

## **A REVIEW OF THE NUCLEAR WEAPONS FILE IN THE PROLIFERATION COUNTRIES AND IN THE PROLIFERATION CONCERNED ONES**

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***Abstract:*** As it is known, this year, in August, the victims of the nuclear attacks carried out by the United States of America on the cities of Hiroshima and Nagasaki were commemorated in Japan and around the world.

Since then and until today, the nuclear arsenals have increased spectacularly, reaching in 2019, (approximately) 13,865 nuclear weapons worldwide but with colossal destructive powers, in the order of megatons and gigatons. The most active promoters are, as in the past, the United States and the Russian Federation (the heir to the USSR's nuclear arsenal). The leaders of the nuclear states do not seem to give the slightest sign to remove, or at least to diminish, the danger.

***Keywords:*** nuclear weapons, Hiroshima, Nagasaki, USA, the Russian Federation, countries owning nuclear weapons.

August marks the 75th anniversary since the launch by the United States of America of two nuclear bombs on the Japanese cities of Hiroshima and Nagasaki (August 6 and 9, 1945).

At the time of the bombs launching - although the war in Europe was ended with the capitulation of Germany - Japan and the United States were still at war.

The two atomic bombs were weapons of shock and terror. The huge advantage of these weapons was not military because the United States would have gained little by destroying two Japanese cities. But, from a civilian point of view, Japan would lose a lot. The novelty brought by nuclear weapons was not the large-scale destruction (which could have been achieved with conventional weapons, in the required amount), but the fact that nuclear weapons compress catastrophic destruction in a very short

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period of time, dramatically changes the war policy, the motivations of people with decision-making power and the ability to reflect while the war is ongoing.

There is an extensive literature on the subject, the actual bombing, the decision to use atomic bombs, and the capitulation of Japan. The sources that are mentioned in the bibliography provide examples of valuable writings on this topic. Due to the ongoing and intense debate over the justification for the bombings, it is possible that the sources indicated contain divergent views.

At the recent commemoration of the 75th anniversary of the nuclear bomb attack, the British Broadcasting Corporation (BBC) presents in an article, terrifying data and images about the tragic event<sup>1</sup>.

The article states (based on evidence) that of the 350,000 people in Hiroshima, 140,000 were instantly killed, and another 74,000 in Nagasaki.

The effects of radiation have killed thousands of people over time, the consequences being observable even today, as the few survivors face serious diseases, and Japanese society rejects and isolates them (these survivors are called *hibakusha*).

The bomb dropped on Hiroshima called “Little Boy” had a destructive power between 12 and 15 kilotons of trinitrotoluene (TNT), and instantly devastated an area of 13 km<sup>2</sup>.

The images published by the BBC, some for the first time, are terrifying. These images of “small” bombs by current standards do not seem to impress the politicians and military of the great nuclear powers. The arms race with the weapons of death continues unhindered, despite agreements and treaties signed and never respected.

Following the second attack, Japan surrendered unconditionally on August 14, 1945. Statements by US President Harry Truman, Emperor Hirohito of Japan and British Prime Minister Clement Attlee followed. The official documents of the unconditional surrender were signed by Japan on September 2, aboard the USS Missouri battleship, in the Gulf of Tokyo.

Following these attacks, a new era of the race for nuclear supremacy has opened up, with devastating effects on the economies of the states

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<sup>1</sup> „Hiroshima and Nagasaki: 75th anniversary of atomic”, article, *BBC NEWS*, available at: <https://www.bbc.com/news/in-pictures-53648572>, accessed on 10.08.2020.

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engaged in the race and with the unprecedented amplification of the potential total extinction of the human species and beyond.

Lately, the states of the world (including the declared nuclear powers and the unofficial ones) have kind of forgotten about the danger posed by the huge nuclear arsenal, focusing on the economic-financial crises and more recently on the COVID-19 crisis.

