BIOTERRORISM EMERGENCY PREPAREDNESS AND RESPONSE IN ROMANIA - IMPLICATIONS FOR NATO STRATEGIC CONCEPT -

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In November 2010, the North Atlantic Treaty Organization (NATO) adopted a new Strategic Concept that will serve as the Alliance's roadmap for the next ten years, adopting new approaches in international engagement and aiming to further develop its capacity to defend against the threat of chemical, biological, radiological and nuclear weapons of mass destruction (WMDs). As the world's leading international security organization, NATO is well-positioned to take a more visible role in combating terrorism and WMD proliferation. However, consideration of such a role also involves addressing the challenges faced by its new Members in terms of meeting the required readiness levels for NATO operations and also their national preparedness goals.

Countering Biological Threats and NATO's Strategic Concept

Natural outbreaks of disease could pose significant challenges to global security by undermining national economies, international trade and travel, public health and safety, and the trust of populace in its own government, potentially leading to ineffective governance or fragile state collapse. Such weakened or failed states could become a source of global security threats including regional instability, organized crime, terrorism, and the proliferation of WMDs and related materials.

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The global biological threat environment is compounded by the possibility of rogue states and/or terrorists deliberately using biological agents as weapons of war. Any such use of a biological agent (whether overtly or covertly) is a low-probability event with potentially devastating consequences (from "mass effects" to "mass destruction") on public health or the environment (by requiring costly cleanup and denying use of land).

Not one country is fully prepared to respond effectively to a large scale bioterrorism event especially if it involves a contagious agent. National preparedness and the ability to rely on regional or global networks of support in case of needed surge in response capabilities are therefore critical factors to consider in consequence management planning.

In 2009, NATO started working on revising its strategic concept. The revision was an opportunity to define NATO's role in combating terrorism, not only in offering assistance post-event but also in positioning itself as a network for support and assistance in national preparedness planning, civil-military integration in emergency response, and empowering civil society to get involved in national security policy development, public education, promoting a culture of security awareness, and strengthening communities' resilience to terrorism. The Strategic Concept emphasizes the Alliance's goal to *"enhance the capacity to detect and defend against international terrorism, including through enhanced analysis of the threat, more consultations with our partners, and the development of appropriate military capabilities, including to help train local forces to fight terrorism themselves"*; however, the role of military and public preparedness in defense and deterrence against biological threats is somewhat overlooked. Deterrence, which is called "a core element" of NATO's overall strategy, is discussed in the Strategic Concept only in the context of nuclear and conventional capabilities. It remains to be seen whether the commitment to "ensure that the Alliance is at the front edge in assessing the security impact of emerging technologies" will be applied to dual-use biotechnologies which, as the Strategic Concept states (when referring to modern technology), may also have the potential to "increase the threat and potential impact of terrorist attacks".

Arguably, the most significant shift in NATO's strategy is a focus on prevention instead of response *("the best way to manage conflicts is to prevent them from happening"*) and international partnerships. It is in these

two areas where countering biological threats could stand as a core and cross-cutting element of NATO's strategy. By addressing non-state threats in synergy with other relevant organizations and stakeholders, NATO could strengthen the array of mutually enforcing elements that comprise the global web of bioterrorism deterrence.

Some of the critical elements in this web of deterrence are: the Biological Weapons Convention (BWC), the United Nations Security Council Resolution 1540 (UNSCR 1540), and the World Health Organization (WHO). BWC and UNSCR 1540 are the most important norms against the proliferation of biological weapons and related materials and delivery systems. The World Health Organization (WHO) is combating infectious diseases whether caused by a deliberate release of pathogens or natural outbreaks; its Global Outbreak Alert and Response Network (GOARN) and 2005-revised International Health Regulations (IHRs) provide early warning, response capabilities, and international standards with regard to public health systems' capabilities needed to detect and respond to biological threats. While not specifically spelled out in the Strategic Concept, the BWC, UNSCR 1540 and the WHO IHRs offer the basis for enhanced UN-NATO cooperation and integration of civilian-military efforts in consequence management and counter-proliferation.

