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**CORRELATION BETWEEN THE USE OF DEPLETED
URANIUM AMMUNITION AND THE ETHNIC
STRUCTURE OF THE POPULATION OF THE FEDERAL
REPUBLIC OF YUGOSLAVIA DURING THE 1999
NATO AGGRESSION^a**

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Abstract

This paper explores the correlation of the number of used depleted uranium (DU) projectiles with the ethnic composition of the population in the municipalities (N=208) of the Federal Republic of Yugoslavia (FRY), specifically the type, intensity, and reliability of the correlation and the time dynamics of the use of DU projectiles during the NATO aggression on FRY in 1999. Since the number of citizens and the share of Albanian and non-Albanian populations in the total population of the former FRY do not represent the homogenous characteristics of the observed area, the Spearman correlation coefficient was used to determine the level of correlation between the number of DU missiles and the population of Albanian and non-Albanian ethnic origin in the observed municipalities. The research yielded the results that indicate direct proportionality between the number of DU missiles and the number of Albanians ($r = 0.514$, $p = 0.000000$) and inverse proportionality between the number of specified missiles and the number of non-Albanians ($r = -0.320$, $p = 0.000003$). The determined spatial distribution of DU projectile seriously and lastingly contaminated the living space of Albanians in Kosovo and Metohija, and thus the area of temporary residence of NATO, UNMIK, and EULEX forces in this part of the territory of the Republic of Serbia. The results also revealed that, in the last eleven days of the aggression, NATO forces fired more than a half (54%) of all DU projectiles fired within FRY.

Key words: depleted uranium, Albanians, non-Albanians, NATO aggression, municipalities, correlation

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КОРЕЛАЦИЈА УПОТРЕБЉЕНЕ МУНИЦИЈЕ СА ОСИРОМАШЕНИМ УРАНИЈУМОМ И ЕТНИЧКЕ СТРУКТУРЕ СТАНОВНИШТВА САВЕЗНЕ РЕПУБЛИКЕ ЈУГОСЛАВИЈЕ ТОКОМ АГРЕСИЈЕ НАТО 1999. ГОДИНЕ

Апстракт

Радам се истражује корелација употребљених пројектила са осиромашеним уранијумом и етничке структуре становништва по општинама (N=208) бивше Савезне Републике Југославије (СРЈ), односно врста, интензитет и поузданост те корелације и временска динамика употребе наведених пројектила током агресије НАТО на СРЈ, 1999. године. С обзиром на то да заступљеност становништва албанске и неалбанске етничке припадности у укупном броју становника бивше СРЈ, не представљају хомогена обележја посматраног простора, за утврђивање степена повезаности броја пројектила са осиромашеним уранијумом и броја становника албанске и неалбанске етничке припадности по општинама, коришћен је Спирманов (Spearman) коефицијент корелације. Резултати спроведеног истраживања указују на то да постоји директна пропорционалност између броја употребљених пројектила са осиромашеним уранијумом и броја Албанаца ($\rho = 0.514$, $p = 0.000000$) и инверзна пропорционалност између броја употребљених пројектила са осиромашеним уранијумом и броја неалбанаца ($r = -0.320$, $r = 0.000003$). Тако утврђеном просторном дистрибуцијом пројектила са осиромашеним уранијумом, пре свега је, озбиљно и дугорочно, контаминиран животни простор Албанаца на Косову и Метохији, а тиме и простор привременог боравка снага НАТО, UNMIK и EULEX, на том делу територије Републике Србије. Такође, резултатима спроведеног истраживања, утврђено је да су НАТО снаге, у последњих 11 дана агресије, употребиле више од половине (54%) од укупног броја пројектила са осиромашеним уранијумом употребљених током агресије на СРЈ.

Кључне речи: осиромашени уранијум, Албанци, неалбанци, агресија НАТО, општине, корелација

INTRODUCTION

Modern military conflicts are characterized, *inter alia*, by the deployment of weapons that use the energy of atoms and materials possessing this energy in sufficient quantities. The use of ammunition (projectiles) containing depleted uranium (DU) by the NATO forces during the aggression on the former Federal Republic of Yugoslavia (FRY) from 24 March until 11 June 1999 is still a reference example of the use of that particular kind of weapon. Detrimental use of depleted uranium is reflected in the contamination of the area in which it was delivered. The presence of depleted uranium, which is nuclear waste, in a certain area degrades the environment and affects the health and lives of people, but also material goods. During the NATO bombing of FRY, it was predominantly used by the US Air Force.

Concerning the use of ammunition with depleted uranium, during the 80 days of aggression, much had already been known. Namely, the following

had been scientifically proven: basic tactical-technical characteristics of DU ammunition (Žakula, 2001), its detrimental effect (Briner, 2010; Lagorio, 2008; Peragallo, 2011; Jovanović, 2012), the method of use (Haave & Haun, 2003), and spatial and temporal distribution of DU ammunition (UNEP, 2001; Đurović, 2011; Jovanović, 2012). The objective (Žakula, 2001; Haave & Haun, 2003) and conditions of its use are also known, among which the spatial and demographic conditions are prevalent in terms of the number and ethnic structure of the population in the area where DU ammunition was used (Statistical Yearbook of Yugoslavia, 2000). However, what is not known about the use of the DU ammunition during the NATO aggression in 1999 is the correlation between the use of such ammunition (per quantity) and the ethnic structure of the population (divided into Albanian and non-Albanian population) in FRY (divided into municipalities), and the daily dynamics of its use during wartime.

In this regard, this paper is based on a research which is aimed at answering the following questions:

- 1) Is there a correlation between the number of DU missiles that the NATO forces used during the aggression against FRY in 1999 and the ethnic structure of the population per municipality of the former FRY?
- 2) What are the type, intensity, and reliability of such a correlation?
- 3) What is the temporal dynamics of the use of DU projectiles during the NATO aggression on FRY?
- 4) How can the results of the research be used? and
- 5) What are the directions of future research in this field?

Taking into account the stated research goals, primarily the possible contradictory nature of NATO involvement (“to prevent a humanitarian catastrophe”) and the effects of the DU ammunition used (long-term contamination of the FRY territory inhabited by Albanians), the main part of this paper is divided into three sections. The first section deals with the analysis of the main features of DU ammunition and its use during the NATO aggression on FRY; the second section is dedicated to the analysis of the ethnic structure of the FRY population during the NATO bombing, while the third section discusses the methodology and results of the research, which answer the previously asked questions. The three sections are followed by the conclusion, acknowledgments, three appendices that contain the data used in the research, the list of references, and summary on Serbian.

DEPLETED URANIUM AMMUNITION AND ITS USE IN THE NATO AGGRESSION ON THE FEDERAL REPUBLIC OF YUGOSLAVIA

Depleted uranium ammunition belongs to the group of kinetic anti-tank ammunition. Penetration into the tank is possible by the kinetic energy of the projectile at the moment it hits the target. During the

bombing, the NATO forces only used projectiles with a depleted uranium core, i.e. with the extracted ^{238}U , which occurs as a by-product of the process of enrichment of natural uranium, intended for use in nuclear reactors and for production of nuclear explosives. Its radioactivity is 30% to 40% lower than the radioactivity of natural uranium. The half-life is in the range of $4,5 \times 10^9$ years, which represents very low decay of material per unit time.

Projectiles of 30x173 mm calibre marked with PGU-14/B API Armour Piercing Incendiary [DU] are shot from the 30 mm cannon AN/GAU-8 *Avenger*, with which the attack airplane A-10 *Thunderbolt* is equipped. The mass of the DU penetrating agent (projectile core) is 298 g (Žakula, 2001). The 30 mm calibre cannon AN/GAU-8 *Avenger* is a seven-barrel Gatling-type cannon with rotating barrels. The cannon is loaded with the combination of up to 1,150 DU bullets (already mentioned PGU-14/B API (Armour Piercing Incendiary) [DU]) and with the highly explosive incendiary characteristics of the PGU-13/B HEI (High Explosive Incendiary) (Haave & Haun, 2003). In theory, this cannon can fire 4,200 bullets per minute. In practice, during an ordinary attack, three American A-10s fire from 150 to 300 DU bullets (UNEP/UNCHS Balkans Task Force (BTF), 1999).

