

## THE SECOND NUCLEAR AGE AND NUCLEAR COORDINATES OF REGIONAL SECURITY

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### ABSTRACT

THE CENTERPIECE OF MAINTAINING PEACE AND SECURITY IS THE DISARMAMENT AND NON-PROLIFERATION, PLUS THE FIGHT AGAINST TERRORISM.<sup>2</sup> A NEED FOR INTERNATIONAL REGULATION IS MORE THAN NECESSARY, BUT THE INTERNATIONAL COMMUNITY'S EFFORTS HAVE TOUCHED ONLY THE POLITICAL DECLARATION, A SMALL STEP BUT IT MUST BE DEVELOPED.<sup>3</sup> NOTE THAT MEMBER'S RESPONSIBILITY MUST BE CORRELATED WITH INTERNATIONAL OBLIGATIONS.<sup>4</sup>

"THE NUCLEAR SUBSYSTEM" AS PART OF THE OVERALL POLITICAL SYSTEM COULD INCLUDE NEW ACTORS CHARACTERIZED BY FUNDAMENTAL CHARACTERISTICS DIFFERENT FROM TRADITIONAL STATE ACTORS, BUT CAN BECOME VIRTUAL COORDINATES FOR THE IMPLEMENTED POLICIES. POTENTIAL REGIONAL OUTBREAKS THAT CAN SUPPORT OPEN CONFLICT WITH NUCLEAR SIZE, INDIA-PAKISTAN, ISRAEL, IRAN, NORTH KOREA'S AMBITIONS RAISED ON THE AGENDA, THE NEED FOR REGIONAL ARRANGEMENTS AS A WAY OF MODELING DEVELOPMENTS NEGOTIATED AS THE GLOBAL DIPLOMATIC POORLY REGULATED.

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**KEYWORDS:** DISARMAMENT, NON-PROLIFERATION, SECOND NUCLEAR AGE, REGIONAL NUCLEAR SECURITY

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<sup>2</sup> Recall the statement in UN General Assembly Resolution 67/44 on *Measures to prevent terrorists from acquiring weapons of mass destruction* "Emphasizing that progress is urgently needed in the area of disarmament and non-proliferation in order to maintain international peace and security and to contribute to global efforts against terrorism", and recognize that there is a need to make further progress in this regard. The Ministerial Declaration from the International Conference on Nuclear Security: Enhancing Global Efforts, 1 July 2013 (Annex of document GOV/INF/2013/9-GC(57)/INF/6), Preamble and Para. 4.

<sup>3</sup> Invite States that have not yet done so to make a political commitment to implement the non-legally-binding *Code of Conduct on the Safety and Security of Radioactive Sources* and supplementary *Guidance on the Import and Export of Radioactive Sources*, and encourage all States to implement these instruments and to maintain effective security of radioactive sources throughout their life cycle. The Ministerial Declaration from the International Conference on Nuclear Security: Enhancing Global Efforts, 1 July 2013 (Annex of document GOV/INF/2013/9-GC(57)/INF/6), Preamble and Para. 4.

<sup>4</sup> The objective of the Nuclear Security Plan 2014–2017 is to contribute to global efforts to achieve effective security wherever nuclear and other radioactive material is in use, storage and/or transport, and of associated facilities by supporting States, upon request, in their efforts to meet their national responsibilities and international obligations, to reduce risks and to respond appropriately to threats. Nuclear Security Plan 2014–2017, GOV/2013/42-GC(57)/19, 2 August 2013.

## TWO IMPERFECT ATTEMPTS: DISARMAMENT AND NON-PROLIFERATION

In the sixth decade of the last century, the strategic approach to the issue of disarmament failed to change the international effort towards non-proliferation and limiting risks. US-Soviet discussions on the reduction and limitation of strategic weapons, offensive and defensive,<sup>5</sup> concluded that the damage caused by a nuclear war are huge and continuous improvement of these weapons worse consequences.

In the seventh decade of the last century, disarmament is replaced by the international nuclear non-proliferation agenda, the nuclear powers maintain nuclear strategic advantages and privileges protects its active position in addressing the nuclear issue.

The parallel development of strategic missile and missile defense systems, including the effects of the disaster revealed destruction of nuclear warheads by defense interceptors defensive systems - project Grushin,<sup>6</sup> system components Taran medium range and long-range<sup>7</sup>, project Avrora,<sup>8</sup> the project system of A-135 accompanied by the development of operational-tactical scale missile defense of Moscow. A new stage begins with the development of the concept of missile defense, including a spatial dimension having responsibilities.<sup>9</sup>

In the period 1950-1970, from a position of unique nuclear superpower USA finds catching the USSR<sup>10</sup> and world formula promotes five nuclear powers.<sup>11</sup> "The threat polygonal" - if the Cold War nuclear games were controlled by the two major powers in the second nuclear age, each member of the nuclear club threatens many countries, an unprecedented challenge.<sup>12</sup>

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<sup>5</sup> The Treaty banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (1963), the Treaty on the Non-Proliferation of Nuclear Weapons (NPT, 1968). Article VI of NPT committed the nuclear powers "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control." ABM treaty (1972).

