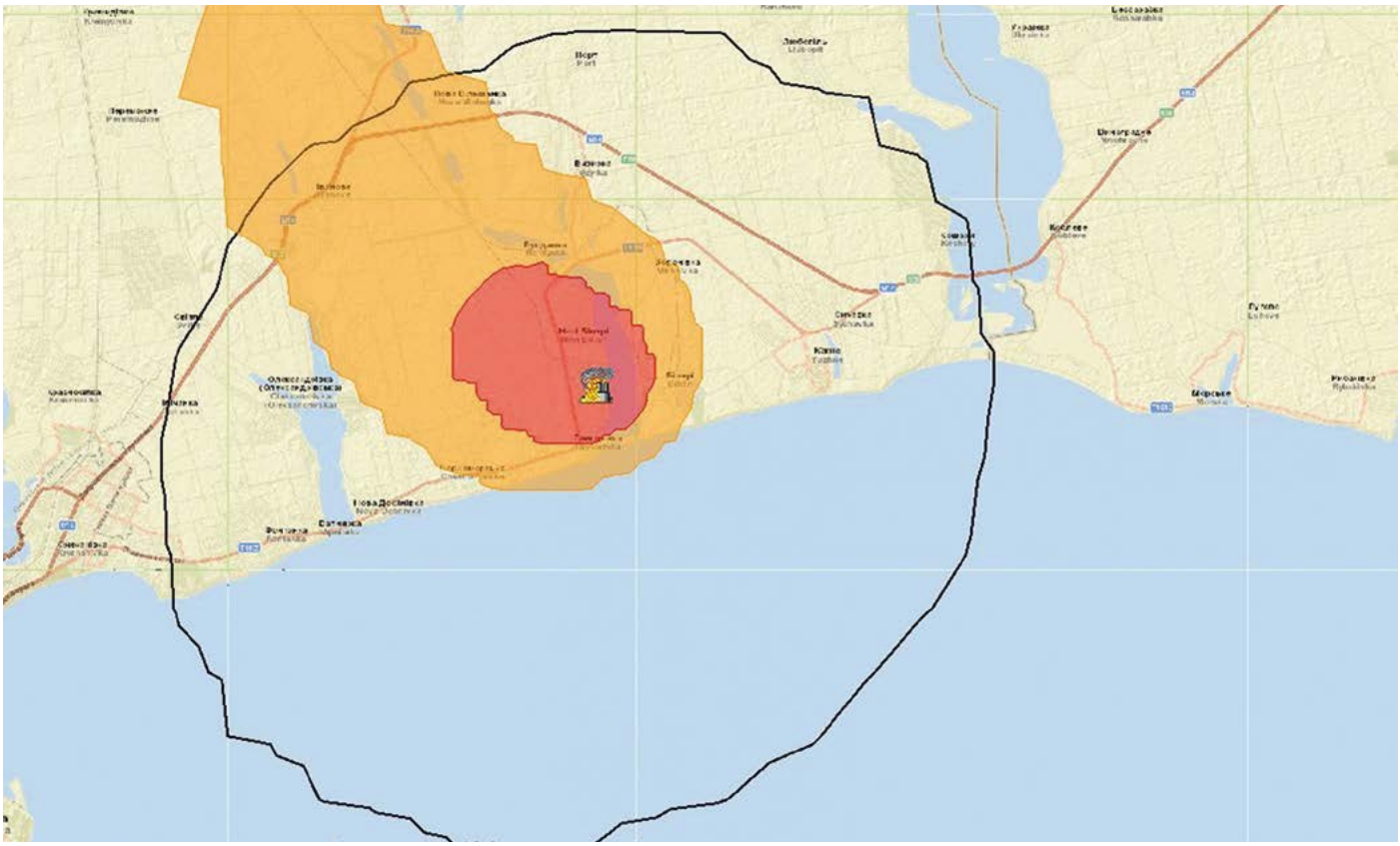
termeasures and (HFM-SET-353) Operational CBR Threat Situational Awareness. Additionally, the Reachback Section holds a seat as a Liaison Officer in the **NATO CBRN Capability Development working groups (CDG)** and its **Challenge Level Panel (CLP)**.