While at the national level, most if not all countries plan on utilizing military resources to assist civilian authorities in emergency planning and response, there is not one international organization to facilitate and strengthen the civil-military cooperation by energizing international partnerships and sharing lessons learned from real or simulated events involving joint civil-military response. Thus NATO, as a political-military organization could effectively act to fill this gap and provide complementary means or niche capabilities to widen and strengthen the web of prevention and international response capabilities supporting both NATO collective-defense and its crisis management operations.

A lot of progress has been made already by integrating the counter-terrorism and counter-WMD areas into the Alliance's engagement (e.g. per *Military Concept for Defence against Terrorism* adopted at the Prague summit in 2002); its activities for Civil Emergency Planning (CEP); the establishment of the WMD Centre at NATO Headquarters in May 2000 (to improve coordination and strengthen consultations on non-proliferation,

arms control, and disarmament issues); and the Comprehensive Political Guidance- endorsed by Allied leaders in 2006. However, addressing biological threats (whether natural, accidental, or deliberate) require a customized strategy and not one that conflates them with chemical, radiological, and nuclear threats.

The *World at Risk* report released in 2008 by the US bipartisan Commission on the Prevention of WMD Proliferation and Terrorism, predicted that it's more likely than not that a WMD terrorist attack will occur somewhere in the world by 2013 and the likelihood of a biological attack is higher than that of a nuclear attack.

The WMD Commission's recommendations, especially the one asking the US to enhance the nation's capabilities for rapid response to prevent mass casualties due to biological attacks, should also prompt NATO Members and Partners to ask how prepared is the Alliance to respond to a bioterrorist attack and if there areas that should be further analyzed to ensure that their capabilities meet the needs of mitigating the risk and executing consequence management operations.

Last but not least, the inherent features of a biological incident (including the difficulties associated with attribution) should also prompt a dialogue that addresses the potential limitations and/or obligations of NATO Article 5 in this new global threat environment as well as the consideration of the UN Secretary General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons on NATO's approaches to counter-terrorism and WMDs.

A parallel could be drawn between the BWC transformation during the past five years and NATO's possible aspirations for its new Strategic Concept. BWC Member States overcame their divide after the failure of the negotiations on the verification protocol, by implementing an inter-sessional process aiming not to reach binding agreements but common understandings and possible solutions to issues of concern to all (e.g. biosafety/biosecurity, codes of conduct in life sciences, disease surveillance and response). In addition, there is a strong undercurrent in the BWC forum to leverage synergies between BWC and the activities in other areas and/or other bilateral or multilateral obligations that lie at the nexus of public health, science, and security. Such synergies in implementation and compliance

have been discussed in the BWC inter-sessional process and other fora in relation to the WHO IHRs and UNSCR 1540 implementation.

Similarly, the implementation of NATO's new Strategic Concept could also offer the opportunity to refocus the alliance on the current strategic environment and its security challenges (including those related to biosecurity), assessing existing capabilities to counter biological threats, identifying areas of improvement, facilitating cooperative activities to increase its members and partners' emergency planning and response capabilities, and ongoing assessment of life sciences and technology developments that may pose emerging security threats. These are issues of concern to all Members and Partners and they go beyond the geopolitical consideration that sometime impede reaching consensus for action.

In addition, NATO's Science for Peace and Security Programme which offers grants to scientists in NATO, Partner and Mediterranean Dialogue countries to collaborate on priority research areas, should also assess how research in the life sciences might inadvertently or intentionally facilitate the development of biological or chemical weapons, and promote a vigorous campaign aimed at building a culture of responsibility and awareness of dual-use research of concern in the life sciences community.

There is an ongoing trend in international biological nonproliferation activities to build a more effective and stable bridge between traditional "hard" security assistance and the "soft" security assistance that might be provided in support of specific nonproliferation initiatives' objectives. Moreover, the current global threats cannot be addressed by a pure military solution neither could the civil authorities address them effectively without leveraging the military resources.