<sup>6</sup> Grushin's Experimental Design Bureau. V-1000 interceptor missile, ground-based system of missile defense codenamed "A". See I. D. Yevtiev, "Iz istorii sozdania zenitnoraketnogo shchita Rossii – o sozdanii zenitnykh upravlyayemykh raket i zenitno-raketnykh kompleksov v Rossii i stranakh NATO" ("From the History of the Development of the Missile Defense Shield of Moscow: On the Development of Guided Missiles for Air Defense Systems in Russia and NATO countries"), (Moscow: Vyzovksaya kniga, 2000), 75.

<sup>7</sup> The long- and medium-range components of the Taran system with multi-channel radar stations of the TsSO-S type. See M. Pervov, "Sistemy raketno-kosmicheskoi oboroni sozdavalis tak" ("This is How the Space and Missile Defense Systems of the Country were Created"), 2nd ed., AVIARIUS-XXI, 2004, 161.

<sup>8</sup> The project would take place in three phases: first shield around Moscow, the European part of the USSR, the Asian part of the USSR supported by two rounds of radio stations to intercept and impact with interceptors. Huge costs have blocked full deployment of the project. See M. Pervov, "Sistemy raketno-kosmicheskoi oboroni sozdavalis tak" ("This is How the Space and Missile Defense Systems of the Country were Created"), 2nd ed., AVIARIUS-XXI, 2004, 173.

<sup>9</sup> concepts of ballistic missile defense (BMD) systems.

<sup>10</sup> Halperin group's report, "we came to an inevitable conclusion that none of the existing American strategic programs could give us the predominance that we had in the 1950s."

<sup>11</sup> The Five Polar Power World formula (U.S., USSR, China, Western Europe and Japan). In 1974, The ABM Treaty is signed together with an Interim Agreement on Certain Measures with Respect to the Limitation of Strategic Offensive Arms.

<sup>12</sup> The author presents the geopolitical area Middle East: as if Iran will have nuclear weapons at their disposal, then Egypt and Saudi Arabia will try to procure such weapons also followed automatically by Syria; in the second phase, the United States and Israel will be threatened and possibly a third phase - after a race of having irrational nuclear weapons - triggering a regional nuclear war. Andrei Kokoshin, *Ensuring Strategic Stability in the Past and Present: Theoretical and Applied Questions*, Belfer Center for Science and International Affairs, (Harvard Kennedy School, 2011), 2.

ABMT becomes the text model of many international agreements based on the principle of equality and equal security by limiting and prohibitions. The provisions regarding limitations of each signatory state from MD system - include maximum 100 interceptors and 100 launchers arranged in only two areas, each with a radius of 150 km - reflected nuclear balance, the main component of the strategic military balance at the time, later called official "strategic stability".<sup>13</sup> It is recognized by both superpowers that provision of strategic missile submarines raise uncertainty in the forecast of a potential nuclear conflict.

In the next period it followed a new spiral of potential nuclear confrontation with the Soviet deployment of SS-20<sup>14</sup> and Pershing II<sup>15</sup> by the United States and the launch of the SDI program with the threat of withdrawal of ABMT.

Scientific and technological auspices of a new spiral, this time in space, enabling the production of anti-satellite weapons systems for the annihilation of adversary satellites - orbit flying already known - virtually ensuring protection of nuclear warheads. New anti-satellite weapons spiral brings new threats, reconnaissance satellites, the missile warning system and satellite systems infrastructure. Without being based on a bilateral moratorium on conducting mutually and testing anti-satellite weapons, respected by the USSR and the USA, between 1985<sup>16</sup> - 2008.<sup>17</sup>

US strategic orientation is based on the "preemptive military action"<sup>18</sup> and it raises some ambiguity regarding the materialization option proactive defense and efficiency of its space vehicles.<sup>19</sup>

Anti-satellite technology is of great diversity - depending on the location (on land, water, air, space), the energy used (kinetic, energetic), tactics (to malfunction, blindness), vector - MiG-31 and F-15 and space mines.

After the Cold War, US and USSR in a joint statement commits to strengthen strategic stability.<sup>20</sup>

The deterioration of US-Russian relations, participation trends blocked multilateral nuclear issues, returning to Cold War superpowers binomial but much changed coordinated with development potential unpredictable.

Currently, there is an unanimous need for a regulated framework for nuclear safety.<sup>21</sup>

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<sup>13</sup> The term "strategic stability" was used in the U.S.-USSR Intermediate-Range Nuclear Forces Treaty [INF Treaty] as of 1987, and the START I Treaty as of 1991.

<sup>14</sup> SS-20 - Pioneer medium-range ballistic missiles (MRBMs), which carried three MIRV warheads.

<sup>15</sup> Pershing II (MRBM) and ground-launched cruise missiles (GLCMs), with stronger capability to hit hard targets (including underground command posts).