RBS outreach is not only external to the JCBRN Defence COE, but also assists departments and sections within the JCBRN Defence COE, which collaborate and support each other in their shared tasks and activities. Specifically, RBS works very closely with **Modelling and Simulation Section (M&SS)** regarding their models and projects to guarantee technically correct results via SME consultations. Through these common interests, close cooperation was set up between RBS, M&SS, and the **US Defense Threat Reduction Agency (DTRA)**. Moreover, a scientific network has been established in support of RBS activities, which now comprises around **20 international organisations** and is still expanding. Lastly, **Lessons Learned** processes are incorporated into our mode of work not only to adhere to NATO concepts but also to facilitate development within our internal procedures and so ensure best practices are in place.

Continuously, Reachback Section (RBS) provides support in European and NATO exercises and other training activities. Namely, these are **STEADFAST JUPITER, STEADFAST JACKAL, EU INTEGRATED RESOLVE (PACE), and BRAVE BEDUIN**. Such support can have different forms but mostly means that reachback services and personnel are available and can be activated for the exercise needs. RBS personnel also provide support to training such as training of the **NATO CBRN Joint Advisory Team (JAT)** and with selected courses of the **Education, Training, and Evaluation Department (ETED)** of the JCBRN Defence COE.

In conclusion, activities of the Reachback Section cover a wide area from operational support, training, and education, to research. In the future, we hope to explore our capabilities further through cooperation with other organizations and revision of our internal procedures. In order to keep this goal, RBS holds an annual meeting with the scientific network to create space for sharing information and experience in CBRN. The next meeting will convene in September 2023. Finally, we also strive to reach out to more NATO commander groups to enhance the availability of CBRN Reachback capability to a wider audience.

Author: LTC Petr Valenta, CZE-A



USE OF EMERGING & DISRUPTIVE TECHNOLOGIES IN THE WAR IN UKRAINE

Drones have become allies of the Ukrainian resistance against Russia. In particular, consumer drones have become crucial tools for observing artillery and for being able to pinpoint the enemy's exact location and direct fire.

Kiev's army is facing Moscow's troops with Javelins and Turkish-made "Bayraktar TB2" drones. The Bayraktar TB2 is an Aircraft Pilot in Remote (APR) developed by Baykar Technologies of Turkey for use by the Turkish Armed Forces. It is the first all-Turkish built hunter--killer Uncrewed Aerial Vehicle (UAV) for long--range and medium-altitude surveillance.

Drones provide a superior view and a tactical advantage. Today low-cost consumer drones have become protagonists of the conflict between Russia and Ukraine, used by the Kiev resistance to track the enemy. From toys of tech enthusiasts and amateur filmmakers to devices for military use.

In recent years, the United States, China, Russia, the United Kingdom, Israel, and Turkey have increased investment in this field by designing artificial intelligence weapons that can strike and eliminate targets from hundreds or thousands of kilometres away.

Ukraine's use of drones have been instrumental in changing the course of the war, as Russia's capabilities were degraded, reducing reconnaissance capabilities and forcing it to conduct artillery strikes without precise coordinates. Conversely, Ukraine has been able to use its drones, large and small, to launch effective strikes without wasting resources and reducing human casualties. This has allowed Ukraine to cut off supply lines, attack air defence systems and even sink ships.

Furthermore, the sanctions imposed on the Russian aerospace and defence sector have made the maintenance and replacement of drones extremely difficult. However, Russia still has advanced anti-aircraft systems and has been able to jam Ukrainian control signals, disable radio communications and directly attack the UAVs. Russian defences have been better organized and more carefully timed as the Russian advance has slowed and stalled, but Ukraine has advanced Western technologies capable of countering them, by switching frequencies and programming drones to perform evasive maneuvers when it is not possible to re-establish contact with the operators.

At the beginning of the war, Ukrainians immediately realized the importance of these technological tools. Andrii Pokrasa, a 15-year-old boy who lives on the outskirts of Kiev has become a hero and his story has gone around the world when he used his toy drone to help the military locate and destroy a huge Russian convoy heading towards the capital. The teenager was approached directly by the military to help them find the convoy that was running along the E40 highway between Kiev and Zhytomyr. The young man took his drone to a field near the road and, under cover of darkness, managed to take pictures and get GPS coordinates of the incoming convoy, which his father then forwarded to the Ukrainian military via social media.