The "one-size-fits-all" approach is losing ground in favor of a more flexible model that recognizes, for instance, the extreme differences between implementing security measures in regions as diverse as Europe, Latin America, Asia, Middle East, or Africa. The military and political tools that NATO has in its arsenal could contribute to strengthening the national biosecurity measures as they refer to the overall "readiness" of national public health systems to deal with natural outbreaks because they also constitute the requisite capacity necessary to prevent the proliferation of biological WMD.

The Romanian Framework for Countering Biological Threats

Romania is actively involved in promoting of regional and international initiatives and cooperation aimed at preventing terrorism and the proliferation of weapons of mass destruction and their means of delivery.

Romania signed the Geneva Convention on 17 June 1925 and ratified it on 23 August 1929 with two reservations (which were withdrawn in 1991). Romania is a State Party to BWC (1979) and a member of the Australia Group export control regime (1995). All international obligations undertaken by Romania as a BWC Member State are fully translated into domestic legislation, including the export control regulations and Penal Code. Romania participates in the BWC Meetings of Experts and Meetings of States Parties and in the annual Confidence Building Measures reporting.

The *Inter-Ministerial Council for Export Control of Dual Use Goods and Technologies*, the *Inter-Departmental Group for Non-Proliferation*, and the *Inter-Ministerial Council for Counter-Terrorism* are the relevant structures for Romania's non-proliferation activities, both at policy and technical levels. They also ensure Romania's implementation of UN Security Council Resolution 1540 (2004).

The governmental institutions which comprise the *National System for Preventing and Combating Terrorism* (established in 2004) have memoranda of agreement in place to delineate their responsibilities and the framework of collective action.

Of note, an agreement was signed in 2008 between the Ministry of Administration and Interior, Ministry of Health, Ministry of Environment, the National Sanitary Veterinary and Food Safety Authority, and the National Authority for Consumers Protection, to establish a *Biological Emergency Support Team* (BEST). BEST consists of technical experts from the participating agencies and their role is to offer, upon request, scientific advice and guidance on consequence management operations to the Incident Commander as well as facilitating the information exchange between agencies. In accordance to the signed agreement, the agencies also agree to exchange of information on best practices and specific scientific methods and technological approaches to biological incident investigations, sharing relevant domestic and international statistical data, and participation in common training activities (workshops, conferences, exercises, etc).

Within the *National System for Preventing and Combating Terrorism*, the Romanian Intelligence Service (SRI) has the legal responsibility for preventing and combating bioterrorism (Public Law 335 of 25 November 2004).

In November 2001, the SRI established the Department for Liaison with Public Authorities and Non-Governmental Organizations (DLAPON), in order to promote a dialogue, education, and public outreach on national security objectives.

Recognizing the role of civil society in national security, the SRI established the *Center for Information on Security Culture* (CICS) on 30 September 2003, to actively pursue partnerships with non-governmental organizations and public engagement. One of the Center's initiatives (a partnership between SRI, EURISC Foundation, NATO House and the All@ Student Team) is the *Campaign for the promotion of security culture among the youth*, suggestively entitled *"Terrorism ... near us"*. The campaign is intended to promote threat awareness and build a culture of responsibility in academic institutions.

In 2008, CICS established a partnership with the *Center of Higher Studies on Preventing Bioterrorism Center* (a Romanian non-governmental organization) in order to enhance the society's preparedness and resilience against biological threats and pursue scientific research topics in the area of preventing bioterrorism.

In collaboration with the Romanian Government (SRI, Ministry of Foreign Affairs, Ministry of Administration and Interior, Ministry of Education, Ministry of Health, and the Ministry of Agriculture), the *Center of Higher Studies on Preventing Bioterrorism* has organized in Bucharest, in 2004, 2005, and 2007, a series of international conferences and forums addressing the challenges of bioterrorism.

