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New nuclear race after 75 years
of atomic age

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Abstract:

In 75 years of atomic age the world has experienced times of fear and rapprochement regarding the use of nuclear weapons. At the beginning of the twenty-first century's second decade, a trend towards the use of nuclear weapons in crisis resolution seems to be emerging again. If this were to happen, the current nuclear non-proliferation regime could change dramatically, especially concerning international treaties which have led to these weapons reduction and prevented their proliferation. In the dispute over global leadership, the new nuclear postures of the US, Russia and possibly China, stand out. How these states act will largely determine the nuclear future in the new global order.

Keywords:

Nuclear, proliferation, treaties, US, China, Russia.

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La nueva carrera nuclear tras 75 años de era atómica

Resumen:

En los 75 años de era atómica, el mundo ha vivido épocas de temor y de distensión respecto al empleo de las armas nucleares. Al comienzo del segundo decenio del siglo XXI parece que está de nuevo surgiendo una tendencia al empleo de este tipo de armas para la resolución de las crisis. Si esto fuese así, el actual régimen de no proliferación nuclear podría cambiar drásticamente, especialmente en lo que se refiere a los tratados internacionales que consiguieron la reducción de estos armamentos y evitaron su proliferación. En la disputa por el liderazgo mundial destacan las nuevas posturas nucleares de EE. UU., Rusia y posiblemente China. Del modo en que actúen estos Estados dependerá, en gran medida, el futuro nuclear en el nuevo orden global.

Palabras clave:

Nuclear, proliferación, tratados, EE. UU, China, Rusia.

Introduction

The birth of the atomic age has recently been gaining attention, 75 years after the use of nuclear weapons on the cities of Hiroshima and Nagasaki. During this period of time many events related to nuclear proliferation have taken place, leading the world to positions of maximum tension, and it seemed that with the disappearance of the large blocs the situation had begun to reduce and move towards non-proliferation.

However, the revisionist positions in the new multipolar order have caused the atomic powers to examine their nuclear strategies in order to maintain their status or to improve their respective positions. That is why nuclear weapons modernization programs have shown that, in this race for power, deterrence is taking precedence over arms control. This could bring with it the risk of nuclear proliferation and a possible return to scenarios in which humanity faced the dangers of such a confrontation.

This document will study the cases of the USA. The United States, Russia and China as global powers that seek to maintain their status, occupy their rightful place or aspire towards leadership, respectively. These geopolitical trends are reflected in different strategies, including nuclear ones.

In order to achieve their supposed objectives, these states are designing new types of nuclear weapons, the development of which may come into conflict with the provisions of treaties related to arms reduction and nuclear non-proliferation. This is why it is possible that in the not-too-distant future many of these agreements, whose consensus was the result of great efforts, will go through critical times and even circumstances will arise that will lead to them being modified or disappearing.

The geopolitical context in the new nuclear order

The geopolitical situation of the post-pandemic future brings with it the prospect of a widening gap between the USA and China, to which we must add Russia's position as a major power, in terms of the struggle between the major players with nuclear capabilities.

In addition to this conflict of interests over world leadership, the regional nuclear powers are predisposed to occupy a space of greater power in their sphere of influence and other states with nuclear capabilities fear that their rivals may jeopardise their vital interests. In this context we can understand the reactions of certain actors on the Asian continent such as India, Pakistan or North Korea and the consequences that the surrounding countries may have in order to guarantee their security.

Similarly, the European states with nuclear capabilities and their partners are awaiting developments in an environment in which transatlantic relations are not experiencing their best moments, while Russia is returning to its natural geopolitical trend of expansion towards its southwest axis. Bearing in mind that the Russian arsenal of sub-strategic weapons stood at around 1850 units, it does not seem that its trend is purely dissuasive¹.

Besides the nuclearised global and regional players, different countries may feel the need to achieve military nuclear capability, either to back up their geopolitical predisposition to leadership in their respective regions or, conversely, to question the expansionist trend of powers seeking to extend their space of influence. In this respect the situation in the Greater Middle East is particularly worrying, where rivalry between Iranians and Saudis extends to the whole region where Israel is an undeclared nuclear power.

The direction in which the evolutionary phenomenon of globalisation is pointing, in a multipolar context, could be described as a clear offensive realism. This trend, in which Professor John Mearsheimer should be highlighted, fully coincides with a new order in which the emerging actors propose a revisionist position and do not simply submit to the established system, seeking a new position in the hierarchy of powers². However, in order to take up a position of leadership, sufficient nuclear credibility is needed to support other hegemonic aspirations such as commercial, economic, territorial or ideological ones.