All this is of particular relevance as it demonstrates the ease of how it is possible to acquire and successfully use this technology. This is what happened, once again, on August 20, 2022 when a suicide UAV struck the Russian Black Sea Fleet's headquarters in Sevastopol, Crimea. From the images it would seem to be, almost certainly, a Skyeye 5000mm Pro UAV and it is also interesting to see that the UAV can even be easily purchased from the AliExpress online site and its cost is just under 10,000 euros.

On October 29, 2022, Ukrainian drone boats attacked the Russian fleet at the Sevastopol naval base in Crimea.*

Emerging and disruptive technologies (EDT) are increasingly touching all aspects of life. These technologies are also having a profound impact on security. On the other hand, innovative technologies are providing new opportunities for NATO militaries, helping them become more effective, resilient, cost-efficient and sustainable. Technologies such as artificial intelligence (AI), autonomous weapons systems, big data, biotechnologies, and quantum technologies are changing the world, and the way NATO operates. These and other EDTs present both, risks and opportunities for NATO and Allies.

The Alliance needs to be prepared to prevent, protect and recover from WMD attacks or CBRN incidents. This will have a major impact on current NATO's Combined Joint CBRN Defence Task Force (CJ-CBRND-TF). Development of capabilities, based on the fore-mentioned opportunities, will help to consider the „NATO CJ-CBRND-TF of the Future".
For this reason, the JCBRN Defence COE is working on a project whose aim is to deliver recommendations on the future structure and equipment of CJ-CBRND-TF so it can be fit for purpose in the future considering but not limited to EDTs as well as current and future threats in the form of a Food-for-thought-paper (FFTP) identifying and describing possible opportunities.

Author: MAJ Bruno FERRANDES, ITA-A

* https://edition.cnn.com/2022/10/31/europe/sevastopol-drone-russia-ukraine-grain-intl-cmd/index.html
Visited 15 February 2023

Picture 3

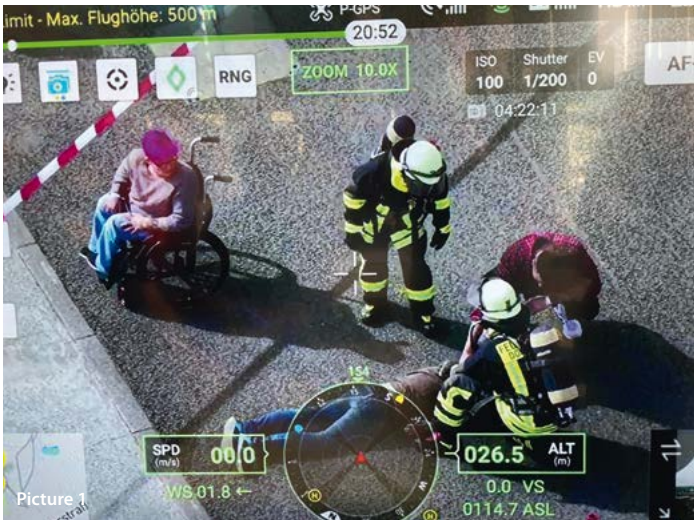
JCBRN DEFENCE COE IS BECOMING FRONT-RUNNER IN NATO – EU COOPERATION

At several FOGO (Flag Officer General Officer) Champion VTCs with Brigadier General Polomé, Deputy Chief of Staff Strategic Plans and Policies at Allied Command Transformation, it became clear that the JCBRN Defence COE's activities in the domain of NATO – EU cooperation are playing a 'front-runner' role not only amongst all the other COEs but also within NATO. One general reason for this statement might be certainly the fact that a COE by definition is not part of NATO's Command Structure nor part of NATO's Force Structure and therefore allowing more flexibility and room for manoeuvring. But this is certainly not the only reason, more significant is the Centre's growing activities in the area of NATO – EU cooperation .