The attack airplane A-10 *Thunderbolt* is a single-seat twin-engine jet aircraft manufactured in the U.S. During the NATO bombing of FRY in 1999, this jet was used to support the helicopters during the rescue of the pilot from the F-117 airplane that was shot down on the night between 27 and 28 March 1999 (Haave & Haun, 2003). From 6 April, until the end of the aggression (10 June), it was used to attack targets on the ground and was in standby until 30 June 1999 (Haave & Haun, 2003).

Missions involving the use of DU projectiles in the NATO aggression are analyzed from a spatial and temporal perspective. DU ammunition missions during the bombing are shown in the following table, based on NATO data.

Table 1. Main features of DU ammunition missions in the NATO aggression on FRY [5]

Number of missions with DU ammunition	Number of locations in Kosovo and Metohija where DU ammunition was used	Number of locations in Central Serbia where DU ammunition was used	Number of locations in Montenegro where DU ammunition was used	Number of locations where DU ammunition was used 2-4 times
112	98 (87.5%)	12 (10.71%)	2 (1.79%)	17

The data on places and dates of NATO missions in which DU projectiles were used are given in Appendix 1. The number of DU projectiles fired during the aggression on FRY is given in Appendix 2.

According to the scientifically verified data (UNEP, 2001; Đurović et al., 2011), and estimates based thereon,¹ some 39,098 DU bullets were used during NATO aggression, which amounts to 11,651.204 kg of depleted uranium. The large quantity of DU used primarily in the area of Kosovo and Metohija, which contains radioactive contaminants, led to numerous detrimental consequences for the environment, people, animals, plants (Lagorio et al., 2008; Peragallo et al., 2011; Jovanović, 2012), and material goods in general. For example, in terms of material goods, some 135 items belonging to the Yugoslav Army were inspected, as they were located in the areas of use of DU ammunition. A portion of these items was found to have an increased level of beta contamination (20-25 Bq/cm²)(Petković et al., 2000), which was several times higher than the allowed contamination (0,4 Bq/cm²)(*Regulations governing the limits of radioactive contamination of the environment and the manner of conducting decontamination*, 1999, *Official Gazette of FRY*, No. 9/99).

ETHNIC STRUCTURE OF FRY AT THE TIME OF NATO AGGRESSION

The census and the estimate of population that were carried out in Serbia and in Montenegro in 1991 are relevant for the year 1999, when DU ammunition was used in FRY. Most Albanian nationals boycotted that census which is why it was not conducted in the territory with the majority of Albanian population and in the municipalities of Bujanovac and Preševo in southern Serbia. Only 9,091 citizens of Albanian nationality took part in the census, which constituted 0.46% of the then estimated number of population of the Autonomous Province of Kosovo and Metohija.² The number of the population in Serbia and Montenegro in 1991(future members of FRY, which was proclaimed in 1992) is given in the table below.

¹ Namely, there are no data on the amount of fired ammunition for the days in which DU projectiles were fired, so we used the interpolated mean value of the number of projectiles in the amount of 375 (see Appendix 2).

² For that region, the Provincial Bureau of Statistics of the Autonomous Province of Kosovo and Metohija has given the official estimate of the number of citizens.

Table 2. Number of the population of the republics of Serbia and Montenegro in 1991

Number of citizens in Serbia and Montenegro	Number of citizens in Serbia, without autonomous provinces	Number of citizens in Vojvodina	Number of citizens in Kosovo and Metohija	Number of citizens in Montenegro
10,394,026	5,808,906	2,013,889	1,956,196	615,035

The ethnic structure of the population in FRY is given in the table below.

Table 3. Ethnic structure of the population of the Federal Republic of Yugoslavia, according to the census and estimates from 1991

Nationality	Total number	Percentage
Serbs	6,504,048	62.57%
Montenegrins	519,766	5%
Yugoslavs	349,784	3.36%
Albanians	1,714,768	16.49%
Hungarians	344,147	3.32%
Muslims	336,025	3.23%
Roma	143,519	1.38%
Romanians	42,364	0.41%
Slovaks	66,863	0.65%
Croats	111,650	1.07%
Others	261,092	2.52%
TOTAL	10,394,026	100.00%

It is obvious from the data that Albanians were represented with 16.49%, and non-Albanians with 83.51% in the population of FRY. The list of municipalities in FRY with primary spatial and demographic data is available in Appendix 3.

METHODOLOGY AND RESULTS

As the relation of the Albanian and non-Albanian population does not represent a homogenous feature of the observed area, we determined the level of correlation of the number of DU projectiles with the number of the population of Albanians and non-Albanians by using the Spearman correlation coefficient.

We formulated the zero hypothesis in relation to the study of the correlation of the number of DU projectiles during NATO aggression with the number of Albanians per municipality in FRY: There is no correlation between the number of projectiles and the number of Albanians. The following correlation coefficient was obtained for the observed features of (1) **number of projectiles** and (2) **number of Albanians**:

$$r = 0.514, \quad (1)$$

where the number of municipalities is

$$N = 208, \quad (2)$$

so the likelihood of the zero hypothesis is

$$p < 0.0001 \quad (3)$$

because of which it is **rejected**, meaning that there is a significant correlation between the observed features. Namely, it is known that if

$$0.5 \leq |r| \leq 0.7, \quad (4)$$

the correlation is significant (Stojković, 2001). As the correlation coefficient has a positive value, the relationship between the two observed features is directly proportional. *It means that there is a strong relation between the number of DU projectiles and the number of Albanians per municipality in FRY during the NATO aggression, i.e. the following statement applies: The bigger the number of used DU projectiles in a specified area (municipality), the bigger the number of Albanians settled in that area (municipality).*

Therefore, we proposed a new zero hypothesis: There is no correlation between the number of DU projectiles and the number of non-Albanians. The correlation coefficient has thus been obtained for observed features of (1) **number of projectiles** and (2) **number of non-Albanians**:

$$r = -0.320, \quad (5)$$

where the number of municipalities is

$$N = 208, \quad (6)$$

and the likelihood of the new zero hypothesis is

$$p < 0.0001, \quad (7)$$

so **it has been rejected**, which means that there is a relation of mean intensity between the observed features. A negative feature of the correlation coefficient indicates the reverse proportionality relation of the **number of projectiles** and the **number of non-Albanians**. *It means that there is a medium relation between the number of DU projectiles and the number of non-Albanians per municipality in FRY during the NATO aggression, i.e. the following statement applies: The bigger the number of used DU projectiles at a specified area (municipality), the smaller the number of non-Albanians settled in that area (municipality).* Table 4 contains the verification results for both hypotheses.

Table 4. Correlation data on the number of DU projectiles and the number of Albanians, and for the number of DU projectiles and the number of non-Albanians

	N	r	T Df=N-2	P
Number of Albanians and Number of projectiles	208	0.514	8.61082	0.000000
Number of non-Albanians and Number of projectiles	208	-0.319509	-4.83948	0.000003

Graphic display of the correlation between the number of DU projectiles and the number of Albanians, and the correlation between the number of DU projectiles and the number of non-Albanians is given in the chart below.