This series of events were also attended by national representatives (of Austria, Bulgaria, the Czech Republic, France, Georgia, Italy, Norway, Poland, the Republic of Moldova, Russia, USA, Serbia, Turkey, and Hungary), inter-governmental organizations [such as NATO, UN Office of Disarmament Affairs, UN Interregional Crime and Justice Research Institute, the Council of the European Union, Food and Agriculture Organization (FAO), WHO, World Customs Organization, World Organization for Animal health (OIE), Interpol, Europol, the European

Center for Disease Prevention and Control (ECDC), UN Office on Drugs and Crime (UNODC), and the Organization for Security and Cooperation in Europe (OSCE)] as well as other non-governmental organizations (such as the Sloan Foundation – New York, the US Defense Strategy Legislative Consortium, the Mc Arthur Foundation – USA).

The NATO-sponsored forum, organized in 2007 by the Center, on *Identification of the methods of regional cooperation for ensuring the population's capacity of response and defense against bioterrorist attacks,* emphasized that:

- The national authorities cannot successfully prevent or mitigate the consequences of bioterrorism without a strong and sustained support of the civil society and scientific research;
- National experience, cooperation, technical assistance, and information exchange are some of the critical factors to consider for countries' implementation of the resolutions of the European Union and all other legislative documents related to countering biological threats;
- An interdisciplinary approach is critical in mitigating the risk and consequences of terrorism;
- A regional and international approach is beneficial in consolidating resources and maximizing efforts in combating terrorism.

Of note, in 2010, the Center also established a partnership with the National Defense University "Carol I" to contribute to the development of a curriculum and specific courses on bioterrorism preparedness and response for the post-graduate education of enrolled civilian and military students.

The Romanian National Security Strategy (NSS) of 2001 acknowledged the increased complexity and diversity of issues which may impact national security (including biological and cyber terrorism) and it addressed both external threats and domestic vulnerabilities. The NSS emphasizes Romania's participation in cooperative security initiatives and collective defense missions as well as the importance of integration into NATO and EU structures to guarantee its integrity, independence, and sovereignty.

The Romanian Military Strategy emphasizes the main missions set by the NSS for the military: defend Romania and its allies, promote regional and global stability, and provide domestic support in case of civil emergencies.

Romania was the first country to join NATO's Partnership for Peace (PfP) Program and later joined NATO (29 March 2004) as a full member. As a NATO member, Romania is working to meet the interoperability requirements and operational capabilities (by 2012) in order to effectively perform NATO full-spectrum operations including counterterrorism, biological defense, and force protection. Romanian's military capabilities transformation also aims to meet the security challenges posed by terrorism and proliferation of WMDs.

The armed forces transformation to that effect began with joining the PfP in 2004 and initiation of its Individual Partnership Program and had a significant contribution to Romania's admission into NATO. The Romanian Army adopted the NATO CBRN Defense Doctrine, Joint Allied CBRN Defense Doctrine, and NATO system for force generation, training, and deployment; and is actively seeking to develop deployable capabilities to detect and mitigate biological threats whether as a stand-alone force for Article 5 (collective defense) or non-Article 5 consequence management operations in response to biological events. These capabilities include mobile biological laboratories (to provide expert sampling, analysis, and scientific advice to support operational requirements) and modeling assets (NBC-Analysis software which is in compliance with STANAG 2103). In addition, the Romanian Ministry of Defense also operates a Biosafety Level 4 laboratory (not yet commissioned).

The Romanian Army addressed the NATO requirements for rapidly deployable capabilities by establishing a CBRN Defense Battalion and CBRN companies organic to each brigade, and it is aiming to address the required collective defense force capabilities (one division) by 2012.

The biological defense readiness is addressed by STANAG 2150, which regulates personnel training and establishes the competency standards for units and personnel, with regard to attack early warning procedures and equipment; collective and individual protection measures; contamination control measures; and intelligence collection and dissemination. Recognizing that education and training are critical tools in increasing the interoperability and mutual understanding among the armed forces of different countries in multi-national operations, in addition to participating in NATO-coordinated training, the Romanian Ministry of Defense offers its partners the opportunity to educate and train military and civilian personnel

of their armed forces through courses organized in the Romanian academic and training institutions.