The JCBRN Defence COE is not only continuing the engagement with the eNOTICE project (European Network of CBRN Training Centres) where in 2022 a number of Joint Activities (JA) have been successfully conducted, but also cooperation within this initiative and its activities with other CBRN related EU HORIZON projects like MELODY and PROACTIVE. MELODY aims to develop CBRN curriculums for first responders in the domain of CBRN. PROACTIVE (Preparedness against CBRNe threats through common approaches between security practitioners and the vulnerable civil society) and allowed eNOTICE to embed the possibility to train first responders in specific scenarios to deal with vulnerable personnel. This approach was conducted even twice in 2022, the first time in Dortmund/DEU where vulnerable people had to pass a decontamination site for wounded personnel in a chemical scenario (Picture 1 and 2).

The second JA with this regard took place in Rieti/ITA where again vulnerable personnel were decontaminated in a complex chemical scenario in a train station. An additional JA had been set up in Ranst/BEL on a huge training area, encompassing a chemical plant-, a hospital fire-, and a car accident-scenario, training firefighter, first responders and police at the same time (Picture 3 and 4). This JA also provided the opportunity to discuss the results of MELODY (Picture 5) and a policy meeting aiming to identify possibilities to establish sustainability for eNOTICE and its catalogue of CBRN training centres once the project ends in August 2023. Next year, two more JAs will take place in Poland and Belgium, followed by the final conference in June 2023. Fingers crossed that by then a sustainability solution is developed.

Another example for the Centre's activities in the area of NATO – EU cooperation is further participation in various CERIS (Community of European Research and Innovation for Security) events, playing an active role in preparing and conducting these activities. The first CERIS event was integrated into the CBRNe Conference in Lille/FRA where more than 550 participants from various domains



Picture 1


Picture 2

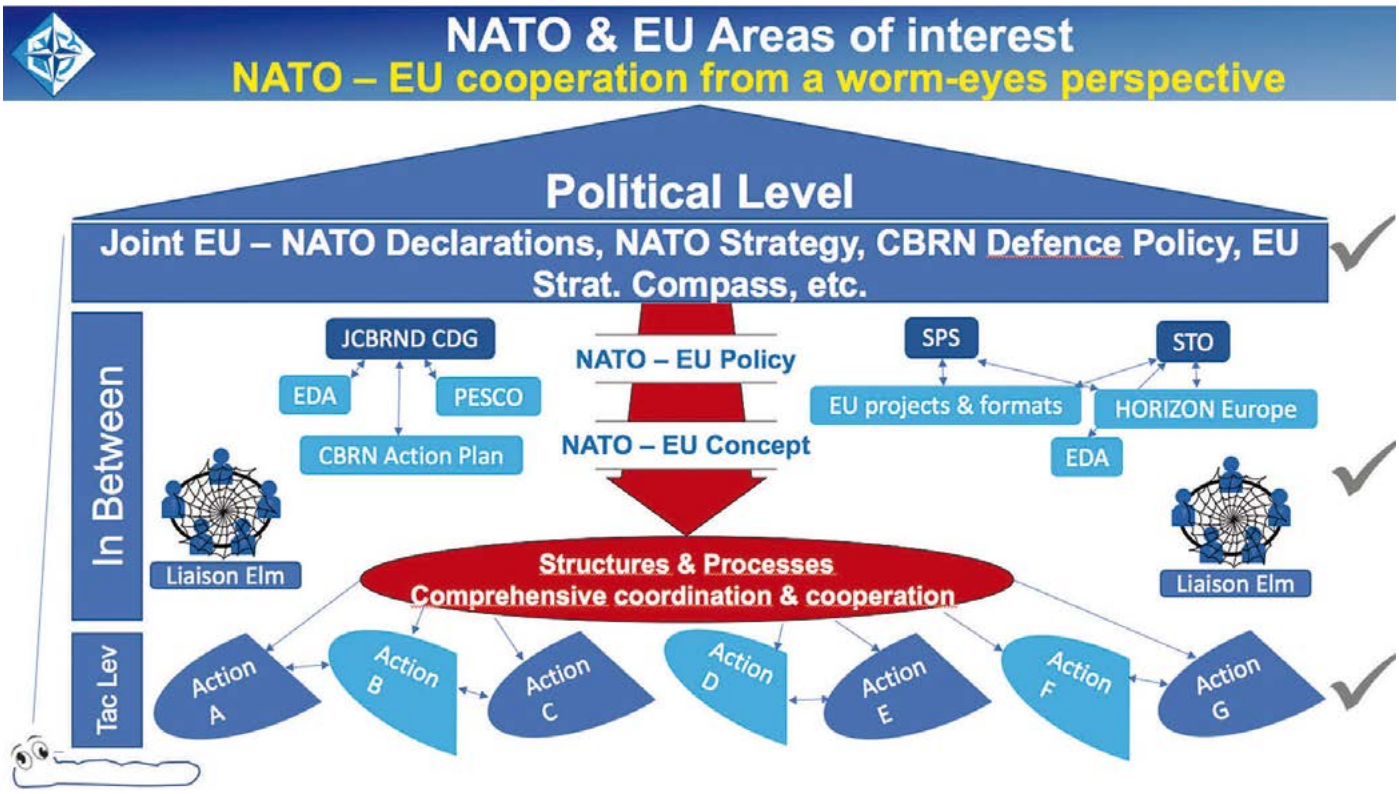
like research, academic and industry participated (Picture 6 and 7). Several CBRN related HORIZON projects, including eNOTICE were discussed over two days mainly focused on training orientated topics. Also, stakeholders from the EU Commission, namely representatives from Directorate General (DG) Migration and Home Affairs (HOME) and DG European Civil Protection and Humanitarian Aid Operations (ECHO) provided their insights on CBRN related topics in Europe. The second event took place in Brussels/BEL and the JCBRN Defence COE representative provided not only a back brief on recent eNOTICE activities but also on some observations in general looking at NATO – EU cooperation as such, identifying gaps and seeking for potential solutions to overcome these gaps (Figure 1).