¹ Advisory Council on International Affairs, *Nuclear weapons in a new geopolitical reality. an urgent need for new arms control initiatives*, No. 109, January 2019, The Netherlands, pg. 5.

² MEARSHEIMER, John J. ALTERMAN Glenn. *The tragedy of great power politics*. WW Norton & Company, 2001, pgs. 53-57.

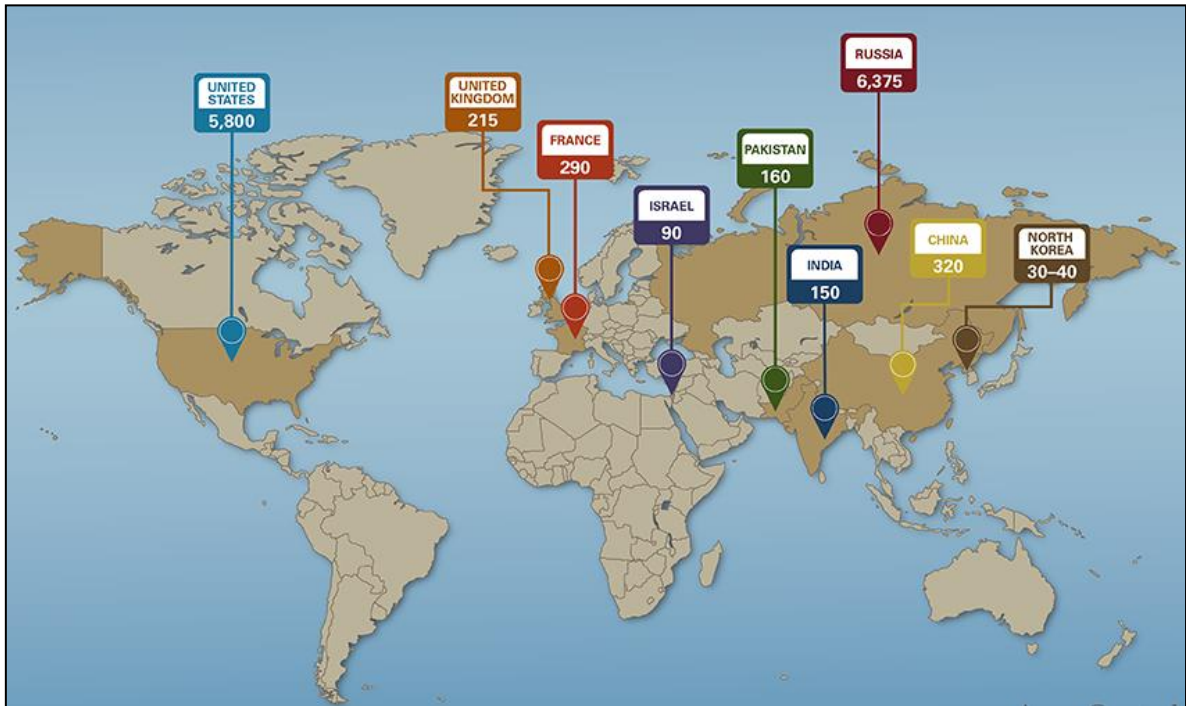


Figure 1. Estimation of the global inventory of nuclear warheads. Source. Arms Control Association. "Nuclear Weapons: Who Has What at a Glance". August 2020. Available at: <https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat> (accessed 21/08/2020).

The strategic nuclear culture of the big players

Focusing the content of this document on the three major global nuclear players, it will then address how the US, Russia and China can use the possession of nuclear weapons as a support for their global strategies and defense of their vital interests. Although the US was the state that began to make its nuclear orientation public with the Nuclear Posture Review (NPR) in 2018, it is no less true that Russia also made its own nuclear strategy public at the beginning of 2020. China's lack of transparency in this respect does not mean that it has not shown an interest in this type of armaments to back up its global expansion trend, beginning with the region closest to its coasts.

The US and NPR 2018: Promises Kept

After President Trump's arrival at the White House, his attitude changed radically from his predecessor, Barack Obama. The Trump Administration contemplated competition among global players by clearly highlighting the rivalry posed by the Russians, Chinese, Iranians and North Koreans. Therefore, when the new NPR was published in 2018, these States were identified as threats³.