Responding to a biological attack to mitigate its effects would entail the combined use of medical surveillance, detection/identification, medical countermeasures, physical protection, and/or restriction of movement. The capabilities developed by the Romanian military to meet NATO requirements are also significant assets in the national preparedness to prevent and respond to biological incidents, whether natural, accidental, or deliberate. For instance, components of these units were part of the NATO CBRN Defence Battalion and/or NATO Response Force, were deployed to Iraq, but have also been involved in the response to the 2005-2006 H5N1 Highly Pathogenic Avian Influenza (HPAI) in domestic poultry in South-Eastern Romania, assisting civil authorities with decontamination and infection control measures.

BIOEX '09

On 29-30 September 2009, SRI and the *Regional Center for Higher Studies on the Prevention of Bioterrorism* (a non-governmental organization) co-sponsored BIOEX '09, the first national exercise to assess the whole-of-government Romanian response to a deliberate biological incident. The specific goals of BIOEX '09 command post exercise (CPX) were to exercise Romanian inter-agency coordination and communication in preventing and combating bioterrorism, command and control in civil emergency consequence management, and interoperability of agencies responsible for consequence management. About 50 participants from various Romanian ministries and agencies were in attendance, including 7-8 participants were from the Ministry of National Defense (MOD). Also in attendance were international observers from the Federal Bureau of Investigation (FBI) and the US Army Reserve.

The BIOEX '09 CPX scenario consisted of a simulated foodborne cholera terrorist attack during an international conference at Hotel "Delta" in Tulcea, Romania. The targets were conference participants (Romanian and foreign tourism operators and Ministers of Tourism from EU Member States). Biological agent was produced in a domestic clandestine biological laboratory. Concomitant attacks occurred using improvised explosive devices (IEDs), one thwarted, and one successful.

The CPX was followed by a capabilities demonstration/mini-field training exercise (FTX) [carried out by the SRI Antiterrorism Brigade and the Ministry of Administration and Interior (MAI) NBC Special Unit] and a demonstration of medical triage, biological sample collection, and transport capabilities as well as a static display of equipment in use by the Romanian first responders (civilian and military). Specialized military CBRN response units in attendance were components of SIBCRA (Sampling and Identification of Biological Chemical and Radiological Agents) teams and NBC decontamination companies and/or decontamination platoons. The MAI-General Inspectorate for Emergency Situations has additional specialized assets that could be deployed in response to a biological incident, such as the CBRN First Research & Assessment Team, the Special Unit for Intervention in Emergency Situations (with various components such as the Pyrotechnical/EOD Detachment, CBRN Protection Detachment, Search & Rescue Detachment, and the Assistance & Maintenance Detachment), and decontamination capabilities for personnel, equipment, and terrain. The Romanian Police NBC Unit also participated but its capabilities only include sampling and transportation of biological agents and not detection/identification.

At the conclusion of BIOEX ’09, participants agreed that the CPX accomplished its goals of evaluating the command and control functions within the Romanian *National Crisis Management System*.

There were also lessons learned upon BIOEX ’09 execution and recommendations from participants for future action, as summarized below:

- Sustain the inter-ministry/inter-agency dialogue and training on bioterrorism crisis and consequence management
- Increase awareness and joint training to familiarize agencies with each other’s capabilities
- Continue and develop the dialogue with academia and private sector technical experts to better inform the responder community
- The threat of diversion of biological materials from commercial or legitimate sources should be addressed with high priority

- Gaps have been identified in dealing with mass media and informing the public
- Formal educational programs should be instituted to promote greater public awareness of bioterrorism and biological weapons, to ensure the community engagement in prevention, and build civil society resilience
- Institute training programs on public health-law enforcement joint investigations
- Gaps have been identified in capabilities at the national level both in logistics (detection and decontamination of biological agents) and information sharing
- BIOEX '09 highlighted the need for more joint training and planning on bioterrorism crisis and consequence management

Arguably, the most significant achievement of BIOEX '09 was the increased awareness of security and law enforcement personnel of the benefits of consulting with the technical experts from the National Sanitary Veterinary and Food Safety Authority and the Ministry of Health, and understanding the capabilities and responsibilities of the National Institute of Research & Development on Microbiology & Immunology *"Dr. I. Cantacuzino"* and those of the Bucharest Health Institute (i.e. the Special Events and Early Alert Office which is the National Focal Point for the WHO IHRs).