In addition, the JCBRN Defence COE is continuing its efforts in cooperating with and supporting the EU CBRN Risk Mitigation CoE initiative (introduced in the newsletter 2020). The National Focal Point (NFP) meeting 2022 took place in Brussels/BEL and the Centre's representative introduced various opportunities to support this initiative in the South and South-East Europe regional meeting; of course, within its mandate and capabilities (Picture 8). These opportunities might encompass training solutions (mobile and residential), modelling and simulation and to some extent CBRN reachback. In the preparation phase of this meeting the activities of the EU CoE initiative in this specific area had been compared with activities launched and financed by NATO's Science for Peace and Security (SPS) programme, whereof approximately ten percent are CBRN defence related. Surprisingly, neither the representatives of the countries in this region nor the secretary were aware of this programme and its activities. This might serve as another concrete example whe-


Picture 4


Picture 5


Picture 6



re NATO – EU cooperation could be better coordinated. This, and some examples where NATO's JCBRN Defence Capability Development Group (JCBRND CDG) is not enabled working closer together with relevant EU bodies and formats finally led to the thoughts described in figure 1. This topic has been discussed during the Centre's Annual Conference with CBRN defence related NATO bodies as well as within the EU CERIS format. Even though there is, due to the given facts in both organisations, for the time being no solution on the table, there might in the future some opportunities to overcome these obstacles. Looking forward to enhancing NATO – EU cooperation, the JCBRN Defence COE will support this endeavour within its mandate and capacities. Apropos capacities, because of the Centre's Strategic Gap Analysis (SGA), the JCBRN Defence COE now has an additional post called 'outreach coordinator', so we are now able to increase our activities within this domain and strengthenour role as 'front-runner'.

Author/Photos: COL Wolfgang Karl-Heinz Reich, DEU-A

Picture 7


Picture 8

JCBRN DEFENCE COE INTERNSHIP

On the 6th of September 2021, I officially started my internship at the JCBRN Defence COE. During the subsequent six months of my stay at the Centre, I was working on an overarching internship project. The topic of the project was "NATO-UN Strategic Level Cooperation on Consequence Management Focusing on CBRN Defence". The main objectives of the project were to identify challenges that both organizations experience in CBRN crisis management cooperation and propose possible recommendations that could overcome these challenges. In order to achieve these objectives, extensive open-source research and in-depth interviews with NATO and UN staff members were conducted as the main research methods during this project. This research resulted in the identification of twelve challenges in NATO-UN CBRN crisis management cooperation and the creation of thirteen recommendations.