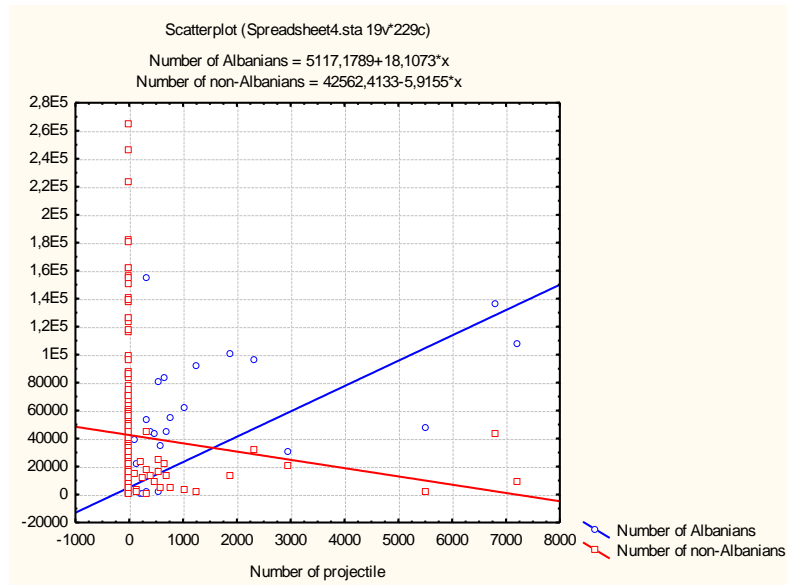


Figure 1. Correlation between the number of projectiles and the number of Albanians (blue line) and the number of projectiles and the number of non-Albanians (red line)³

This analysis leads to a conclusion according to which NATO forces did not behave in compliance with the publicly proclaimed objective of “preventing a humanitarian catastrophe of the citizens of Albanian ethnicity in Kosovo and Metohija”, but rather in compliance with some other, non-proclaimed, objectives. Therefore, it can be reasonably assumed that one of the non-proclaimed objectives was the release of nuclear waste in the form of DU ammunition. The evidence of this statement is the fact that **47 attacks** or **41.96%** of the attacks were carried out after the agreement on starting negotiations on the termination of NATO aggression had been reached, i.e. in the last **11** days of the aggression (from 1 to 11 June 1999) (Đurović, 2011; Jovanović, 2012). In this period (13.75% of the duration of the aggression), also including the duration of the negotiations in Kumanovo between the KFOR international security forces and the representatives of governments of FRY and the Republic of Serbia, whose topic was the termination of NATO

³ Calculations were performed by means of the software package *Statistica 7* (Software. Champaign, (IL, USA): Wolfram Research, Inc.).

aggression (from 5 to 9 June 1999), NATO forces fired 21,098 or 54.05% of DU projectiles of the total 39,098 missiles with DU fired during the aggression (Appendix 3).

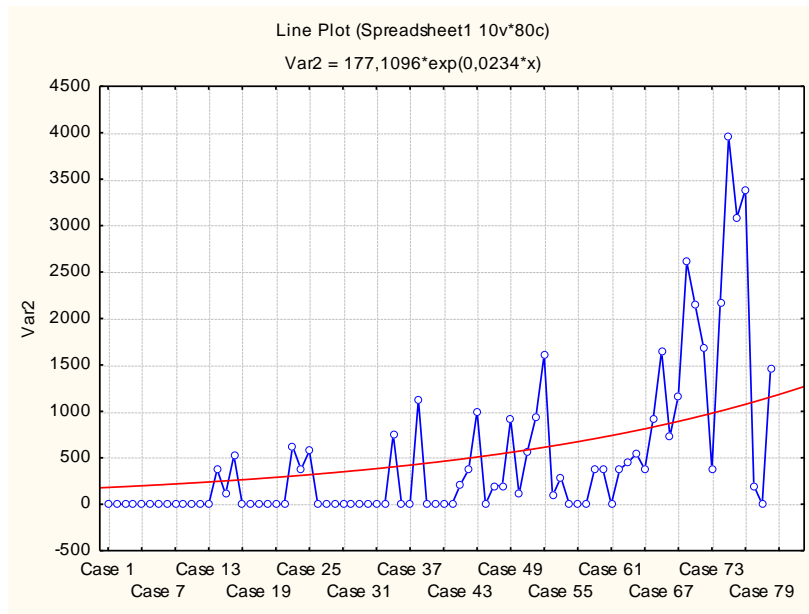


Figure 2. Number of DU projectiles fired per day during NATO aggression on FRY (blue line) and the trend of these activities (red curve)

The red line in Figure 2 shows the curvilinear (exponential) trend in the number of fired DU projectiles over time (per day). It is clear that the trend in the number of fired DU projectiles shows exponential growth, which is particularly evident in the last 11 days of the aggression.

CONCLUSION

Test results of the statistical hypotheses confirmed the key assumption of this study that NATO used DU missiles to a significantly greater extent in municipalities of the then FRY that were and still are mainly inhabited by ethnic Albanian citizens than in municipalities that are mainly inhabited by a population of non-Albanian ethnicity. More specifically, we found that NATO used 87.5% of the DU projectiles in Kosovo and Metohija, populated by the citizens of the Republic of Serbia of predominantly Albanian ethnicity, where the members of the international security and civilian forces (KFOR, UNMIK, EULEX) have maintained their presence ever since (over 15 years). In addition, we proved that the growth in the number of DU ammunition used increases with the number of Albanians and decreases with the number of non-Albanians per municipality of FRY and that such a correlation is of

high intensity and statistically significant, so the results can be accepted with confidence (Figures 3 and 4). At the same time, the study of the correlation between the number of used DU missiles and periods of their use during the NATO aggression proved an exponential trend in the growth of the number of used DU missiles as the aggression was nearing its end, including the duration of Kumanovo negotiations aimed at terminating the NATO aggression.

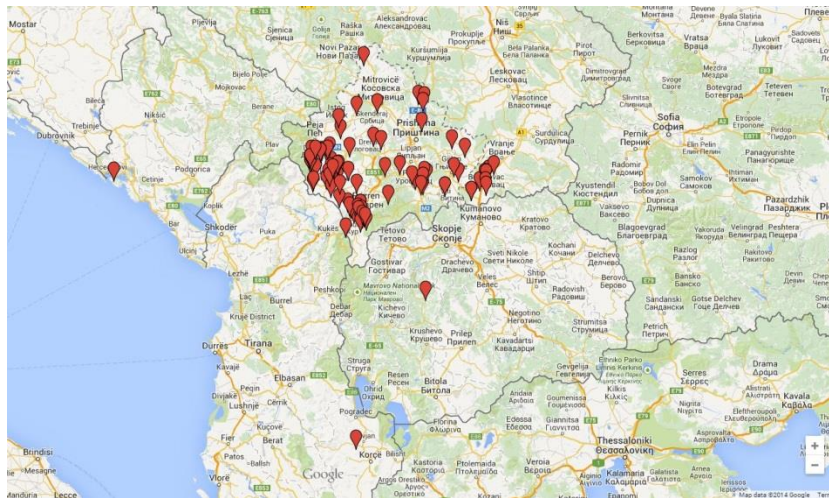


Figure 3. Spatial distribution of DU missiles fired in the Federal Republic of Yugoslavia

