

Lieutenant Colonel (ret.) **REZSŐ PELLÉRDI**

*The Challenges of the NBC Defence in Wartime and in Peace  
Operations*

the author's review and its official critiques  
of entitled doctoral (PhD) thesis

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## **The formulation of the scientific problem**

The international security-political changes cause new risks and threats involving a direct effect on the security of the environment of our homeland and the international community, in him the integrational organizations, NATO and EU countries.

The fundamental challenge for the peace and security is the threatening international terrorism, but the existence of the WMDs appears as a potential threat and him proliferation, it is necessary to reckon it at the same time the regional one and the states with conflicts, on which row of his the military operations they may be proceeding in NBC environment.

I am looking for the answer with the analysis of these new risks in my dissertation onto the challenges of NBC defence wartime and in peace operations.

## **Research aims**

- The exploration of the NBC risks and his dangers of recent past and our days. The scientific analysis of the role of WMDs and the NBC terrorism. The examination of NBC hazard causing by ROTA events.
- The examination of the answers to NBC challenges created by the State Parties, UN and European Union. The analysis of the role of NATO in the prevention of the proliferation of the WMDs.
- The summarizing of the views of Republic of Hungary and the Hungarian Defence Forces (HDF) connected with the NBC challenges. The examination of the place and the role of NBC defence in the wartime and in peace operations by perspective ability ambition level of HDF.
- The comparative analysis of NBC defence doctrines of NATO and the HDF (draft). The widening of NBC defence support of Joint Forces (JF). The examination of the organization and the employment of the NBC defence subunits .The presentation of the development of means of NBC defence.

## **Research methods**

- The analysis and assessment of studies, articles, lectures connecting with recent NBC risks and dangers, the deduction of the suitable conclusion.
- The application and adaptation of my expert work done in NATO NBC Working Groups and the use of my experiences obtained in NATO School.
- The analysis of the views of the Republic of Hungary and the HDF connecting with NBC challenges. The synthesis of the achievements of the research.
- The summarizing of the tasks of NBC defence support based on the conclusions of the analysis of the experiments of the technical and technological development in wartime and in the peace operations
- The analysis of experiments of the cooperation exercises, war games, the deduction of conclusions.
- The treatment of the domestic and international experiments of specialists participated on NATO's professional meeting and field trips on the foreign country.
- The deduction of summarised conclusions, the putting forward the recommendations

### **The brief description of the done examination by chapters**

**In the chapter I,** I explored the recent ABV risks and his dangers. I analysed the role of the WMDs and ABV of terrorism. I examined the NBC hazard causing by ROTA events.

**In the chapter II,** I demonstrated the answers to NBC challenges. I compared the role created by the State Parties, UN, European Union and NATO in the prevention of the proliferation of the WMDs.

**In the chapter III,** I summed up the views of Republic of Hungary and the Hungarian Defence Forces (HDF) connected with the NBC challenges. I examined the place and the role of NBC defence in wartime and in peace operations by perspective ability ambition level of HDF.

**In the chapter IV,** I analysed the NBC defence doctrines of NATO and the HDF (draft). I reviewed the NBC defence support of Joint Forces (JF). I examined the

organization and the employment of the NBC defence subunits. I presented the possibility of the development of means of NBC defence.

### **Summarised conclusions**

- I verified in the course of my researches the hypothesis that ABV risks and dangers did not decrease by the end of the cold war, the significance of NBC defence, his place and his role on the wide scale of the military operations is unquestionable. The scientific publications, freshest results of military science research, the regulations with a different level and the daily practice of the missionary activity prove his importance.
- In NATO's documents successively traceable, that the questions of NBC defence necessary to treat, for it on all of them (economic, financial, and training) together with his argument.
- The analysis of the past 15 years indicates that the nuclear weapon holds it his significance, if his role changes. It passed years prove that, the development of nuclear devices, the process of his production continues and it is possible to stop their proliferation difficultly.
- Examining the role of the nuclear weapons, deductible the conclusion, that considerable changes happened in the functions of the nuclear weapons following end of the Cold War. The military functions which serve the direct military aims, they were squeezed into background. The political function dominates for primary today since it is a nuclear weapon by today - with the Cold War military opposition's cessation, primarily, it serves as the means of the political pressure
- The use of the chemical weapons in military operations slows the execution of an activity down significantly, it is appropriate for the party, which prefers the warfare with a slower tempo. The deployment of chemical weapons may be attractive option against an enemy in a numerical superiority on the space of the conventional weapons, since applying it generally requires numerous victims.
- From comparative analysis of the WMDs is deductible conclusion that the biological weapon applying on modern delivery means, being over the operational and tactical effect of chemical weapons, it has a strategic

significance.