<sup>16</sup> The United States conducted a test of its anti-satellite weapons, hitting a low-orbit satellite with an experimental air-deployed ballistic missile called the SRAM-Altair.

<sup>17</sup> When sea-launched missiles hit a U.S. reconnaissance satellite. Before that, China conducted an anti-satellite missile test using a German interceptor missile.

<sup>18</sup> The principle of taking preemptive military action against any threat to the U.S. national security, which was defined in the *U.S. 2002 National Security Strategy*.

<sup>19</sup> See Marc Kaufman, Dafna Linzer, "China Criticized for Anti-Satellite Missile Test," *Washington Post*, 19 January 2007. Available at <http://www.washingtonpost.com/wp-dyn/content/article/2007/01/18/AR2007011801029.html>.

<sup>20</sup> The statement said that future negotiations on the reduction of strategic nuclear arms should be aimed at "further reduction of the risk of war, especially nuclear war, enhancement of strategic stability, transparency and predictability by way of further stabilizing reductions of the strategic arsenals of both countries. This shall be achieved through the pursuit of arrangements that increase survivability, eliminate incentives for the first nuclear strike, and embody the relevant interrelation between the strategic offensive and defensive means."

<sup>21</sup> The Agency supports the international legal framework for nuclear security through the promotion of the relevant legally binding and non-binding instruments under Agency auspices and the development of comprehensive guidance in the Nuclear Security Series in accordance with the publications plan agreed by the

## DIRECTIONS OF DEVELOPMENT IN THE SECOND NUCLEAR AGE

Nuclear governance includes a series of measures that states adhere even if against their interests. An important role is played by specific regions interstate- relations crises, conflicts - regional balance of conventional forces, alliances etc.<sup>22</sup>

Arms control and governance are built on mutual basis, on matters of strategic significance serious point but usually not used through legal instruments. Under these arrangements, which have delicate granted both the international dimension and the national sovereignty, the center pivot is the risk that nuclear weapons are drawn.

There is a major distinction to disarmament and non-proliferation even if they are correlated, because if its interests are ignored governance and the other are promoted.

A direction of development of the nuclear age is the nuclear fuel cycle control; although steps in developing a multilateral management known variants since the Cold War, but no progress is made.<sup>23</sup>

Currently, institutions, arrangements and practice do not operate as a coherent complex, unable to speak the universal legitimacy, especially since the legal instruments are flexible and allow the nuances of official positions and they are subject to a perfect diet do not necessarily mean progress, even they are inserted in the instruments of international law.<sup>24</sup> The relationship between the United Nations and IAEA closes all Security Council resolutions, according to international instruments, a trend to these data primarily involving international unlikely law changes.<sup>25</sup>

Non-proliferation is dependent on nuclear technology which currently does not offer a viable solution to restrict the production of nuclear weapons but also to allow the use of nuclear energy for civilian purposes on a large scale.<sup>26</sup> Duality of nuclear technology, the spread of knowledge and capabilities seriously limits controlled by technology and the option of using nuclear fuel cycle.

Although the NPT is opened for signature for over 45 years, it is signed by 189 countries of which 40 are estimated to be able to produce and develop nuclear weapons, an alternative to this agreement was made with although the NPT should be strengthened and developed. For the new nuclear era, NWS and NNWS philosophy are the pillars for non-

NSGC. The importance of strengthening the framework was indicated in paragraphs 9, 10, 11, 17, and 20 of the Ministerial Declaration. See *Nuclear Security Plan 2014–2017*, GOV/2013/42-GC(57)/19, 2 August 2013.

<sup>22</sup>See *Nuclear Security Plan 2014–2017*, GOV/2013/42-GC(57)/19, 2 August 2013.

<sup>23</sup> Electricity from nuclear reactors is particularly important to parts of the industrialized world. Currently, only six countries have enrichment facilities supplying the commercial world market: France, Germany, the Netherlands, Russia, the United Kingdom, and the United States. Thus the international community is thinking hard about how to manage the nuclear fuel market and is looking to different forms of fuel assurances to dissuade additional countries from launching their own enrichment capacity. See Erwann O. Michel-Kerjan and Debra K. Decker, „Insure to Assure. A New Paradigm for Nuclear Nonproliferation and International Security”, *Innovations* / spring 2009, 142-143.

<sup>24</sup> Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament. See *the Treaty on the Non-Proliferation of Nuclear Weapons*, had entered into force on 5 March 1970.

<sup>25</sup> ARTICLE I – Principles. 1. The United Nations recognizes the International Atomic Energy Agency (hereinafter referred to as the Agency) as the agency, under the aegis of the United Nations as specified in this Agreement, responsible for international activities concerned with the peaceful uses of atomic energy in accordance with its Statute, without prejudice to the rights and responsibilities of the United Nations in this field under the Charter. See *Agreement Governing the Relationship Between the United Nations and the International Atomic Energy Agency*, 19th day of June 1959.