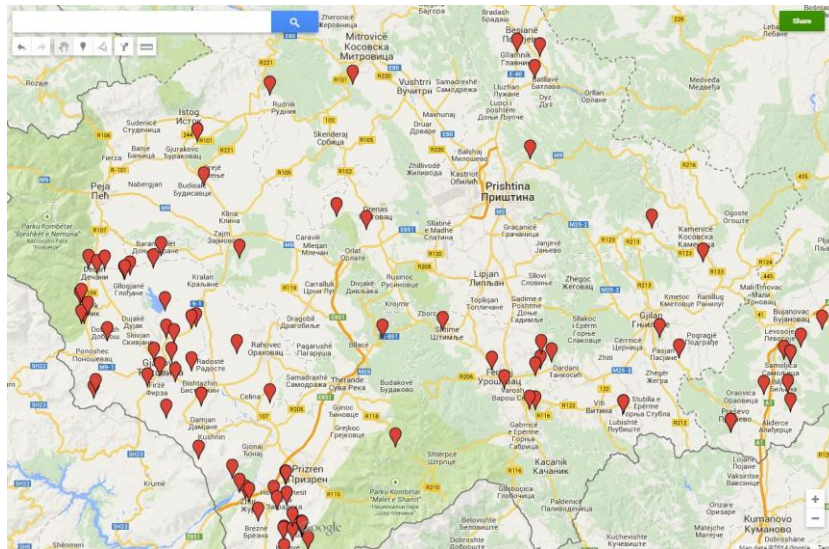


Figure 4. Spatial distribution of DU missiles fired in the Republic of Serbia

With the set hypotheses proven, the generally proclaimed objective of deploying NATO forces, defined as “prevention of a humanitarian catastrophe” to which the citizens of the Republic of Serbia of Albanian ethnicity in the territory of Kosovo and Metohija were allegedly exposed, is thus called into question. This has indirectly proved that the real reasons and long-term results of NATO deployment are at odds with the publicly declared objectives of the deployment or that they have been seriously compromised due to the use of a considerable amount of DU projectiles. Namely, the environmental degradation that has destroyed the health of people in the long run, particularly of the citizens of the Republic of Serbia of Albanian ethnicity and international troops in Kosovo and Metohija, cannot prevent the humanitarian catastrophe, but can only seriously deepen it. This finding is consistent with the results of there search which pertains to “... the concerns of people in Serbia and Kosovo regarding the possible post-conflict risks to human health and the environment. These issues are relevant for assessing the security of field staff from the UN and other international agencies” (UNEP / UNCHS Balkan Task Force, 1999).

Likewise, it has been estimated that during the NATO aggression in 1999, a total number of 39,028 DU missiles were fired, which makes a total of 11.63 tonnes of depleted uranium used (39028 x 298 g). Japanese scientist Dr K. Yagasaki presented the data that the bomb dropped on Hiroshima contained 13 kg of enriched uranium (Đurović, 2011; Source: Alok O'Brien, Legality of Treason: depleted Uranium and the Poisoning of Humanity, available from <http://www.byronchild.com/arts48.htm>). Having compared the activity (subsequent radiation) of this bomb and the activity of 1 (one) ton of depleted uranium, he drew a conclusion that the activity of one ton of DU is 100 times greater than the activity of the Hiroshima bomb. This means that the territory of FRY (by the effects of post-radiation) was bombed by an equivalent of 1,160 bombs dropped on Hiroshima.

There is still no answer regarding the real, currently hidden, reasons and goals of these NATO activities and regarding the ways to overcome the existing problems. Three reasons for this NATO activity could be logical: 1) the focus of NATO air raids against armoured vehicles and fortified facilities of the Yugoslav Army was on Kosovo and Metohija, as the focus of specific engagement of the Yugoslav Army was in that part of the Republic of Serbia; 2) strengthening its own position and weakening the position of FRY and RS authorities in the upcoming negotiations concerning the termination of the aggression; and 3) US Air Force operating within the NATO forces used the opportunity to train the aircraft A-10 pilots to shell the targets on the ground in real (wartime) conditions (UNEP/UNCHS Balkans Task Force, 1999). However, these reasons do not seem to be sufficient to explain the damage caused, particularly in the context of the following facts:

1) in the long run, DU projectiles are indisputably detrimental to the environment, human health, wildlife, and material goods in the area of their use,

2) the territory of Kosovo and Metohija, which is predominantly populated by ethnic Albanians, and in which the members of the armed forces of NATO member states, members of UNMIK (later on joined by the members of EULEX) have been present for over 15 years, has been largely contaminated by DU projectiles (UNEP/UNCHS Balkans Task Force, 1999). Thus, on one hand, NATO fought against RS, supposedly protecting ethnic Albanians from the humanitarian disaster caused by the action of the defence forces of FRY and security forces of RS, while on the other hand, they sporadically contaminated the living space of Serbs by using DU missiles, whereby the living area of the Kosovo and Metohija Albanians, i.e. the area of the temporary bases of NATO, UNMIK, and later EULEX forces, was contaminated to a significantly greater extent.

The fact that some 42% of the total number of air attacks in which DU projectiles were used or that about 54% of the total number of DU projectiles were used in the last 11 days of the aggression (after the agreement on starting negotiations has been reached) may indicate that NATO had intended to release some of its hazardous nuclear waste. However, it is still difficult to explain the fact that, by using DU ammunition as hazardous nuclear waste in Kosovo and Metohija, NATO forces had no respect either for the citizens who they were supposedly protecting from the humanitarian disaster or for their own members who resided in that area as a part of international peace-keeping forces.

Consequently, the results of the study indicate the need for a serious scientific and professional research of the causes, reasons, goals, and consequences of the use of DU projectiles during the NATO aggression on FRY. They also imply the necessity of finding a long-term and permanent solution to the existing problem and the need to prevent the occurrence of such and similar problems in the future. These efforts, however, include the need to ban the use of DU weapons and projectiles by an international act within the Organization of United Nations, i.e. to apply regulations relating to nuclear weapons on DU ammunition and projectiles. In any case, in order to minimize the harmful effects of the use of DU ammunition for military purposes, it is necessary to regulate precisely the conditions and the manner of its application (NPRI – Nuclear Policy Research Institute, 2003; The Kosovo Report Conflict: International Response, Lessons Learned – The Independent International Commission on Kosovo, 2000).

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Appendix 1

Spatial distribution of projectiles fired in FRY, per day of aggression
(Columns 1-3: NATO data; Đurović, 2011, pp. 193-196; Column 4: authors)

No. (1)	Mission date (2)	Coordinates (3)		Location (4)
		ϕ	λ	
1	6 Apr 1999	42° 19' 41"	20° 39' 42"	Village of Velika Kruša, municipality of Orahovac
2	7 Apr 1999	42° 21' 41"	20° 27' 36"	Đakovica, 3.6 km south-east of the centre of Đakovica, municipality of Đakovica
3	8 Apr 1999	42° 33' 24"	20° 35' 49"	Village of Dolovo, 3.3 km south-east, municipality of Klina (Village of Volujak, 500 m to the north-west)
4	8 Apr 1999	42° 37' 22"	20° 48' 10"	Obrinje, 8 km north-west of Glogovac, municipality of Glogovac
5	15 Apr 1999	42° 20' 30"	21° 42' 34"	Village of Bukarevac, 1 km north, municipality of Preševo
6	15 Apr 1999	42° 26' 40"	31° 49' 56"	Village of Žbevac 500 m south-west, 6 km south-east of Bujanovac, municipality of Bujanovac
7	16 Apr 1999	42° 25' 00"	21° 47' 13"	5.6km south-east of Bujanovac, municipality of Bujanovac
8	17 Apr 1999	42° 19' 00"	21° 13' 25"	Village of Grlica 1.8 km east, municipality of Uroševac
9	27 Apr 1999	42° 25' 35"	20° 18' 57"	Village of Dobroš, 1.5 km south, municipality of Đakovica
10	27 Apr 1999	42° 10' 19"	20° 37' 04"	Village of Žur, 500 m south-east, municipality of Prizren
11	30 Apr 1999	42° 03' 00"	20° 34' 00"	Village of Pakiš, 300 m south-west, Albania, 25 km SW of Prizren
12	30 Apr 1999	42° 23' 35"	21° 15' 29"	Village of Miroslavlje, 1.5 km south-east, municipality of Uroševac
13	30 Apr 1999	42° 32' 29"	20° 16' 37"	Dečani, 1 km west of centre
14	5 May 1999	42° 23' 40"	20° 24' 57"	Đakovica
15	6 May 1999	42° 19' 41"	20° 39' 42"	Village of Velika Kruša, 2.8 km south-east, municipality of Orahovac
16	7 May 1999	42° 21' 14"	20° 24' 06"	Village of Brekovac, 600 m south-west, municipality of Đakovica
17	7 May 1999	42° 29' 05"	20° 15' 33"	Village of Junik, municipality of Dečani
18	7 May 1999	42° 06' 56"	20° 43' 41"	Village of Brodosavce, municipality of Prizren
19	9 May 1999	42° 31' 57"	20° 17' 38"	Village of G. Drenovac, 0.6 km south-west of Dečani, municipality of Dečani
20	10 May 1999	42° 52' 56"	21° 11' 11"	Village of Glavnik, 3.6 km south of Podujevo, municipality of Podujevo
21	11 May 1999	42° 52' 30"	21° 14' 03"	Village of Ladovac, 1.5 km south-east, municipality of Podujevo
22	11 May 1999	42° 26' 34"	21° 01' 42"	Štimlje
23	11 May 1999	42° 25' 49"	20° 53' 58"	Village of Dulje, municipality of Suva Reka
24	12 May 1999	40° 41' 41"	20° 39' 19"	Village of Kolanec, 1,7 km north-west, Albanija, 40 km south-west of Lake Prespa
25	13 May 1999	43° 07' 37"	20° 43' 21"	Village of Dren, 4,4 km east, municipality of Leposavić