These perceived threats were not only considered in the nuclear field, but emphasis was placed on other types of attacks, such as cyber attacks, which could cause as much and even greater damage than atomic weapons. Therefore, the use of nuclear weapons is opening up as a broad range of possibilities and graduated responses, leading the NPR to consider the need for a thorough review, updating and even modernization of the capabilities of US atomic weapons⁴.

America's nuclear concern was centred on Russia, as the Russians had committed acts that disrupted the international order on its immediate periphery, most notably the case of the Crimea. The Americans considered that Russia had focused its nuclear strategy on the concept "escalate to de-escalate", where tension in a crisis could be increased by the potential use of nuclear weapons, and then seek détente from a position of strength and favourable negotiations⁵.

The Americans regarded China as the new great challenge, as it sought to displace American power not only in the nuclear field but also in space and cyberspace. One significant development was the construction of a barrier of artificial islands in the China Sea which, in view of the threat posed by these islands, would force America's naval aviation potential to retreat. That is why the US should be prepared to respond to a nuclear or conventional attack by China against its interests or those of its allies⁶.

³ Office of the Secretary of Defense, *Nuclear Posture Review, February 2018*, pg. I. Available at: <https://dod.defense.gov/News/SpecialReports/2018NuclearPostureReview.aspx> (accessed 12/08/2020).

⁴ Op. cit. pgs. 41-50.

⁵ GÓMEZ CASAL Marcos, *Review of the US Nuclear Posture of 2018: A Turning Point in the History of the Nuclear Weapon*, IEEE Opinion Paper 45/2018. pgs. 11-12. Available at: http://www.ieeee.es/Galerias/fichero/docs_opinion/2018/DIEEEO45-2018 Postura Nuclear EEUU 2018 GomezCasal.pdf (accessed 12/08/2020)

⁶ Ibid.

The consequences of the NPR 2018 have begun to be felt in the field of nuclear weapons, as the Trump Administration has placed special emphasis on modernizing and bringing into service new types of such weapons. In this sense, new capabilities have been added to Obama's modernization plan, including equipping existing nuclear ballistic missile (NBM) submarines with weapons from different powers and fully incorporating this graduated response capability into the next generation of submarines⁷.

Trump's plans became a reality when, in 2020, the USS Tennessee (SSBN-734) set sail carrying missiles with W76-2 warheads. According to John Rood, US under secretary for the defense policy, this capability "strengthens deterrence and provides the United States with a quicker, more survivable, low-yield strategic weapon; supports our commitment to extended deterrence; and demonstrates to potential adversaries that there is no advantage in limited nuclear use because the United States can respond credibly and decisively to any threat scenario". However, this transitional solution carries risks because, as the launch vehicle is a Trident missile, its detection would not be able to distinguish whether it is carrying a large or small nuclear weapon and could lead to decisions based on erroneous assumptions⁸.

In the strategic-military field, the White House's intentions have been reflected in the updating of its operations plan (OPLAN) 8010/12 *Strategic Deterrence and Force Employment*, including flexible intervention options against Russia, China, North Korea and Iran. The plan was verified in 2019 through several exercises, including the Strategic Communication (STRATCOM) *Global Lightning* exercise, which supported the US command in Europe (USEUCOM). During the exercise, which included other derivatives, UK-based B-52 bombers were deployed and assigned missions over the Baltic and off the coast of Norway⁹.

⁷ Arms Control Association, US Nuclear Modernization Programs. Available at: <https://www.armscontrol.org/factsheets/USNuclearModernization> (accessed 14/08/2020)

⁸ MEHTA Aaron, "Trump's new nuclear weapon has been deployed", *Defense News*. Available at: <https://www.defensenews.com/smr/nuclear-arsenal/2020/02/04/trumps-new-nuclear-weapon-has-been-deployed/> (accessed 14/08/2020).

⁹ KRISTENSEN Hans M.; KORDA Matt, United States nuclear forces, 2020, *Bulletin of the Atomic Scientists*, 76:1, pgs. 46-60.

In the future, there is a possibility that new weapons from different powers will need to be tested. The US has not conducted a nuclear test since 1992 and is a party to the Comprehensive Nuclear-Test-Ban Treaty (CTBT), although the treaty has not been ratified by the US Senate. Bearing in mind that the Americans are accusing the Russians and Chinese of having carried out nuclear tests, this possibility is raised with firm consistency. Meanwhile, Department of Energy sources claim to have “a requirement to retain the ability to resume testing within certain timeframes. It is always prudent to review these deadlines in order to be aware of the position of preparation”¹⁰.