<sup>26</sup> “The biggest risk to the nonproliferation regime today comes from the spread of fissile material production capability.” See Anatoly Dyakov, “Nuclear Fuel Cycle Security,” in *Nuclear Proliferation: New Technologies, Weapons, Treaties*, ed. Alexei Arbatov and Vladimir Dvorkin (Moscow: Carnegie Moscow Center, 2009), 39.

proliferation, disarmament and peaceful use of nuclear technology, which was built on NPT and might become obsolete.<sup>27</sup>

Relationship disarmament – non-proliferation in the NPT frame is regarded differently in the NWS to NNWS, namely disarmament, including nuclear is the final object of this treaty.<sup>28</sup> Regarding nuclear disarmament, it concerns both NWS and NNWS as ways to block the proliferation of nuclear weapons not only market in the current reform agenda and the NPT.<sup>29</sup>

Spectacular developments in technology make changes even over substance risks, imposing periodic evaluations. Need verification mechanisms on nuclear material is particularly acute.

Nuclear governance develops a multi-purpose structure formed with the corollary consensus on a wide range of issues in economic trends and conditions that involve a number of states technologic increasingly larger, including non-state actors. A global nuclear order is dependent on regulations, policies and international relations, military-political paradigms, the intensity of promoting the interests of states and international organizations.<sup>30</sup> Obsolescence agreement on conventional arms in Europe and NATO option for extended nuclear threat and maintaining tactical nuclear weapons are major determinants of nuclear safety.

Adapting the current system at the second nuclear age, although it has supported nuclear power policy statements, it is conducted in an imperceptible pace; nuclear summits have not solved any of the major issues in the field and the NPT review conferences may be the new proposals. NPT Review Conference (2015)<sup>31</sup> will be a setback in achieving strategic disarmament obligations if cuts are not continued by Russia and the United States are negotiating strategic issues, although accused of nuclear preserve their privileged role.<sup>32</sup>

Maintaining nuclear doctrine which promotes the principle of reducing the importance of nuclear factor gives a boost to NWS to avoid proliferation even exacerbate inequity treaty parties.<sup>33</sup> NNWS will continue to seek NWS to honor its obligations under the NPT.<sup>34</sup>

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<sup>27</sup> “The NPT is designed, first and foremost, to prevent the spread of nuclear weapons. The other two elements of the treaty are not really pillars at all; they are subordinate clauses under the central purpose of nuclear nonproliferation.” See Baker Spring, *The Misleading Messages from the Nonproliferation Treaty Review Conference*, Heritage Foundation Web Memo No. 2924, June 3, 2010, 1.

<sup>28</sup> “Broadly speaking, the Movement remains united in the conviction that the ultimate goal of the NPT is nuclear disarmament. . . . Unlike nuclear disarmament, nonproliferation was never a central tenet of the Non-Aligned Movement.” See William Potter and Gaukhar Mukhatzhanova, *Principles vs. Pragmatism: The Non-Aligned Movement and Nuclear Politics* (London: Routledge, 2012), 41–42.

<sup>29</sup> See Scott D. Sagan et al., *Shared Responsibilities for Nuclear Disarmament: A Global Debate*, (Cambridge, Mass.: American Academy of Arts and Sciences, 2010).

<sup>30</sup> See Andrei Kokoshin, *Ensuring Strategic Stability in the Past and Present: Theoretical and Applied Questions*, Belfer Center for Science and International Affairs, Harvard Kennedy School 2011.

<sup>31</sup> The Non-Proliferation of Nuclear Weapons (NPT).

<sup>32</sup> Brazil’s perspective on the NPT system, for example, the regime is seen as a “politically driven tool in the hands of the United States to lay down the law” and reflects an effort by great powers to use international norms “to impose their will on weaker nations.” See Trita Parsi, *A Single Role of the Dice: Obama’s Diplomacy with Iran* (New Haven, Conn.: Yale University Press, 2012), 177.

<sup>33</sup> “The most fundamental problem with the nuclear nonproliferation regime is, in itself, a double standard: the inherent asymmetry, or inequality, between the nuclear haves and have-nots.” See Mohamed ElBaradei, *The Age of Deception: Nuclear Diplomacy in Treacherous Times* (New York: Metropolitan Books, 2011), 236.

<sup>34</sup> For the foreseeable future, the NWS are not prepared to do what the majority of NPT member states wish them to do and believe they are legally obligated to do. See Sverre Lodgaard, *Nuclear Disarmament and Non-Proliferation: Towards a Nuclear-Weapon-Free World?* (New York: Routledge, 2010).

Reducing nuclear arsenals under current levels through substantial revision of the situation in the subject of complex multilateral program.<sup>35</sup>

It should be emphasized that the basic building an edifice of nuclear governance consists of conventional, nuclear-strategic relationship (precision strike, counter of it). One solution is to reach agreement between the parties with some nuclear purposes.

The nuclear landscape is a collection of correlation between political and military structures on the escalating levels of nuclear confrontation, fighting variants crisis, assessing the consequences of nuclear conflict outbreak. Status quantitative and qualitative symmetry of the two nuclear superpowers, is affected when one of the parties achieve superiority and the other party does not take countermeasures in response defining the strategic situation as stable or unstable.<sup>36</sup> An unstable strategic situation entails a risk of nuclear conflict.