26	14 May 1999	42° 10' 30"	20° 40' 11"	Village of Poslište, 300 m south, municipality of Prizren
27	14 May 1999	42° 22' 47"	21° 07' 58"	Village of Balić, 2 km north-west, municipality of Uroševac
28	14 May 1999	42° 22' 13"	20° 25' 42"	Village of Brekovac, 1.4 km south-west of Đakovica, municipality of Đakovica
29	14 May 1999	42° 21' 03"	21° 09' 30"	Uroševac, 2.8 km south of city centre
30	15 May 1999	42° 06' 33"	20° 41' 26"	Village of Belobrod, 6 km north-east of Dragaš, municipality of Prizren
31	15 May 1999	42° 32' 32"	20° 24' 48"	Dečani, 10.4 km east
32	15 May 1999	42° 24' 24"	21° 14' 10"	Village of Mirosavlje, 1.2 km north-west, municipality of Uroševac
33	15 May 1999	42° 24' 48"	21° 46' 59"	Village of Bogdanovac, 1.9 km north-west, municipality of Bujanovac
34	15 May 1999	42° 48' 52"	20° 39' 41"	Village of Črkolez, 3.4 km north-west of Rudnik, municipality of Srbica
35	15 May 1999	42° 06' 40"	20° 41' 31"	Village of Kapre, 550 m north-west, municipality of Prizren
36	16 May 1999	42° 09' 54"	20° 41' 47"	Village of Hodža Zagradka, 6 km south-west of Prizren, municipality of Prizren
37	17 May 1999	42° 06' 30"	20° 42' 32"	Village of Buzec, 200 m east municipality of Prizren
38	17 May 1999	42° 17' 20"	21° 39' 37"	Preševo, 1.7 km south-east, municipality of Preševo,
39	22 May 1999	41° 38' 37"	21° 15' 22"	Village of Crešnjevo, 2.5 km west, Macedonia
40	25 May 1999	42° 17' 20"	21° 39' 37"	As well as Pro. No. 38
41	25 May 1999	42° 24' 00"	21° 45' 31"	Village of Borovac, 5.8 km south-west of Bujanovac, municipality of Bujanovac
42	25 May 1999	42° 23' 24"	21° 46' 23"	Donje Novo Selo Village, 1.2 km north, municipality of Bujanovac
43	26 May 1999	42° 26' 56"	20° 30' 15"	Village of Mece, 500 m south-east, municipality of Đakovica
44	26 May 1999	42° 25' 25"	20° 27' 29"	Đakovica, 5.2 km south-east, municipality of Đakovica
45	28 May 1999	42° 33' 05"	21° 34' 49"	Village of Volujak, 500 m north-west, municipality of Kosovska Kamenica
46	28 May 1999	42° 20' 35"	21° 45' 51"	Village of Bratoselce, 1.3 km east, municipality of Bujanovac
47	28 May 1999	42° 23' 56"	21° 31' 46"	Village of Pasjane, 1.5 km east, municipality of Gnjilane
48	28 May 1999	42° 24' 22"	20° 35' 27"	Orahovac, 5.6 km west, municipality of Orahovac
49	28 May 1999	42° 22' 56"	21° 14' 05"	Village of Sojevo, 1.5 km north, municipality of Uroševac
50	29 May 1999	42° 50' 27"	21° 13' 23"	Village of Radujevac, 7.8 km south-west of Podujevo, municipality of Podujevo,
51	29 May 1999	42° 08' 23"	20° 38' 10"	976.4 km south-east of Village of Žur, municipality of Prizren
52	29 May 1999	42° 18' 38"	21° 24' 42"	Village of Ljubište, 2 km north, municipality of Vitina
53	29 May 1999	42° 26' 43"	20° 29' 40"	Village of Bec, 3.7 km east, municipality of Đakovica

54	29 May 1999	42° 24' 22"	20° 35' 27"	Orahovac, 5.6 km west, municipality of Orahovac
55	29 May 1999	42° 23' 37"	18° 35' 34"	Vučja uvala, 1.34 km north-east, Boka Kotorska, Montenegro
56	29 May 1999	42° 18' 38"	21° 24' 42"	As well as Pro. No. 52
57	30 May 1999	42° 22' 14"	21° 13' 26"	Village of Sojevo, 250 m north-west, municipality of Uroševac,
58	30 May 1999	42° 23' 37"	18° 35' 34"	Cape Arza, península Luštica, Boka Kotorska, Montenegro
59	31 May 1999	42° 23' 38"	20° 27' 08"	Đakovica, 1.2 km south-east, municipality of Đakovica,
60	31 May 1999	42° 12' 29"	20° 34' 52"	Village of Planeja, municipality of Prizren
61	1 June 1999	42° 25' 50"	20° 26' 30"	Village of Tarkanić, 1.4 km east, municipality of Đakovica
62	1 June 1999	42° 11' 08"	20° 35' 49"	Village of Dobrušte, 700 m south-east, municipality of Prizren,
63	1 June 1999	42° 19' 23"	20° 30' 58"	Village of Smać, 1.2 km south, municipality of Đakovica,
64	1 June 1999	42° 05' 38"	20° 44' 30"	Village of Kukovce, 1.4 km east, municipality of Prizren
65	1 June 1999	42° 20' 35"	21° 45' 51"	Village of Bratoselce, 1.3 km east, municipality of Bujanovac
66	2 June 1999	42° 09' 31"	20° 40' 33"	Village of Biluša, 1 km south-east, municipality of Prizren
67	2 June 1999	42° 09' 31"	20° 40' 33"	As well as Pro. No. 66
68	2 June 1999	42° 22' 43"	20° 29' 42"	Village of Marmule, 1.4 km west, municipality of Đakovica
69	2 June 1999	42° 11' 57"	20° 41' 38"	Prizren, 4.6 km south-west, municipality of Prizren
70	2 June 1999	42° 21' 14"	20° 24' 06"	Village of Brekoc, 600 m south-west, 3.7 km south-west of Đakovica, municipality of Đakovica
71	2 June 1999	42° 29' 05"	20° 15' 33"	Village of Junik, 400 m west, municipality of Dečani,
72	2 June 1999	42° 06' 56"	20° 43' 41"	Village of Belobrod, 7.2 km north-east of Dragaš, municipality of Prizren
73	3 June 1999	42° 36' 18"	21° 28' 15"	Village of Jasenovik, 500 m north-east, municipality of Novo Brdo,
74	3 June 1999	42° 21' 14"	20° 24' 06"	Village of Brekoc, 600 m south-west, municipality of Đakovica,
75	3 June 1999	42° 04' 56"	20° 41' 27"	Village of Zrze, 600 m north-east, municipality of Prizren
76	3 June 1999	42° 44' 26"	20° 30' 25"	Village of Đurakovac, 3 km north-east, Mitrovica-Peć road, municipality of Istok
77	5 June 1999	42° 27' 15"	20° 16' 01"	Village of Batuša, municipality of Dečani
78	5 June 1999	42° 28' 03"	20° 16' 31"	Village of Junik, municipality of Dečani
79	5 June 1999	42° 29' 14"	20° 15' 42"	Village of Junik, 700 m north-west, municipality of Dečani
80	5 June 1999	42° 27' 15"	20° 16' 01"	Village of Batuša, municipality of Dečani
81	5 June 1999	42° 27' 14"	20° 15' 42"	Village of Batuša, municipality of Dečani
82	5 June 1999	42° 40' 18"	20° 31' 14"	Village of Kruševo, 800 m north-west, municipality of Klina
83	5 June 1999	42° 10' 31"	20° 36' 31"	Village of Žur, 900 m north-west, municipality of Prizren