- From an analysis of the effects of the nuclear terrorism verifiable, that the use of radiological dispersal devices is authentic threat. Comparing the effect of the nuclear weapons and the radiological dispersal devices, deductible conclusion is the number of the deathly cases it RDD attack is insignificant, but the bigger residential areas (40-50 km<sup>2</sup>) his radiological contamination may exceed it the medical and radiological protection norms.
- The use the “dirty bomb” against cities quarters, may turn into contaminated in a measure like that, requests the evacuation. The immediate evacuation brings a real terror situation for big crowds about a yet in the case, if the radiological loss is low.
- The financial and economic consequences of a radiological attack are catastrophic. The decontamination may last more weeks, months, whose expenses are flagrant. If single buildings, group of buildings are contaminated in a measure like that, is not efficient decontamination onto the achievement of the prescribed radiological protection norms, it is necessary to break them down.
- Despite the efforts of the State Parties and UN made on the area of the arms control, the worldwide proliferation of the chemical, biological, radiological, nuclear (CBRN) weapons and their delivery systems is proceeding.
- From NATO NBC defence ambitions is deductible conclusion, realizing new NBC challenges and risks, increased NBC defence ability of Alliance.
- In NATO summit (Prague, November 2002) was accepted by the part of capability commitment five, nuclear, biological, chemical and radiological defence initiatives, then - with Hungarian participation - started and continues his function with a success the NATO Multinational Chemical, Biological, Radiological and Nuclear (CBRN) Defence Battalion.
- The task of the Hungarian security policy against international terrorism being linked to fight, that in the framework of the international non-proliferation systems actively contributes to the prevention of proliferation of the missile technology and the WMDs, to the reduction of the risks deriving from them.
- The Republic of Hungary adapting the NBC challenges and risks formulated in NATO's new defensive strategy, the important element of the national security

strategy displayed it. In the national military strategy and in the long-term development plans of the HDF the NBC defence has suitable weight.

- From the comparative analysis of the NBC defence doctrines of NATO and the HDF is a deductible conclusion, that the construction of the Hungarian variant, meets NATO's requirements, after the suitable corrections may serve as a basis for the preparation of the final version.
- In the long-term (up to 2014) development plans of HDF, the creation of abilities with conforming to the ambition levels was accepted. Consequently, in the organizational change, which can be waited for NBC defence of the HDF, with a strange look onto the HDF 93? PS NBC defence battalion, has to receive priority the creation of the NBC defence subunits suitable for NBC defence support of the light infantry brigade and battalions
- The designated NBC defence organizations and subunits of the HDF have to stand it ready in the future NATO onto the execution of obligations undertaken in proposals. It is necessary to prepare up to 2010 for participation in NATO operation a modern technical equipped decontamination company.
- The development of NBC defence means in the long-term plans of HDF expectedly meets the requirements of the age and the recommendations of NATO.

### **New scientific achievements**

1. I explored the new challenges of the NBC defence based on the domestic and the international security-political analyses, the coherent system of ROTA events and NBC terrorism, its fundamental effects endangering the international security, his features that are typical of our days.
2. I pointed the strong and weak sides of role of UN, European Union and NATO in the prevention of proliferation of WMD based on new NBC defence initiatives accepted by NATO's Prague summit.
3. I subjected the NBC defence doctrines of NATO and HDF (draft) to the comparative analysis. I lifted out from NATO's doctrine into NBC defence doctrine of HDF by way of me onto adapting the important principles, the system of task of NBC defence.

4. I summed up the views of Republic of Hungary and the Hungarian Defence Forces (HDF) connected with the NBC challenges based on the national security strategy and the national military strategy. I systematized the capability of HDF in wartime and in peace operation being founded on the long-term ambition levels.
5. I drew up the new principles of NBC defence support of light infantry brigade and battalion of the NBC support being equal to the ambition levels and the practice of realisation, and I made a proposal onto the correction of the organization of the HDF 93. PS NBC defence battalion and onto the manner of its employment..