Overcoming a level of arsenals of nuclear weapons ("safe limit" or "stability limit")<sup>37</sup> with a huge destructive capacity, reporting to the state renders the symmetry of the two nuclear superpowers because their destructive power draw unimaginable consequences. Considered as the starting point of calibration consequences, the breakthrough of the arsenals is indispensable for negotiations various arrangements in the field - to reduce and limit their strategic forces composition.

Technical and operational uncertainties of executing a massive preemptive strike, synchronized and at some point the trajectories of struggle, other than testing on hundreds of targets are sufficiently strong so as to strengthen strategic nuclear symmetry. Destruction guaranteed a certain target is questioned by "fratricidal effect of warheads" and the fact that the first shot will mask the location of the target by the dust that lifted into the air; consequences of this effect are impossible to estimate when launching a rocket volleys 1000.<sup>38</sup>

Strategic stability is defined by the "stability margins" which relates to external and internal factors - including scientific research and technological developments that negatively influence the results of certain weapons systems - the impact on strategic nuclear defense.<sup>39</sup>

Nuclear deterrence is dependent on the requirements set by the potential need: nuclear ammunition to cause unacceptable losses opponent, protecting forces will execute counterattack, the ratio of forces and missile defense systems opponent.

The opposing party decides that the losses are unacceptable and by developing crisis, the degree of damage to the national potential options available; scenario with 300 shots, each with 0.5 MT, executed on several hundred industrial centers.<sup>40</sup>

Regarding response kicks can choose between: kick ball response, counterattack and counterattack.

In the literature, it is observed that although the USSR had a huge arsenal of missiles and warheads placed in silos, a small proportion of these were designed to counter because

<sup>35</sup> See *First Report of the Deep Cuts Commission, Preparing for Deep Cuts: Options for Enhancing Euro-Atlantic and International Security*, April 2014. The Institute for Peace Research and Security Policy at the University of Hamburg (IFSH), the Washington-based Arms Control Association (ACA) and the Institute of World Economy and International Relations of the Russian Academy of Sciences (IMEMO, RAN).

<sup>36</sup> This situation has existed for a long period of time: the United States had more warheads missiles while the Soviet Union had to make serious efforts to pass the multiple warhead missiles equipped with MIRVs.

<sup>37</sup> "safety margin" or "stability margin."

<sup>38</sup> See Andrei Kokoshin, *Ensuring Strategic Stability in the Past and Present: Theoretical and Applied Questions*, Belfer Center for Science and International Affairs, Harvard Kennedy School 2011, 22.

<sup>39</sup> See V. Z. Dvorkin, "K voprosu o formirovani politiki natsionalnoi bezopasnosti" ("On the Formation of National Security Policy"), *World Economy and Foreign Affairs*, 2004, No. 13, 52-56.

<sup>40</sup> See Y. A. Trutnev, "Na blago Rossii: K 75-letiu akademiki RAN Yu. A. Trutneva" ("For the Benefit of Russia: Dedicated to the 75th Anniversary of Academician of the Russian Academy of Sciences Y. A. Trutnev"), Sarov, Saransk: Krasnyi Oktyabr, 2002, 334.

they were not insured against the effects of massive hits. The vulnerability was fixed by ensuring mobility and improved performance of shot response.<sup>41</sup>

Running counter strike depends on the warning systems<sup>42</sup> - two levels of satellites and radar systems - which offer only a few minutes to a political decision on what kind of reaction must be adopted.

Unauthorized or accidental use of nuclear weapons could trigger a nuclear war: technical errors, deficiencies in information analysis and decision making, strategic evaluations superficial, a highly stressful environment that tainted the institutional framework. A tactical decision to launch missiles with nuclear warheads without the leader of the state agreement is possible with very serious consequences. Preventing accidental triggering nuclear war is a main direction in the organization of the command and control of strategic forces.

Besides prevention and control required escalation to a profound political-military crisis may turn to nuclear war.<sup>43</sup>

A development that exacerbated the distinction between conventional war and nuclear war is the introduction of tactical nuclear weapons and tactical operational concept limited nuclear war as artillery shells. Initially limited nuclear war option was developed by the United States in response to the conventional balance of forces favorable to the opponent, but at present, although they were substantially reduced and withdrawn deposits constitute the foundation of Russia's national security.<sup>44</sup>

Nuclear deterrence is the concept that summed up two opposing sides; on the one hand, the need to deter any adversary risk of being destroyed from the first shot, on the other hand, your opponent must show its

The belief that the opponent can not execute a preemptive strike but has the ability to support strikes are in response to vulnerability (damage you may suffer) and mutual invulnerability (kicks opponent response will produce losses).