84	6 June 1999	42° 20' 07"	20° 17' 16"	Đakovica, 15 km north-west, Albanian border, municipality of Đakovica
85	6 June 1999	42° 20' 40"	20° 17' 29"	As well as Pro. No. 84 (2km deviation), municipality of Đakovica
86	6 June 1999	42° 28' 03"	20° 16' 31"	Village of Junik, municipality of Dečani
87	6 June 1999	42° 15' 30"	20° 55' 39"	Village of Mušutište, 5.3 km south-east, municipality of Suva Reka
88	6 June 1999	42° 31' 52"	20° 21' 53"	Village of Kodralija-Požar, 5 km east of Dečani, municipality of Dečani
89	6 June 1999	42° 31' 26"	20° 21' 09"	Village of Rznić, 600 m, south-east, municipality of Đakovica
90	6 June 1999	42° 11' 56"	20° 41' 42"	Prizren, 5.7 km south-west, road from Prizren to the Albanian border, municipality of Prizren
91	6 June 1999	42° 31' 52"	20° 21' 53"	Village of Rznić, 2.2 km north-east, municipality of Dečani
92	6 June 1999	42° 31' 26"	20° 21' 09"	Village of Rznić, 600 m north-east, municipality of Dečani
93	7 June 1999	42° 11' 56"	20° 41' 42"	Prizren, 2 km west, road from Prizren to the Albanian border, municipality of Prizren
94	7 June 1999	42° 23' 38"	20° 27' 08"	Đakovica, 2.3 km north-east of centre, municipality of Đakovica
95	7 June 1999	42° 36' 11"	20° 51' 58"	Village of Krokovo, 1.2 km east, municipality of Glogovac
96	7 June 1999	42° 14' 18"	20° 30' 38"	Prizren, 20 km west, 1.2 km from the Albanian border, municipality of Prizren
97	7 June 1999	42° 31' 29"	20° 21' 14"	Village of Rznić, municipality of Dečani
98	7 June 1999	42° 28' 26"	20° 26' 18"	Lake Radonjic, 400 m south-east, 2.7 km from the Village of Crmljane, municipality of Đakovica
99	7 June 1999	42° 32' 24"	20° 18' 39"	Dečani, 2 km east, municipality of Dečani
100	8 June 1999	42° 33' 41"	20° 25' 48"	Village of Donje Berane, 1.8 km south-east, municipality of Peć
101	8 June 1999	42° 07' 09"	20° 43' 41"	Village of Brodosavce, municipality of Prizren
102	8 June 1999	42° 49' 55"	20° 50' 15"	Village of Brabonjić, 4.2 km south-east, municipality of Kosovska Mitrovica
103	08 June 1999	42° 33' 41"	20° 25' 48"	As well as Pro. No. 100
104	9 June 1999	42° 07' 54"	20° 42' 31"	Village of Brut, 700 m north-east, municipality of Prizren
105	11 June 1999	42° 07' 06"	20° 43' 46"	Village of Brodosavce, 900 m north, road Bljač-Brodosavce, municipality of Prizren
106	11 June 1999	42° 20' 35"	21° 45' 51"	Village of Bratoselce, 1.3 km east, municipality of Bujanovac
107	17 June 1999	42° 19' 06"	21° 12' 41"	Village of Grac, 900 m north-west, municipality of Uroševac
108	N/A	42° 18' 55"	21° 46' 15"	Village of Svinjište, 2.7 km south-east, municipality of Bujanovac
109	N/A	42° 42' 49"	21° 12' 47"	Village of Makovac, municipality of Priština
110	N/A	42° 18' 13"	20° 26' 31"	Village of Letica, 1.2 km north-west, municipality of Đakovica
111	27 May 1999	42° 25' 55"	21° 29' 16"	Village of Velekince, municipality of Gnjilane
112	28 May 1999	42° 18' 58"	21° 46' 16"	As well as Pro. No. 108

Appendix 2
*Number of fired DU projectiles per day (progressive numbers of days)
during the NATO aggression [5]*

Date	Day of aggression	Number of fired DU projectiles	Date	Day of aggression	Number of fired DU projectiles
24 March	1	0	9 May	47	200
25 March	2	0	10 May	48	200
26 March	3	0	11 May	49	915
27 March	4	0	12 May	50	110
28 March	5	0	13 May	51	570
29 March	6	0	14 May	52	935
30 March	7	0	15 May	53	1,610
31 March	8	0	16 May	54	90
1 April	9	0	17 May	55	290
2 April	10	0	18 May	56	0
3 April	11	0	19 May	57	0
4 April	12	0	20 May	58	0
5 April	13	0	21 May	59	375
6 April	14	375	22 May	60	375
7 April	15	110	23 May	61	0
8 April	16	525	24 May	62	375
9 April	17	0	25 May	63	450
10 April	18	0	26 May	64	545
11 April	19	0	27 May	65	375
12 April	20	0	28 May	66	920
13 April	21	0	29 May	67	1,650
14 April	22	0	30 May	68	730
15 April	23	625	31 May	69	1,170
16 April	24	375	1 June	70	2,610
17 April	25	575	2 June	71	2,150
18 April	26	0	3 June	72	1,690
19 April	27	0	4 June	73	375
20 April	28	0	5 June	74	2,166
21 April	29	0	6 June	75	3,957
22 April	30	0	7 June	76	3,090
23 April	31	0	8 June	77	3,390
24 April	32	0	9 June	78	200
25 April	33	0	10 June	79	0
26 April	34	0	11 June	80	1,470
27 April	35	750	8 May	46	0
28 April	36	0	9 May	47	200
29 April	37	0	10 May	48	200
30 April	38	1,125	11 May	49	915
1 May	39	0	12 May	50	110
2 May	40	0	13 May	51	570
3 May	41	0	14 May	52	935
4 May	42	0	15 May	53	1,610
5 May	43	210	16 May	54	90
6 May	44	375	17 May	55	290
7 May	45	1,000	18 May	56	0
8 May	46	0			

Appendix 3

Number and ethnic structure of the population per municipality in FRY according to the 1991 Census for the territory of the Republic of Serbia, without the Autonomous Province of Kosovo and Metohija and the Republic of Montenegro, and the estimate for the Autonomous Province of Kosovo and Metohija (Statistical Yearbook of Yugoslavia 2000)