The recovery of Russia’s nuclear capabilities

Many of Russia’s foreign policy lines have been developed in accordance with the theory of neo-Eurasianism, on which the geopolitician Alexander Dugin analysed Russian relations through the western, southern and eastern extension axes. For this reason Russia must seek to communicate with Germany, Iran and Japan, leaving aside the Chinese and Turks in the long term because they oppose these axes (this has yet to be established). For Dugin, the Eurasia project depends on the nuclear balance between Russia and the “Atlanticism” represented by NATO. The existence of this balance would increase Russia's attractiveness to other states, while providing a crisis-resolution capability in the face of threats from the US and its NATO partners¹¹.

Since 2014, Russia has shown a controversial position in the international arena. This has been helped by its cultural perception of a “single civilization” that can be shown to be an alternative to the multipolar order. Because of this, there is a tendency to carry out actions that force the Western world to readjust its traditional relations¹².

¹⁰ MARCUS WEISGERBER, “If Given OK, US Could Conduct a Nuclear Test in a Matter of Months, Pentagon Official Says”. *Defense One*. Available at: <https://www.defenseone.com/threats/2020/05/if-given-ok-us-could-conduct-nuclear-test-matter-months-pentagon-official-says/165662/>(accessed 14/08/2020)

¹¹ KALININ, Kirill. Neo-Eurasianism and the Russian elite: the irrelevance of Aleksandr Dugin’s geopolitics. *Post-Soviet Affairs*, 2019, vol. 35, no. 5-6, pgs. 462-464.

¹² Op. cit. pg. 461.

However, it should be noted that Russia's attitude has been awakened by a series of events that have made it feel threatened by Euro-Atlantic expansion since Poland, Hungary and the Czech Republic joined NATO. Thus, the sequence of Kosovo's independence in 1999, the incorporation of the Baltic Republics into the Alliance in 2004 and the approaches to Georgia in 2008 and Ukraine in 2014, made the Russians feel forced to intervene to protect their immediate periphery¹³.

The Russian nuclear doctrine has been adapting to the requirements of the new times. Seeing themselves as inferior to their Western rivals in terms of conventional weapons, the Russians opted for the possibility of nuclear deterrence in the face of a nuclear or conventional attack. In this sense, the Russian military doctrines of the years 2000, 2010 and 2015 can be understood¹⁴.

In 2020, Russia enacted for the first time a specific nuclear doctrine at a time when it had renewed a significant part of its nuclear arsenal. The Presidential Order "*Basic principles of Russian State policy on nuclear deterrence*" addressed the political decision on the use of nuclear weapons and the circumstances of their possible use or threat¹⁵.

The Russians appear to be continuing their defensive stance to protect themselves and their allies from Western expansionism. However, the possibilities of using this type of weapon have increased compared to previous military doctrines.

Traditional employment scenarios used to contemplate reacting to the use of nuclear or other types of weapons of mass destruction against Russia or its allies. The possibility

¹³ PARDO DE SANTAYANA GÓMEZ DE OLEA José María, *History, identity and strategy in the Russian Federation*, IEEE Analysis Paper 16/2017. Available at: http://www.ieee.es/Galerias/fichero/docs_analisis/2017/DIEEEA16-2017_Federacion_Rusa_JMPSGO.pdf(accessed 15/08/2020).

¹⁴ SINOVETS, Polina A.; RENZ, Bettina. Russia's 2014 Military Doctrine and beyond: threat perceptions, capabilities and ambitions. Research Paper. *NATO Defense College*. Rome, No. 117, July 2016. For a detailed study of the evolution of Russia's military doctrine according to international circumstances, we suggest reading: PARDO DE SANTAYANA, José. *The disagreement with Russia and the keys to its military strategy*. IEEE Analysis Paper 22/2020. Available at: http://www.ieee.es/Galerias/fichero/docs_analisis/2020/DIEEEA22_2020JOSPAR_Rusiamilitar.pdf (accessed 16/08/2020).

¹⁵ The Ministry of Foreign Affairs of the Russian Federation, *Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence*, 8 June 2020. Available at: https://www.mid.ru/en/web/quest/foreign_policy/international_safety/disarmament/-/asset_publisher/rp0fiUBmANaH/content/id/4152094(accessed 16/08/2020).

of reacting to a conventional attack on the Russian Federation or in the event of the state's existence being threatened was also included¹⁶.