SDI<sup>45</sup> Strategic Defense Initiative - a program conducted in space defense costs higher than the "Manhattan Project" - and the deployment of medium-range missiles in Europe, they obliged the USSR to develop a response strategy but with a symmetrical profile in fact a new level of Soviet arms race that it did not allow for financial reasons. The Soviet response strategies at asymmetric-symmetrical replace principle, divided into three areas: increasing invulnerability strategic forces, offensive and improving measures to neutralize the space stations with high power lasers. Approach on the basis of asymmetric threat, although usually the reaction is built on the principle of symmetry, introducing new parameters for assessing the balance of determined opponents of power-capability ratio.

Asymmetric reaction to SDI - an expanded missile defense system - based on three types of response, organized by type of impact during activation, vital and vulnerable targets of SDI, revealed the importance of reducing non-selectivity. Development of nuclear weapons for destruction without collateral damage, on which the doctrine formulated various

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<sup>41</sup> See V. Z. Dvorkin "K voprosu o formirovanii politiki natsionalnoi bezopasnosti" ("On the Formation of National Security Policy"), *World Economy and Foreign Affairs*, no. 13, 2004.

<sup>42</sup> early warning systems (EWS).

<sup>43</sup> The non-use of nuclear weapons since 1945 certainly remains the single most important phenomenon of the nuclear age. See Tannenwald, Nina (2007). *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945. Cambridge Studies in International Relations*, No. 87. New York: Cambridge University Press.

<sup>44</sup> See "Yadernoye oruzhie posle 'kholodnoi voiny'" (A. G. Arbatov and V. Z. Dvorkin, "Nuclear Weapons after the Cold War"), Moscow: ROSSPEN, 2006, 34.

<sup>45</sup> Strategic Defense Initiative (SDI).

concepts of limited nuclear war and multiple perspectives on controlled nuclear conflict contributed to the post-nuclear revolution in military art.

Joined the proliferation of nuclear security must solve an issue in the agenda of international politics,<sup>46</sup> the relationship between nuclear and terrorist intentions with consequences difficult to predict in the future. Attention to define nuclear installations to be protected<sup>47</sup> and the need to regulate the system of criminal breach of this agreement<sup>48</sup> signifies the seriousness of the situation.

### **REGIONAL NUCLEAR SECURITY RELATIONSHIP WITH RUSSIA-US BALANCE**

In terms of regional security, the status of nuclear power by a state reconfigures regional and global relations of power; status of nuclear power itself, minimizing uncertainty - France and Japan distrustful of protection US - offset imbalance conventional balance.

Having the status of nuclear power in Iran<sup>49</sup> exchange ratios in the south-west Asia from nuclear pentagon - China, India,<sup>50</sup> Pakistan, Russia and Israel - to the hexagon, heptagon possible - entering Saudi Arabia supported by Pakistan in the system - which will interact with the nuclear balance Russia-US. In East Asia, the status of nuclear power by the North Korean nuclear complex will generate a polygon, without excluding the entry of Japan into the nuclear spiral.

Regional nuclear security relationship balance Russia-US required that states should detect the pentagon, hexagon, etc., inside and balance directly in a process of transition from a structure to another.

Russia-US nuclear balance in terms of nuclear security is higher than in the past, though there are still dangerous aspects - US withdrawal from ABMT (2002), development of an American missile defense combat power to annihilate Russia, if not a huge expense for a higher level of invulnerability. USA permanently maintained efficiency and upgrade strategic nuclear forces, improved by pre-emptive strikes against potential nuclear forces of other states and ensuring supremacy for major international crisis.

Given that China, France, Great Britain, India continued their efforts to modernize their nuclear forces and means for future commitments related to limiting and reducing nuclear arsenals could be achieved by joining the US-Soviet INF agreement.<sup>51</sup> Adhering to the principle of not using nuclear power nuclear weapons and the principle non-threatening to use nuclear weapons against NNWS or against nuclear weapons free zones.

Missile warning system - MWS<sup>52</sup> have got only the USA and Russia, possibly in the distant future and China, while France and Britain (developing only naval component) gave

<sup>46</sup> The 2005 International Convention for the Suppression of Acts of Nuclear Terrorism.

<sup>47</sup> See pp. 1-2 of Article 1, The 2005 International Convention for the Suppression of Acts of Nuclear Terrorism.

<sup>48</sup> See pp. 1a, b of Article 2, The 2005 International Convention for the Suppression of Acts of Nuclear Terrorism.

<sup>49</sup> Iran has been treated harshly and deprived of access to international nuclear markets though it is an original member of the NPT, though its nuclear facilities have been heavily inspected, though it allowed implementation of the Additional Protocol for several years, though it has never been (in the eyes of many observers) proven to have nuclear weapons or even a weapons program. See Martha Williams, „On the Importance of MC&A to Nuclear Security”, *CISSM Working Paper*, February 2014, 13.

<sup>50</sup> How is it that India, outside the regime, uninspected, and unambiguously in possession of nuclear weapons, is treated better than Iran, inside the regime and heavily inspected? How is it that nuclear-armed non-member India gains access to benefits of membership that are meant for members in good standing? See Martha Williams, „On the Importance of MC&A to Nuclear Security”, *CISSM Working Paper*, February 2014, 13.