Municipality	Total number of population	Number of Albanians	Number of non-Albanians	Area in km ²	Number of DU projectiles
Vitina	57,290	45,078	12,212	295	423
Vučitrn	80,644	71,354	9,290	380	0
Glogovac	53,618	53,562	56	290	343
Gnjilane	103,675	79,357	24,318	515	543
Gora	17,574	941	16,633	385	343
Dečani	49,000	47,669	1,331	402	5,528
Đakovica	115,097	106,868	8,229	586	7,212
Zvečan	10,030	1,934	8,096	104	0
Zubin Potok	8,479	2,079	6,400	335	0
Istok	57,261	43,910	13,351	454	700
Kačanik	38,010	37,368	642	294	0
Klina	52,266	43,248	9,018	403	470
Kosovo Polje	35,570	20,142	15,428	89	0
Kosovska Kamenica	52,152	38,096	14,056	523	100
Kosovska Mitrovica	104,885	82,837	22,048	350	670
Leposavić	16,395	951	15,444	750	570
Lipljan	69,451	53,730	15,721	401	0
Mališevo	47,817	47,318	499	200	0
Novo Brdo	4,611	1,845	2,766	90	150
Obilić	31,627	20,971	10,656	105	0
Orahovac	59,877	55,033	4,844	401	786
Peć	127,796	96,441	31,355	603	2,320
Podujevo	92,946	91,005	1,941	625	1,250
Prizren	178,723	135,674	43,049	640	6,812
Priština	199,654	154,990	44,664	857	343
Srbica	55,471	54,437	1,034	378	0
Suva Reka	64,530	61,230	3,300	434	1,035
Uroševac	113,668	100,144	13,524	344	1,889
Štimlje	23,506	21,716	1,790	134	150
Štrpce	12,712	4,300	8,412	247	0
Aleksandrovac	33,215	0	33,215	387	0
Aleksinac	63,844	48	63,796	706	0
Arandelovac	47,618	5	47,613	376	0
Arilje	20,335	1	20,334	349	0
Babušnica	19,333	1	19,332	529	0
Bajina Bašta	29,747	1	29,746	673	0
Batočina	22,939	7	22,932	136	0
Bela Palanka	16,447	0	16,447	517	0
Barajevo	21,647	53	21,594	213	0
Voždovac	161,376	573	160,803	148	0

Vračar	69,680	190	69,490	3	0
Grocka	69,448	50	69,398	289	0
Zvezdara	140,483	629	139,854	32	0
Zemun	181,692	723	180,969	438	0
Lazarevac	58,882	29	58,853	384	0
Mladenovac	56,389	39	56,350	339	0
Novi Beograd	224,424	836	223,588	41	0
Obrenovac	70,234	66	70,168	411	0
Palilula	156,587	628	155,959	451	0
Rakovica	97,752	443	97,309	31	0
Savski Venac	47,682	138	47,544	16	0
Sopot	20,527	12	20,515	271	0
Stari Grad	70,791	267	70,524	7	0
Čukarica	154,632	309	154,323	156	0
Blace	15,709	0	15,709	306	0
Bogatić	34,348	15	34,333	384	0
Bojnik	14,498	2	14,496	264	0
Boljevac	19,384	26	19,358	828	0
Bor	59,900	345	59,555	856	0
Bosilegrad	11,644	0	11,644	57	0
Brus	21,331	1	21,330	605	0
Bujanovac	49,238	29,588	19,650	461	2,959
Valjevo	98,226	38	98,188	905	0
Varvarin	23,821	5	23,816	249	0
Velika Plana	51,150	22	51,128	345	0
Veliko Gradište	27,174	13	27,161	344	0
Vladimirci	23,335	0	23,335	338	0
Vladičin Han	25,255	0	25,255	366	0
Vlasotince	34,302	2	34,300	303	0
Vranje	86,518	57	86,461	860	0
Vrnjačka Banja	25,875	3	25,872	239	0
Gadžin han	12,990	0	12,990	325	0
Golubac	12,513	10	12,503	368	0
Gornji Milanovac	50,087	15	50,072	837	0
Despotovac	33,869	17	33,852	623	0
Dimitrovgrad	13,488	3	13,485	483	0
Doljevac	20,662	1	20,661	121	0
Žabari	19,347	5	19,342	264	0
Žagubica	17,777	0	17,777	760	0
Žitorada	19,545	0	19,545	214	0
Zaječar	72,763	91	72,672	1,068	0
Ivanjica	36,686	1	36,685	1,090	0
Kladovo	31,881	8	31,873	138	0
Knić	18,724	0	18,724	413	0
Knjaževac	44,036	38	43,998	1,202	0
Kosjerić	15,478	0	15,478	359	0
Koceljeva	17,064	0	17,064	257	0
Kragujevac	180,084	80	180,004	835	0
Kraljevo	125,772	43	125,729	1,529	0
Krupanj	21,879	0	21,879	342	0
Kruševac	138,111	47	138,064	854	0

Kuršumlja	23,590	2	23,588	952	0
Kučevo	25,649	4	25,645	721	0
Lebane	27,068	2	27,066	337	0
Leskovac	161,986	111	161,875	1,025	0
Loznica	86,875	28	86,847	612	0
Lučani	27,167	0	27,167	454	0
Ljig	15,912	0	15,912	279	0
Ljubovija	18,391	0	18,391	356	0
Majdanpek	27,378	11	27,367	932	0
Mali Zvornik	14,029	5	14,024	184	0
Malo Crniće	19,940	4	19,936	271	0
Medveđa	13,368	3832	9,536	524	0
Merošina	18,041	17,484	557	193	0
Mionica	17,368	0	17,368	329	0
Negotin	59,559	49	59,510	1,089	0
Niš	246,184	121	246,063	597	0
Nova Varoš	21,812	2	21,810	584	0
Novi Pazar	85,249	209	85,040	725	0
Osečina	16,745	0	16,745	319	0
Paraćin	64,119	11	64,108	542	0
Petrovac	46,414	120	46,294	655	0
Pirot	67,658	42	67,616	1,232	0
Požarevac	84,678	120	84,558	482	0
Požega	33,578	0	33,578	426	0
Preševo	38,943	34,992	3,951	264	610
Priboj	35,951	36	35,915	552	0
Prijepolje	46,525	25	46,500	827	0
Prokuplje	52,969	11	52,958	759	0
Ražanj	13,582	8	13,574	289	0
Rača	15,216	1	15,215	216	0
Raška	28,747	5	28,742	666	0
Rekovac	17,011	0	17,011	366	0
Jagodina	77,226	23	77,203	470	0
Svilajnac	33,136	2	33,134	362	0
Svrljig	20,740	8	20,732	497	0
Sjenica	33,681	55	33,626	1,059	0
Smederevo	115,617	162	115,455	484	0
Smed Palanka	59,882	30	59,852	421	0
Sokobanja	21,948	104	21,844	525	0
Surdulica	24,785	11	24,774	628	0
Topola	27,579	6	27,573	356	0
Trgovište	7,146	0	7,146	370	0
Trstenik	54,873	2	54,871	448	0
Tutin	34,631	67	34,564	741	0
Ćićevac	11,757	3	11,754	124	0
Čuprija	38,747	30	38,717	287	0
Ub	34,593	5	34,588	457	0
Užice	82,723	18	82,705	667	0
Crna Trava	3,789	0	3,789	312	0
Čajetina	15,996	0	15,996	647	0
Čačak	116,808	7	116,801	636	0