Two other new scenarios have been added to the above circumstances. The first concerns the arrival of data indicating that a ballistic missile launch has taken place against Russia or its allies (a concept known as “launch on warning”). The second envisages an attack against a deployed Russian state or military means that would endanger the response capability of Russian nuclear forces¹⁷.

Furthermore, when reading the document, the concept of “escalate to de-escalate” can be seen, as point four of the General Provisions refers to the fact that the end of a conflict should be carried out in a manner favourable to Russia or its allies. However, it is so diffuse that this reading lends itself to multiple interpretations or ambiguities, which can lead to misperceptions in the event of a crisis.

In this environment of rivalry Russia began an in-depth review and update of its nuclear weapons from 2011, suffering several delays due to the economic recession the country was experiencing. However, the program continued, with the premise of countering NATO's missile shield in Europe. Starting in 2018, President Putin revived the momentum by announcing a series of new projects, including a new hypersonic missile called the Avangard and a remotely manned underwater vehicle that could cause radioactive contamination of the coast on which it operates¹⁸.

Subsequently, there was news of a missile test in the region of Arkangel which, in 2019, caused a radioactive accident and the announcement, in 2020, of the testing of a sea drone which, under the name of Poseidon, would have the potential to travel tens of thousands of kilometres carrying a high-powered nuclear warhead¹⁹.

¹⁶ BUGOS, Shannon, “Russia Releases Nuclear Deterrence Policy”, *Arms Control Association*. Available at: <https://www.armscontrol.org/act/2020-07/news/russia-releases-nuclear-deterrence-policy> (accessed 16/08/2020).

¹⁷ Ibid.

¹⁸ Nuclear Threat Initiative, Russia Nuclear. Available at: <https://www.nti.org/learn/countries/russia/nuclear/> (accessed 15/08/2020).

¹⁹ SUTTON H I, “Russia's New Super Weapons May Be Cause of Radiation Leak”, *Forbes*, 1 July 2020. Available at: <https://www.forbes.com/sites/hisutton/2020/07/01/russias-new-super-weapons-may-be-cause-of-radiation-leak/> (accessed 16/08/2020).

The rise of China's nuclear capacity

The geopolitical conception of China has changed radically from the traditional positions of Confucian-Mencian narrative that, until the death of Mao, prevailed in the country. The beginning of industrialisation after the covert occupation of power by Deng Xiaoping in 1978 and its strong acceleration with Xi Jinping marked a break in the trend based on the industrial potential, the pressure to obtain raw materials and the need to protect its communication routes. Many of these events have reflected the “great Chinese dream” of Colonel Liu MingFu²⁰.

Mao's consideration for the nuclear weapons he called “paper tigers” meant that China's nuclear power was not on a par with Americans and Soviets, as although the sacrifice their use would entail would be very important, they would not be decisive for victory in the event of war. Therefore, although not clearly revealing its intentions, China's nuclear strategy seemed to be based on sufficient defense to provide effective deterrence, relying more on the enormous capabilities of the People's Liberation Army (PLA)²¹.

China's nuclear strategy became clear when its *Defense White Paper* was published in 2006, promulgating a “nuclear strategy of self-defense” to deter a nuclear attack against China and to avoid coercing other states by the nuclear threat. Therefore, the Chinese maintained their “no first use” (NFU) policy, declaring not to use their nuclear weapons against non-nuclear states. Meanwhile, against the nuclearised states, China would maintain the deterrence capability based on “assured retaliation”, whereby the PLA would store the warheads separately from the missiles (especially protected after the First Gulf War), assembling the weapon for retaliatory action. This caused the alert level of Chinese nuclear forces to be low, unlike that of the US and Russia²².

²⁰ MINGFU, Liu; RHODE, Grant. The China Dream: Great Power Thinking & Strategic Posture in the Post-American Era. *Naval War College Review*, 2016, vol. 69, no 2, pg. 20.

²¹ WHYTE, Christopher, Nuclear Ambitions in Asia: The Paper Tiger Revisited, *E-International Relations*, pgs. 1-3. Available at: <https://www.e-ir.info/2011/05/28/nuclear-ambitions-in-asia-the-paper-tiger-revisited/>(accessed 16/08/2020).

²² Center for Strategic and International Studies, “How is China modernizing its nuclear forces?”, *China Power*. Available at: <https://chinapower.csis.org/china-nuclear-weapons/>(accessed 16/08/2020)

Due to the aforementioned causes, China currently has some 300 nuclear weapons, mainly based on land missiles, in addition to some submarine capabilities and very limited air capabilities. Therefore, it has not yet been considered to have the status of a Nuclear Triad, which is approaching at a dizzying speed²³. It should be noted that in 2015 the Chinese SSBN program became effective with the entry into service of the Julang-2 missiles on at least four Jin-class submarines owned by the PLA navy²⁴. In addition, the PLA air force has been reassigned to nuclear missions, probably with some kind of bomber still being tested. In addition to this, a new generation of mobile re-entry missiles (MIRVs) has been developed²⁵.