<sup>51</sup> The U.S.-Soviet Intermediate-Range Nuclear Forces Treaty (INF).

<sup>52</sup> missile warning system (MWS).

up such a system. It is estimated that China will have the option to develop nuclear offensive strategic forces than the establishment of a missile defense system (BMD). India is backing US civil nuclear field, even if it violates its own principles of non-proliferation.<sup>53</sup>

An important dimension of safety is the work of submarine forces, particularly anti-submarines and collision strategic submarines<sup>54</sup> on patrol could be climbing a major security incident light to nuclear conflict. Although there are certain regulations regarding collisions between ships and between planes,<sup>55</sup> there are no provisions to prevent collision submarines, but only in situations of exercises that can be seen on the other side, although there are enough regulations in international practice for such situations.<sup>56</sup>

Russia has reduced the number of strategic missile submarines and patrol the area proposed to limit strategic missile submarines on patrol while fighting anti-submarine activities in these areas through a US-Russian agreement containing procedures for verifying the compliance with its provisions.

The international treaties on non-proliferation focus on the limitation and reduction, focusing on qualitative developments significant nuclear arsenal especially precision strikes. In negotiating the NPT, has accepted the existence of American nuclear weapons on their territory and expanding NATO "nuclear umbrella" essence of coalition strategies of which the United States and NATO Strategic Concept have no justification.<sup>57</sup> It speaks more than double standard NPT - powers and its allies can benefit from nuclear weapons and others can not.

Detection of nuclear safety trend is uncertain because of reductions<sup>58</sup> negotiated by the United States and Russia will not be changed at least for medium term, even if there is a proposal to reduce by one third the strategic nuclear forces, negotiations have not started. NATO invoked as obstacles intention to conduct missile defense systems and strategic and tactical technologies for placing nuclear weapons in space and satellites threat. Regarding the reduction of tactical nuclear weapons<sup>59</sup> (TNWs) Condition of American TNWs in Europe withdrawal.

A new level of nuclear reductions under New START, might establish around 500 deployed strategic delivery vehicles<sup>60</sup> and 1,000 nuclear warheads deployed missile

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<sup>53</sup> See "Armaments, Disarmament and International Security," *SIPRI Yearbook 2007*.

<sup>54</sup> Two missile-carrying nuclear submarines—French (Triomphant-class) and British (Vanguard-class)—collided in the Atlantic on 3 February 2009. See Andrei Kokoshin, *Ensuring Strategic Stability in the Past and Present: Theoretical and Applied Questions*, Belfer Center for Science and International Affairs, Harvard Kennedy School 2011, 55.

<sup>55</sup> The U.S.-Soviet Incidents at Sea Agreement (signed on 25 May 1972, was modified and amended in 1979 and 1986 by mutual agreement of the parties). Available at:

<http://www.armscontrol.ru/start/Rus/docs/incsea.htm>

<sup>56</sup> The U.S.-Soviet Incidents at Sea Agreement prohibits the simulation of attacks against ships and aircraft, and obliges commanders of aircraft of the parties (Article 4) "to use the greatest caution and prudence in approaching aircraft and ships of the other Party operating on and over the high seas." The same wording would be very useful for commanders of submarines as well.

<sup>57</sup> Within NATO, for example, twenty-eight member states enjoy the security benefits provided by nuclear weapons—benefits that are denied all other NNWS members of the regime. But, In Article I of the NPT, the NWS pledge that they will not provide nuclear assistance of any sort "to any recipient whatsoever," whether "directly or indirectly." Similarly, in Article II, NNWS pledge not to receive any such assistance, including "control over such weapons ... directly or indirectly." See Martha Williams, "On the Importance of MC&A to Nuclear Security", *CISSM Working Paper*, February 2014, 19.

<sup>58</sup> See New START.

<sup>59</sup> tactical nuclear weapons (TNWs).

<sup>60</sup> deployed strategic delivery vehicles.

defenses<sup>61</sup> and increase confidence, TNWs, high-precision conventional weapons and weapons location in space.

The level of nuclear safety is dependent nuclear negotiations and remove fears of further strategic If the US wants the start as soon as possible while the conclusion of Russia postpones the New START (2021) although descended from two of the three limits of agreement, and that the life of American missile systems to the Russian is high and the high potential for improvement in deposit missiles against Russian possibilities. On the other hand, USA may postpone until 2018, at least to the limits imposed by the treaty, and not to the bottom.

Bilateral negotiation mechanism suggested Russia should look on technological developments impact and on nuclear security of both countries and the international community<sup>62</sup> may be further materialized through New START agreement in order to demonstrate efforts towards non-proliferation, and for a predictivitate mutual agreement.

The term tactical nuclear weapons - TNWs<sup>63</sup> can be defined by a joint US-Russian effort as the foundation of systems analysis, control and procedures to be negotiated, followed by clarification of the NATO nuclear policy on such weapons. Legislation for the TNWs regime - as non-strategic weapons remain in storage - can be done through bilateral agreements or as part of broader treaties to include strategic weapons system, carried or stored in warehouses. Without the establishment of non-intrusive checking procedures will not check on weapons in warehouses. A possible development could be setting an overall limit for all nuclear warheads, deployed and in storage, supplemented by a limit of the deposits, and the strategic and tactical compensation systems eliminate any limits to vehicles.