### **Recommendations**

- Taking into consideration of the scientific systematisation NBC risks and dangers at the planning of the wartime and the peace operation.
- NATO NRF multinational CBRN defence battalion's biannual rotation modifying him to one with year change, with this the simplification of the preparation and certification.
- The wide-ranging application and practice of NBC defence tasks in the preparation and training for the peace operations.
- From among NBC sources of danger needed to intend emphasized role for the reconnaissance of the biological agents and of the radiological dispersal devices. It is necessary to lay a bigger emphasis onto protection against them as at the present.
- Utilizing of the comprehensive analysis of NBC defence doctrines NATO and the HDF (draft) for the finalisation of Hungarian variant of NBC doctrine.
- At the revision of the organizations of the NBC defence to take into consideration the analysis prepared by it perspective ability ambition level of HDF.

I think, the achievements of my thesis can be used in the fundamental and additional education, in the professional developments with a different level and in the doctoral education at the Zrínyi Miklós National Defence University.

The results of my thesis may constitute a basis for additional researches. My recommendations may help in the decision makers' professional work; they may serve as a guide for the creation of a modern, NBC support system satisfying XXI. Century's requirements.

Budapest, August 21, 2007

**Lieutenant Colonel (ret.) Rezső Pellérdi**



## Own publicational register

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2. Korunk kihívása a nukleáris terrorizmus, Tavaszi Szél Konferencia kiadvány, Társadalomtudományok, 2007, 6 o.
3. Destruction of Chemical Weapons in NATO Armed Forces, Academic and Applied Research in Military Science 2005. Vol 5, No 1.7 o.
4. Az elszegényített urán katonai alkalmazása és annak katonai következményei. Új Honvédségi Szemle 1999. 7. 7 o.
5. A vegyi-, biológiai fegyverkezés az amerikai sajtó tükrében. Új Honvédségi Szemle. 1998. 7. 8 o
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11. "A holland kapcsolat" (a holland törzstiszti tanfolyam tapasztalatai). Magyar Honvéd, 1994. 6. 2 o. ,
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14. A vegyi-, sugármentesítésről. Honvédelem 1985. 6. különkiadás 8 o.
15. A ZÁPOR gyakorlatok főbb tapasztalatai. Honvédelem 1985. 6. Titkos 5 o.

## Professional scientific curriculum vitae

### Personal data:

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### Studies:

1. Petrik Lajos Technical High School of Chemical Industry, 1965-69
2. Zalka Máté Military Technical College, 1969-73
3. Military Academy of NBC Defence, Moscow, 1977-80
4. International Staff Officer Course, Royal Military Academy, The Hague, The Netherlands, 1993
5. Environmental Protection Course, NATO School, Oberammergau, Germany, 1994
6. Advance NBC officer Course, US Army Chemical School, Ft. McClellan, Alabama, US, 1997
7. Doctoral School of Military Science, ZMNDU, Budapest, 2006-07

### Military career:

1. Decontamination platoon leader, 93. NBC Defence Regiment, Kiskőrös, 1973
2. NBC reconnaissance company commander, 93. NBC Defence Regiment, Kiskőrös, 1974-77
3. NBC reconnaissance field officer, 8. Mechanised Division. Zalaegerszeg, 1980-81
4. Operational field officer, NBC Directorate, MOD, Budapest, 1981-88
5. Nuclear safety field officer, NBK Secretariat, Budapest, 1989-91
6. Deputy Head of NBC Defence Department, BJMTC, Budapest, 1991-96
7. UN military observer, UNOMIG, Georgia, 1995-96
8. Senior lecturer, BJMTC, Budapest, 1992-2001
9. Course director, instructor, NATO School, Oberammergau, Germany, 2001-04
10. Lecturer, ZMNDU, Budapest, 2004- 2006

**Tutorial activity:**1. ZMNDU (BJMTC), NBC Defence and Disaster Relief Department

My subjects: Chemical troops' tactics, Nuclear accident protection, Safety technology of nuclear power plants, NBC Defence and special tactics, Disaster relief, Damage management of dangerous substances, Chemistry, Chemistry of explosives, Population protection.

2. NATO School, E&NBC Defence Department, (Oberammergau, Germany).

My subjects: NATO NBC Risk Assessment, Low Level Radiation, Toxic Industrial Chemical Hazard, Nuclear Weapons. (all in English languages)

**Language knowledge:**

1. English advance C, STANAG 3333
2. Russian advance C
3. German basic C

**Membership:**

1. Hungarian Military science Association, Budapest, 1989-
2. Hungarian UN Association, Budapest, 1996-
3. NATO NBC Defence Working Group, Brussels, 2001-04
4. NATO NAAG LG 7 on NBC Defence, Brussels, 2001-04