A detailed explanation of the identified challenges, recommendations, and the supporting research can be found in the "NATO-UN Strategic Level Cooperation on Consequence Management Focusing on CBRN Defence" document. The internship itself was a very informative, rewarding, and overall positive experience. It has been a great introduction to the topic of international crisis management. It was very interesting to observe how international organizations, such as NATO and the UN, deal with CBRN crisis management, and crisis management in general. Researching complex topics like CBRN crisis management, interviewing experts from NATO as well as UN bodies, and being able to propose recommendations in this domain as an intern was a very unique experience. All of this would not be possible without any support. I have had the pleasure to work with a team of highly experienced professionals in this field that guided me throughout the internship period. The experience gathered by discussing NATO-UN CBRN issues and receiving feedback from these experts was very valuable. Overall, I consider the internship to be a success and I would like to thank the JCBRN Defence COE for providing me with this opportunity.

Author: Mr Aleks Kozuchowski

LETTER OF INTENT WITH THE HAGUE UNIVERSITY OF APPLIED SCIENCE

On 15 February 2022, the JCBRN Defence COE Director COL David Martínek and the representative of the Hague University of Applied Science Frits Van Balveren signed the Letter of Intent between these two institutions.

The signing of the Letter underlined already excellent cooperation, which had led to the establishment of the JCBRN Defence COE Internship Programme, a highly successful and fruitful endeavor.

To deepen cooperation between the JCBRN Defence COE and the Hague University of Applied Science, the Letter will allow the institutions to extend already existing cooperation to the exchange of teaching and research personnel, collaboration for education and training, collaboration for short-term training, symposia, and other academic meetings as well as support in the field of science, research, doctrine and lessons learned analysis.

Conclusion of the Letter opens the door for broader collaboration and cooperation between both organisations which is believed to be beneficial not only for both signatories but for the wider CBRN defence community as well.

Author: Mr Zdeněk Hýbl

GREETINGS FROM THE GREAT WHITE NORTH

This summer had a lot of transition in personnel for the international members of the JCBRN Defence COE. This included the arrival of new Canadians, MAJ Warren Deatcher, and his wife Ruth.

Ruth and I are excited to have the opportunity to be the second Canadians welcomed to the JCBRN Defence COE. We have replaced MAJ Randy Godfrey and his wife Kelly who were sad to leave the CBRN community here in Vyškov but remain within the CBRN community in Canada.

As an introduction, I am originally from Glasgow, Scotland and my wife Ruth is from Listuguj Mi'gmaq First Nation in Eastern Canada. We have also brought our daughter's dog Marnie, whom some of you have met. Marnie is a morkie. We have used this assignment to the Czech Republic to push our two children/adults Gregory and Rebecca out of the nest. They have remained in Canada. Ruth is enjoying her interactions in the Czech Republic. She has enjoyed the opportunity to visit a local school to share her experiences in Canada along with her American counterpart Katrina Firmin as native English speakers. Marnie and Ruth are enthusiastic travelers and have enjoyed visiting the many sites and cultural opportunities the Czech Republic offers. We seek to overcome our challenges and trepidation of the Czech language such as understanding the differences between zebra and žebra at restaurants.

I am an Armoured Officer with 37 years of service currently from the Lord Strathcona's Horse (Royal Canadians), a Canadian Armoured Regiment. Canada has no CBRN occupation except for NCOs within our Special Operations Community. I have been dabbling in the field of CBRN for over 20 years, since 9/11 which functioned as a catalyst for re-invigorating our CBRN capabilities. I have held CBRN positions at the tactical and operational level focusing initially on Counter Terrorism but more recently on Consequence Management planning. I was the operations officer for the military component of our National CBRN Response Team. The National CBRN Response Team is an inter-department/agency capability led by our national police force, the Royal Canadian Mounted Police (RCMP). I also

spent five years as military liaison officer to the RCMP supporting police operations other than just CBRN. I have been involved in planning support to several major security events such as the Olympics and G7/G20 Summits. I have also planned CBRN support and force protection to many Canadian military operations at home and abroad. I am hoping to leverage my experience in planning and working with non-military groups such as civilian organizations, scientific organizations, and industry in my work here at the JCBRN Defence COE.