Both nuclear doctrine of the United States and Russia's nuclear strike option are silent, but development of nuclear safety issues through deterrence of any attack; changing doctrines, following negotiations to understand each other's intentions make consequential structural changes (alert nuclear preemptive strike, declarations of intent, mutual declarations, political mutual fighting alert, multilateralisation dialogue, non-use of nuclear weapons in response to a non-nuclear attack).

Balancing TNWs USA (500) - Russia (2000) and not having verification measures<sup>64</sup> in view of Americans need to be balanced, while Russians favor a consolidation of the balance with other relationships in the field - withdrawal TNWs in Europe and the dissolution of adjacent infrastructure, including upgrading of the withdraw of B-61 bombers - divisions within NATO to preserve or revocation.<sup>65</sup> In addition, it is unlikely that such negotiation TNWs regime may begin before negotiations continue New START.

Monitoring the space<sup>66</sup> between Norway and Russia, Poland, Russia, Turkey and Russia by two coordination centers - in Warsaw and Moscow - may also include operation BMD, promoting transparency, a NATO-Russia Center for the supervision and monitoring of missile threats or objects space, an initiative of NATO-Russia space cooperation.<sup>67</sup>

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<sup>61</sup> deployed strategic warheads.

<sup>62</sup> Establishing a transparent verification regime under New START, a consultative mechanism for bilateral discussions with the present - the New START Bilateral Consultative Commission and the "Working Group on Arms Control and International Security at the US-Russia Bilateral Presidential Commission" – having China, France and Britain in a mechanism similar to US-Russia bilateral consultative mechanism.

<sup>63</sup> tactical nuclear weapon.

<sup>64</sup> See *The Presidential Nuclear Initiatives* (PNIs -1991 and 1992), which led to independent but reciprocal steps, resulting in the dismantlement or withdrawal of thousands of TNWs from forward or surface naval deployment to non-deployed status in centralized storage facilities.

<sup>65</sup> See *NATO's Deterrence and Defense Posture Review*.

<sup>66</sup> See NATO-Russia Cooperative Airspace Initiative (CAI).

<sup>67</sup> See The NATO-Russia Cooperative Airspace Initiative.

## CONCLUSIONS

In the medium and long term, the United States and Russia are expected to kick prompt global software development with suitable precision<sup>68</sup> conventional weapons arms control procedures and favorable reductions of nuclear weapons in the future. Such weapons with "non-prompt" weapons could be the subject of measures to increase mutual trust binding and China.

Concerns regarding their threats: missiles carried on submarines American cruise missiles<sup>69</sup> increasing capabilities of Russia.

Measures to increase confidence in the conventional strategic weapons: informing Russia about nuclear strategic movement of all vehicles, not only B-1B bomber; annual declaration of the maximum number of conventional and nuclear missiles deployed on different classes of ships and submarines.<sup>70</sup>

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<sup>68</sup> See The Conventional Prompt Global Strike (CPGS) program.

<sup>69</sup> Tomahawk sea-launched cruise missile (SLCM).

<sup>70</sup> See *First Report of the Deep Cuts Commission, Preparing for Deep Cuts: Options for Enhancing Euro-Atlantic and International Security*, April 2014, 24.

**ACRONIME**

ABMT	Anti-Ballistic Missile Treaty	Tratatul privind Rachetele Anti-Balistice
DV	Delivery Vehicles	Vectorii de transport
GZ	Global Zero	Conceptul Nuclear Zero
HB	Heavy Bomber	Bombardier greu
IRBM	Intermediate-Range Ballistic Missile	Rachete cu rază medie de acțiune
ICBM	Intercontinental Ballistic Missile	Rachetă Balistică Intercontinentală
INF	Intermediate-Range Nuclear Forces Treaty	Tratatul privind Forțele Nucleare de Rază Medie
MAD	Mutual Assured Destruction	Distrugerea Reciprocă Asigurată
MRBM	Medium Range Ballistic Missiles	Rachete cu rază medie de acțiune
MIRVs	Multiple Independently Targetable Reentry Vehicles	Rachete Purtătoare de Multiple Focoase Nucleare Independente
NSNW	Non Strategic Nuclear Weapon	Armamentul nuclear non-strategic
SALT I	Arms Limitation Talks	Discuțiile privind Limitarea Armamentelor
SLBM	Submarine Launched Ballistic Missiles	Rachete balistice lansate de submarine
SORT	Strategic Offensive Reductions Treaty	Tratatul de Reducere a Capabilitățile Ofensive
START I	Strategic Arms Reduction Treaty	Tratatul de Reducere a Armelor Strategice
New START	The New Strategic Arms Reduction Treaty	Noul Tratat de Reducere a Armelor Strategice

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