That is why I consider it useful and necessary to take a brief look at the danger to which the human species is exposed, every second, as a result of the development of nuclear weapons technology and the improvement of transport vectors to the target.

According to a report published in 2019<sup>2</sup> by the famous International Institute for Peace Studies (SIPRI) in Stockholm, the number of nuclear warheads in the world has continued to fall, but nuclear-weapon states attach “increasing importance” to it and modernize their arsenals, including target transport vectors. The document, quoted by *France Presse* and *Business Insider*, shows that at the beginning of 2019, the USA, Russia, the Great Britain, France, China, India, Pakistan, Israel and North Korea had about 13,865 nuclear weapons, 600 fewer than at the beginning of 2018. In parallel, these countries are modernizing their own arsenal, and also China, India and Pakistan are increasing their nuclear size.

The nuclear decline in recent years has been recorded mainly in the USA and Russia, whose arsenals represent 90-93% of the atomic weapons in the world today. The two countries are unenthusiastically fulfilling their obligations under the NEW START Treaty, which they signed in April 2010, which provides for a limited number of functional warheads and the defuse of nuclear warheads from the Cold War. But this treaty expires in 2021, and there is “no serious discussion about its extension”, which is happening in a period of great tension between these two largest nuclear powers in the world, as Shannon Kile, Director of the SIPRI Nuclear

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<sup>2</sup> Constantin Dumitru, „Câte arme nucleare sunt și în ce locuri ale lumii se află?”, *Cotidianul.ro*, available at: <https://www.cotidianul.ro/câte-arme-nucleare-sunt-și-în-ce-locuri-ale-lumii-se-află/>, accessed on 10.08.2020.

Weapons Control Program, co-author of the mentioned report, told to *France Presse*.

Russia and the United States have launched extensive and expensive programs in recent years to replace and upgrade their missiles, missile launch systems and nuclear weapons facilities. If the number of nuclear weapons has decreased since the mid-1980s, when it was almost 70,000 according to the newspaper “La Tribune”, today it is still too high around the world and makes real the risk of bursting of a nuclear conflict one day.

Of the 13,865 nuclear weapons inventoried in 2019 worldwide by SIPRI, 3,750 are deployed with operational forces, and almost 2,000 of them are maintained in a state of high operational alert.

It is necessary to present below the distribution of nuclear forces in the world, more precisely in the nine countries that are known to have it, stating that these estimates are “approximate”, given that those states are far from proving total transparency regarding their atomic capabilities.

As for me, I considered it appropriate to take into account the higher numbers from the various sources consulted, although they also seem to be outdated by reality.

Let us review the existing data on the arsenal of nuclear powers<sup>3</sup>:

1. The United States of America

- Active nuclear warheads = 1,920
- Other nuclear warheads = 5,380
- Total warhead = 7,300
- Year of the first nuclear test = 1945
- Current concerns:
  - Miniaturization of nuclear warheads simultaneously with the increase of destructive power;
  - Improvement of target transport vectors from the ground, sea, air and outer space;
  - Improvement of command and control systems.

2. Russian Federation:

- Active nuclear warheads = 1,600

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<sup>3</sup> Top countries that have nuclear weapons: how big is the arsenal of the 9 states, available at <https://www.wall-street.ro/slideshow/International/167702/top-9-tari-posesoare-de-arme-nucleare>, accessed on 11.08.2020.

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- Other nuclear warheads = 6,400
- Total warhead = 8,000
- The year of the first nuclear test = 1946
- Current concerns:
  - Increasing the destructive power of the warheads;
  - Development of the program for making hypersonic missiles (4-5 times the speed of sound);
  - Widening the range of transport vectors to the target, including by underwater drones (Poseidon) and aerial drones;
  - Improvement of command and control systems;
  - Launching threats with the use of nuclear force on some NATO member states.

3. The Great Britain:

- Active nuclear warheads = 160
- Other nuclear warheads = 65
- Total warhead = 225
- The year of the first nuclear test = 1952
- Current concerns:
  - Modernization of the nuclear arsenal and target transport vectors

according to the US model.