The bulk of my CBRN work has been in cooperation with the United States and I have only worked a little in the NATO realm. I am already learning lots about NATO and hope to expand my knowledge on CBRN operations at the strategic and operational level. I will be seeking every opportunity to expand my CBRN knowledge and have enjoyed observing the Joint Assessment Team training and participating in the Live Agent Training course.

I wish to build upon the work of Randy Godfrey and LTC Cosmin Mihăescu and integrate operations planning within the Operations Support Department but also with external partners and supported headquarters. I am looking forward to help define my role. I also aim to introduce and expand awareness of the JCBRN Defence COE in Canada to a variety of groups within and outside of the military CBRN community. I hope to help also rebuild social networks and interactions in a post-Covid environment as the opportunity arises to interact together more. In addition to celebrating national holidays, I will try to provide opportunities for social interaction with poker, horseshoes, and axe-throwing. We are truly looking forward to our tour here at the JCBRN Defence COE and have enjoyed our time here to date.

Author: MAJ Warren Deatcher, CAN-A

THANKS FOR THE OPPORTUNITY

Everyday life nowadays brings a lot of challenges and one of them met myself – to work in an international environment and move forward in my professional career.

Dear Readers, let me describe my experience when joining JCBRN Defence COE. My name is Lukáš Pazdera, Sergeant First Class (SFC), Czech Army. Currently, I am assigned to the position of Transportation Specialist in the Support Department at the JCBRN Defence COE in Vyškov.

I started my military carrier when I was 19 years old, right after my high school graduation, and I joined the University of Defence as a new student. Unfortunately, I didn't succeed in the first year due to a serious injury. However, I received another opportunity and Iserved for seven years in Žatec as a member of the 41st mechanized Battalion. I was then assigned to the 74th light armoured Battalion in Bučovice as an operator for four years and, during this period, I was deployed in Afghanistan in 2016 as an operator at Bagram Airfield.

My next assignment was as a logistics member supporting a Basic Training Course at the Military Academy in Vyškov, where I definitely found out, that the logistics domain is my destiny.

In the summer of 2022, I received an irresistible offer to work for the JCBRN Defence COE. At first, I was a little afraid that I would not fit in, but the opposite seems to be true. I have found my colleagues to be very kind and supportive. From the beginning, I started to be part of the Support Department with all the responsibilities and privileges, and I feel happy and proud to be part of it.

Now I am mainly in charge of traffic coordination and personnel transport as well as the regular maintenance of duty cars. So I am often the very first person our guests or visitors see at the airports. This allows me to communicate in English, which is a priceless experience for me.

„Lukáš, let me warmly welcome you on the board of the Centre and on a behalf of the leadership let me wish you great success on the next possition," stated by SWO Kamil Šesták, CZE-AF, Military Assistant of the JCBRN Defence COE.

Author: SFC Lukáš Pazdera, CZE-A

DEFENCE MERITORIOUS SERVICE MEDAL FOR COE MEMBER

UNITED STATES OF AMERICA

TO ALL WHO SHALL SEE THESE PRESENTS, GREETING:
THIS IS TO CERTIFY THAT
THE SECRETARY OF DEFENSE
HAS AWARDED THE

DEFENSE MERITORIOUS SERVICE MEDAL

TO

Lieutenant Colonel Aleš Mynařík, Czech Republic Army

FOR
OUTSTANDING MERITORIOUS SERVICE
WITH THE ARMED FORCES OF THE UNITED STATES
GIVEN UNDER MY HAND THIS 31ST DAY OF AUGUST 2022