Šabac	123,633	25	123,608	795	0
Ada	21,506	10	21,496	227	0
Alibunar	26,535	27	26,508	602	0
Apatin	32,999	22	32,977	350	0
Bač	17,249	18	17,231	365	0
Bačka Palanka	58,835	86	58,749	579	0
Bačka Topola	49,473	38	49,435	596	0
Bački Petrovac	15,662	15	15,647	158	0
Bela Crkva	23,707	13	23,694	353	0
Beočin	14,848	18	14,830	186	0
Bečež	42,685	55	42,630	487	0
Vrbas	46,405	74	46,331	376	0
Vršac	58,228	100	58,128	800	0
Žabalj	25,823	17	25,806	400	0
Žitište	22,811	24	22,787	525	0
Zrenjanin	136,778	184	136,594	1,324	0
Indija	44,185	27	44,158	385	0
Irig	11,696	16	11,680	230	0
Kanjiža	30,668	28	30,640	399	0
Kikinda	69,743	92	69,651	782	0
Kovačica	30,469	53	30,416	419	0
Kovin	38,263	37	38,226	730	0
Kula	49,311	82	49,229	481	0
Mali Idoš	14,394	46	14,348	181	0
Nova Crnja	14,538	23	14,515	273	0
Novi Bečež	28,788	23	28,765	609	0
Novi Kneževac	13,816	10	13,806	305	0
Novi Sad	265,464	538	264,926	832	0
Opovo	11,384	7	11,377	203	0
Odžaci	37,501	40	37,461	411	0
Pančevo	125,261	85	125,176	759	0
Plandište	14,581	18	14,563	383	0
Ruma	55,087	43	55,044	582	0
Senta	28,779	35	28,744	293	0
Sečanj	18,438	18	18,420	523	0
Sombor	96,105	109	95,996	1,178	0
Srbobran	17,365	14	17,351	284	0
Sremska Mitrovica	85,328	56	85,272	762	0
Sremski Karlovci	7,534	12	7,522	51	0
Stara Pazova	57,291	28	57,263	351	0
Subotica	150,534	311	150,223	1,007	0
Temerin	24,939	21	24,918	170	0
Titel	16,218	18	16,200	262	0
Čoka	15,271	3	15,268	321	0
Šid	36,317	44	36,273	687	0
Andrijevića	6,696	0	6,696	283	0
Bar	37,321	4,619	32,702	598	0
Berane	38,953	46	38,907	717	0
Bijelo Polje	55,268	38	55,230	924	0
Budva	11,717	63	11,654	122	0
Danilovgrad	14,718	26	14,692	501	0

Žabljak	4,914	53	4,861	445	0
Kolašin	11,120	3	11,117	894	0
Kotor	22,410	68	22,342	335	230
Mojkovac	10,830	7	10,823	367	0
Nikšić	74,706	74	74,632	2,065	0
Plav	19,305	4,032	15,273	486	0
Plužine	5,247	4	5,243	854	0
Pljevlja	39,593	11	39,582	1,346	0
Podgorica	152,025	12,777	139,248	1,441	0
Rožaj	22,976	900	22,076	432	0
Tivat	11,429	154	11,275	46	250
Ulcinj	24,217	17,469	6,748	255	0
Herceg Novi	27,593	89	27,504	235	0
Cetinje	29,397	35	29,362	910	0
Šavnik	3,690	0	3,690	555	0

REFERENCES

- Djurović, B., Spasić Jokić, V., Petković, S., Fortuna, D., Selaković, V. & Atlagić, N. (2011). Osiromašeni uranijum - metode detekcije, saniranje neposrednih efekata i prevencija kasnih posledica [Depleted Uranium –Detection, Mitigation of Direct Effects and Prevention of Late Consequences], Draslar Partner, Belgrade.
- Haave, E.C. & Haun M.P. (2003). A-10s over Kosovo, Air University Press, Maxwell Air Force Base, Alabama, December, <http://aupress.maxwell.af.mil/Books/Haun/Haun.pdf>, Retrieved on 25 Feb 2013.
- Jovanović, V., Petković, S., Čikarić, S. (2012). Zločin u ratu-genocid u miru: posledice NATO bombardovanja Srbije 1999. godine [Crime During War – Genocide During Peace: Effects of the NATO Bombing of Serbia in 1999], Službeni glasnik, Beograd.
- Lagorio, S., Grande, E. & Marchina, L. (2008). Review of epidemiological studies of cancer risk among Gulf War and Balkans veterans. *Epidemiol. Prev.*, 32(3), 145-155.
- NPRI - The Nuclear Policy Research Institute. (2003). Depleted Uranium: Scientific Basis for Assessing Risk, NPRI, Washington D.C., July, <http://www.helencaldicott.com/depleted.pdf>, available 18.11.2014.
- Peragallo, M.S., Urbano, F., Sarnicola, G., Lista, F. & Vecchione, A. (2011). Cancer incidence in the military: an update. *Epidemiol. Prev.*, 35(5-6), 339-345.
- Petković, S., Zarić, N. & Dević, Z. (2000). The use of ammunition containing depleted uranium in NATO campaign against Federal Republic of Yugoslavia. *Vinča Institute of nuclear sciences bulletin: a scientific and informational journal of the Vinča Institute of Nuclear Sciences*, 5(1-4), .
- Statistical Yearbook of Yugoslavia* (2000). Federal Republic of Yugoslavia, Federal Statistical Office, Belgrade.
- Stojković, M. (2001). *Statistics*. Faculty of Economics, Subotica.
- The Kosovo Report Conflict: International Response, Lessons Learned – The Independent International Commission On Kosovo. (2000). Oxford University Press Inc., New York.
- The Regulations governing limits of radioactive contamination of the environment and the manner of conducting decontamination, *Official Gazette of FRY*, No. 9/99.
- UNEP/UNCHS Balkans Task Force (BTF). (1999). The potential effects on human health and environment arising from possible use of depleted uranium during

the 1999 Kosovo conflict(October 1999). *A preliminary assessment*. Geneva, October 1999.

Žakula, B. (2001). Municija sa osiromašenim uranijumom [Depleted Uranium Ammunition]. *Hemijska industrija (Chemical Industry)*, 55(7-8), 330-335.

КОРЕЛАЦИЈА УПОТРЕБЉЕНЕ МУНИЦИЈЕ СА ОСИРОМАШЕНИМ УРАНИЈУМОМ И ЕТНИЧКЕ СТРУКТУРЕ СТАНОВНИШТВА САВЕЗНЕ РЕПУБЛИКЕ ЈУГОСЛАВИЈЕ ТОКОМ АГРЕСИЈЕ НАТО 1999. ГОДИНЕ

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Резиме

У раду су презентовани резултати истраживања корелације употребљених пројектила са осиромашеним уранијумом (ОУ) и етничке структуре становништва по општинама бивше Савезне Републике Југославије (СРЈ), као и резултати истраживања временске дистрибуције употребљених пројектила са ОУ током агресије НАТО на СРЈ, 1999. године. За утврђивање степена повезаности употребљених пројектила и етничке структуре становништва, коришћен је Спирманов (Spearman) коефицијент корелације. У обради података (из НАТО извора) коришћен је програмски пакет Statistica 7 (Software.Champaign, (IL, USA): Wolfram Research, Inc.).

Резултатима спроведеног истраживања утврђено је да постоји директна пропорционалност између броја употребљених пројектила са ОУ и броја Албанаца и инверзна пропорционалност између броја употребљених пројектила са ОУ и броја неалбанаца по општинама бивше СРЈ. Конкретније, истраживањем је утврђено да је НАТО употребио 87,5% пројектила са ОУ на територији Косова и Метохије на којој доминантно живе грађани РС албанске етничке припадности и на којој од тада (преко 15 година) бораве припадници међународних безбедносних и цивилних снага (KFOR, UNMIK, EULEX). Такође, резултати истраживања су показали експоненцијални тренд раста броја употребљених пројектила са приближавањем агресије НАТО сопственом крају. Истраживањем је, конкретније, утврђено да су НАТО снаге, у последњих 11 дана агресије на СРЈ, укључујући и период трајања „Кумановских преговора“, употребиле више од половине (54%) од укупног броја употребљених пројектила са ОУ.

Тако утврђена временска и посебно просторна дистрибуција пројектила са ОУ указује на озбиљну противречност њихове употребе. С једне стране, НАТО је декларативно штитио Албанце на Косову и Метохији од “хуманитарне катастрофе”, наводно изазване деловањем снага безбедности СРЈ и РС, док је, с друге стране, управо Албанце и њихов животни простор, а тиме и простор привременог боравка снага НАТО, UNMIK, а касније и EULEX на Косову и Метохији дугорочно контаминирао у знатно већој мери од осталих делова СРЈ и од животног простора Срба и других неалбанаца у СРЈ. Полазећи од тога, резултати истраживања указују на потребу за озбиљним научним и стручним истраживањима узрока, разлога, циљева и последица употребе пројектила са ОУ током НАТО агресије на СРЈ, као и на неопходност изналажења дугорочног и трајног решења постојећег проблема и на потребу спречавања настајања таквих и сличних проблема у будућности.