4. France:

- Active nuclear warheads = 290
- Other nuclear warheads = 10
- Total warhead = 300
- The year of the first nuclear test = 1960
- Current concerns:
  - Similar to those of the USA and the Great Britain.

5. China:

- Active nuclear warheads = 0
- Other nuclear warheads = 250

- Total warhead = 250
- The year of the first nuclear test = 1964
- Current concerns:
  - Given the excessive secrecy of Beijing's power, there are no definite data. Presumably they are not standing still.

6. India:

- Active nuclear warheads = 0
- Other nuclear warheads = 110
- Total warhead = 110
- The year of the first nuclear test = 1974

7. Pakistan:

- Active nuclear warheads = 0
- Other nuclear warheads = 120
- Total warhead = 120

8. Israel:

- Active nuclear warheads = 0
- Other nuclear warheads = 80
- Total warhead = 80
- The year of the first nuclear test = unknown

9. North Korea:

- Active nuclear warheads = 0
- Other nuclear warheads = 8
- Total warhead = 8
- The year of the first nuclear test = 2006
- Current concerns:

- With the support of other nuclear powers, it develops its transport vectors at the target, including those with a very long range.

In addition to the nine countries for which the above data are (approximately) known, there are other states that have the economic capacity, scientific potential and technology to build nuclear weapons and transport vehicles at the target.

Those interested in pursuing the phenomenon of conventional and nuclear weapons in the world may guess what these countries might be, but for political reasons, it is not right to nominate them.

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I must also remember that on 01.07.1968 the Treaty on the Non-Proliferation of Nuclear Weapons was signed<sup>4</sup>. The treaty was initiated and signed by the three nuclear powers: the United States, the USSR and the Great Britain, with the request that all states in the world that possess and do not possess nuclear weapons to join and to ratify it. Almost every country in the world has done it.

The treaty contains eleven articles, and those interested should study it. It is neither the place nor the space available to present the document in more detail, but I consider it necessary to reproduce point 2 of Article III:

*“Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this Article”.*

The fact that, along nuclear-weapon states in 1968, several other countries appeared in this area shows that the Treaty has been violated by some signatories.

Finally, let us look at just two examples of the huge destructive force of today's nuclear weapons:

- In the event of a nuclear attack, it is estimated that a single USA-owned B-83 bomb would kill 1.4 million people in the first 24 hours, with another 3.7 million seriously injured;
- The most powerful atomic bomb is owned by Russia. If it were launched over New York, 7.6 million people would be killed and 3.7 million injured. Millions more would suffer severely over a distance of up to ten kilometres around the blast.

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<sup>4</sup> The Treaty on the Non-Proliferation of Nuclear Weapons of 01.07.1968 (In Romanian: Tratatul cu privire la neproliferarea armelor nucleare din 01.07.1968), text published in Official Bulletin no. 3 on January 31, 1970, available at: <https://lege5.ro>, accessed on 12.08.2020.

- Some analysts, familiar with the phenomenon of nuclear weapons, estimate that with the current arsenal, life on planet Earth can be destroyed 100 times (author's note: It seems that some political leaders of the great powers think it is not enough!).

The nuclear clock is ticking and dangerously approaching a global disaster, but some current heads of state in countries with huge nuclear arsenals do not seem to hear or see.

Some nuclear weapons and target transport treaties have been denounced, and others are expiring soon. There is no political signal and no proposal to resume serious and honest negotiations on the drastic reduction of these super dangerous weapons and, of course, there is no mention of general and total nuclear disarmament.

Moreover, the President of the Russian Federation, Vladimir Vladimirovich Putin sees it possible to use nuclear weapons in an illusory and totally unlikely conventional attack.

So, dealing with COVID-19 and the global economic crisis, it seems that we do not notice that we can disappear as a species, in no more than 30 minutes.



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