THE JOINT STAFF
COMMAND OR OFFICE

DAGVIN R.M. ANDERSON
LIEUTENANT GENERAL, U. S. AIR FORCE
DIRECTOR FOR JOINT FORCE DEVELOPMENT

Colonel Aleš Mynařík, former JCBRN Defence COE Modelling and Simulation Section Chief and current Operations Support Department Director, was serving abroad as the Czech Republic Liaison Officer, Joint Force Development Directorate, the Joint Staff, from August 2019 to July 2022. The Secretary of Defense of the United States of America awarded the Defense Meritorious Service Medal to COL Aleš Mynařík for his outstanding meritorious service on 31st of August 2022. The medal is the third-highest award that the Department of Defense issues and is awarded to military personnel who distinguish themselves through non-combat meritorious achievement or service that is incontestably exceptional and of magnitude that clearly places the individual above his peers. The Defense Meritorious Service Medal is presented to personnel serving with or assigned to a number of joint activities including the Secretary of Defense, Organizations of the Joint Chiefs of Staff and Headquarters of Joint Commands.

Author: COL Aleš Mynařík, CZE-A

AFTER 19 994 700 MINUTES - MISSION ACCOMPLISHED

On 1st January 2023, after 38 years and 5 months of service within the national and international military CBRN defence community – or 19 994 700 minutes to be specific – the JCBRN Defence COE Education and Individual Training Section Chief (E&IT), LTC Jiří Chrástek, CZE-A, retired. This outstanding, humble, and reliable officer is one of the creators of the Czech CBRN Defence on Centre, which was established in 2004. He managed a great deal during his tenure, not only as the deputy director of the Czech CBRN Defence Centre, but also during the last 5 years as the JCBRN Defence COE Education & Individual Training (E&IT) Section Chief.

LTC Chrástek was the right person, at the right place and especially at the right time –credit for the preparation of the Quality Assurance reaccreditation goes to him. His colleagues will always recall him as an excellent teammate, one who lived by his mantra: Alone you can go fast, together we can go far.

Those who had the honour to meet him remember his infectious sense of humour - always aimed at challenging one to achieve better things.

I would like to say on behalf of the CBRN Defence community, "Jiří, thank you! On behalf of the JCBRN Defence COE, I would like to wish Jiří all the best for his civilian life: May blessed days full of sunshine, happiness and health never end, so that you can enjoy time with your family".

Summary of the military career of LTC Jiří Chrástek:

1992 – 1994	Commander of CBRN battalion
1994 – 1998	CBRN chief of a mechanized brigade
1998 – 2004	Director of CBRN department at the Czech Military Academy/the University of Defence in Brno
2004 – 2006	Deputy Director of the Czech CBRN Defence Centre
2006 – 2014	CBRN Defence Capability Development and Defence Planning Section chief/deputy section chief (TSD, JCBRN Defence COE)
2014 – 2017	Deputy director of the Protection Department at NATO School Oberammergau, Germany
2017 – 2022	Education & Individual Training Section chief of the JCBRN Defence COE

Author: LTC Veronika Dočkalová, CZE-A

OVERVIEW OF PLANNED COURSES FOR 2023

ETOC Code	Course Name	Date
Tailored*	CBRN Awareness Course	**12 Feb – 16 Feb**
WMD-CD-25502	International Radiological and Nuclear Training for Emergency Response (I-RAD)	**27 Feb – 03 Mar**
WMD-MD-21769	International CBRN Preparedness and Consequence Management Course for First Responders	**24 Apr – 28 Apr**
WMD-CD-25502	International Radiological and Nuclear Training for Emergency Response (I-RAD) – SVN (MTS)**	**15 May – 19 May**
WMD-MD-25631	CBRN Warning and Reporting Centre Management	**05 Sep – 07 Sep**
Tailored***	First Responders Course	**18 Sep – 22 Sep**
WMD-CD-31883	Live Agent Training	**09 Oct – 13 Oct**
WMD-MD-35522	Introduction to NATO WMD Disablement – ITA (MTS) **	**06 Nov – 10 Nov**
WMD-CD-25633	CBRN Consequence Management – ITA (MTS) **	**27 Nov – 01 Dec**

* Tailored for Kuwait and its neibouring countries
** MTS – Mobile Training Solution
*** Tailored for Middle East and North Afirca Countries (MENA)

For more details, please, visit our website https://www.jcbrncoe.org
Alternatively, please, use the QR code to link to the webpage for further information.
You can also reach us via e-mail courses@jcbrncoe.org
* Mobile Training Solution

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