The US observers also provided significant input to BIOEX '09 by reviewing the US concept of operations for biological consequence management under the National Response Framework (including a discussion of the Emergency Support Function # 8- Public Health and Medical Services and the Biological Incident Annex). The US observers also noted the historical significance of BIOEX '09 (as the first national exercise to assess the whole-of-government Romanian response to a deliberate biological incident) and the need to sustain the inter-ministry dialogue and training on bioterrorism crisis and consequence management while considering the participation of relevant inter-governmental organizations (such as WHO, OIE, FAO, NATO EADRCC, INTERPOL, UNODA) and regional organizations and partners in future training events.

BIOEX '09: demonstration of response capabilities of SRI/Antiterrorism Brigade and MAI/ Special NBC Unit. The scenario consisted of chasing/detaining a suspected terrorist transporting biological materials; vehicle search & survey (radiological, chemical, explosive), and materials seizure; decontamination of suspected terrorist and response personnel.

BIOEX '09: MOD and MAI joint demonstration of medical triage, MedEvac, and biological sample collection and transportation. GIES NBC Teams, Police NBC Units, SMURD (Mobile Emergency Service for Resuscitation and Extrication), and the MOD Mobile Biological Laboratory were featured.

Conclusion

The implementation of its new Strategic Concept could potentially place NATO in a more visible role in combating terrorism and WMD proliferation, as the world's leading international security organization.

However, it is these authors' opinion that addressing the biological terrorism and biological weapons requires a customized approach that involves building a more effective and stable bridge between traditional "hard" security assistance and the "soft" security assistance that might be provided in support of specific nonproliferation initiatives' objectives. Integral to this approach would be NATO's participation in concert with other inter-governmental organizations on strengthening the national biosecurity measures which address the preparedness needs of their public

health systems but also the requisite capacity necessary to prevent the proliferation of biological WMD.

The threat of bioterrorism is of concern to all NATO Members and Partners and issues addressing it or biological threats in general, go beyond the geopolitical consideration that sometime impede reaching consensus for action. Addressing non-state biological threats as a matter of security may also require an evaluation of Article V implications and in particular the definition of an "attack" as well as consideration of related issues such as the UN Secretary General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons.

Matching needs with capabilities, facilitating cooperative and joint training activities to increase emergency planning and response capabilities, and ongoing assessment of life sciences and technology developments that may pose emerging security threats, should be complemented by a vigorous campaign led by NATO's Science for Peace and Security Programme, aimed at building a culture of responsibility and awareness of dual-use research of concern in the life sciences community.

As a Member of the Alliance, Romania is focused on meeting its operational requirements at the military level while strengthening its national response capabilities. Intrinsic to Romania's national preparedness goals, is the public outreach and empowering the civil society to be an active participant in ensuring national security.

During World War I (roughly 1915-1916), Romania was the target of German sabotage operations when German agents infected animal shipments sent to the Allies with anthrax and glanders bacteria either by injected them directly into their blood or feeding them bacteria-laced sugar cubes. A year or so later, on 17 April 1917, the German Army used chemical weapons on the Romanian territory against the Romanian 1st Mountain Ranger Regiment followed by another attack on 5 July against the Romanian 24th Artillery Regiment. Attacks with chemical and biological weapons on the battlefield are heinous but even more so when threaten the civilian populations as well. Countering biological and chemical threats should therefore be a major contemporary global security priority.