Several Chinese military schools of thought advocate the evolution of the nuclear posture towards the possibility of *launch on warning*, thus increasing deterrence capacity by improving the systems of preparation, surveillance and decision-making process, thanks to sophisticated command and control systems (based on quantum technology and therefore non-interferable). These capabilities would be augmented by satellite-based early warning systems and protected by ballistic missile shields²⁶.

At present, China could linearly increase the number of nuclear weapons it possesses, although this would be sufficient to address the strategic vulnerabilities of a globally expanding actor. The country's 14 tonnes of highly enriched uranium (HEU) and 2.9 tonnes of plutonium would enable it to produce several hundred weapons²⁷.

If this were to happen it is possible that in the relatively near future China's nuclear posture could change from the NFU to a *launch on warning* of an imminent nuclear attack. Improving their surface and submarine missiles and finding a missile launched from an airborne platform would provide the Chinese with a nuclear triad effective

²³ PICKRELL, Ryan, "With this new missile, China could join the ranks of the world's most dangerous nuclear arsenals" *Business Insider*, 7 May 2019. Available at: <https://www.businessinsider.com/china-is-moving-closer-to-having-a-nuclear-triad-pentagon-warns-2019-5?IR=T> (accessed 16/08/2020).

²⁴ Center for Strategic and International Studies, "How is China modernizing its nuclear forces?", Op. Cit.

²⁵ TIANLIANG, Xiao, ed., *The Science of Military Strategy [战略学]*, NDU Press, Beijing, 2015. pgs. 364-369.

²⁶ Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win*, 2019. pg. 37.

²⁷ The International Panel on Fissile Materials, *Countries: China*, 18 May 2020. Available at: <http://fissilematerials.org/countries/china.html> (accessed 17/08/2020).

enough for this change²⁸. However, China's 2019 *Defense White Paper* continues to state that "China is always committed to a nuclear policy of not using these weapons for the first time under any circumstances, and not using or threatening to use nuclear weapons against non-nuclear-weapon states or nuclear-weapon-free zones unconditionally"²⁹.

In addition to all this, there is the secrecy surrounding the actions related to the Chinese nuclear activity. These include the improvements they are developing to double their nuclear capability by 2030 and, in addition to the aforementioned modernisation of ballistic missiles, a new model of silo-based intercontinental missile is being developed as a type of "*first strike*" weapon. Such missiles could be equipped with hypersonic velocities and random trajectories, which would make missile defense very difficult³⁰.

Another issue is China's production of uranium and plutonium, which far exceeds the needs of its civil industry. If the planned enrichment and reprocessing plants were built, China could produce some 1,500 nuclear warheads a year, giving it parity with the Russians and Americans in 10 years³¹. In view of all these data, one might ask what China's real intentions are, as it already has the necessary capacity to act on US cities, in the event that retaliatory measures need to be taken.

The house of cards of the nuclear non-proliferation treaties

In a highly competitive environment, as described above, there is little room for the continuity of nuclear non-proliferation treaties, at least as they have been known to date. Furthermore, it should be borne in mind that these treaties come from a time when the

²⁸ Office of the Secretary of Defense, Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019, *Department of Defense*, 2019, pgs. 65-67.

²⁹ ERIKSON, ANDREW s., Full Text of 2019 Defense White Paper: "China's National Defense in the New Era" (English & Chinese Versions). Available at: <https://www.andrewerickson.com/2019/07/full-text-of-defense-white-paper-chinas-national-defense-in-the-new-era-english-chinese-versions/> (accessed 17/08/2020).

³⁰ MAZZA, Michael; SOKOLSKI, Henry, "China's Nuclear Arms Are a Riddle Wrapped in a Mystery", *Foreign Policy*, 13 March 2020. Available at: <https://foreignpolicy.com/2020/03/13/china-nuclear-arms-race-mystery/#:~:text=China%20is%20also%20operating%20a,500%20nuclear%20warheads%20a%20year.> (accessed 17/08/2020).

³¹ Ibid.

American and Soviet blocs were at odds with each other and that China's capacity as an expanding power had not been considered.

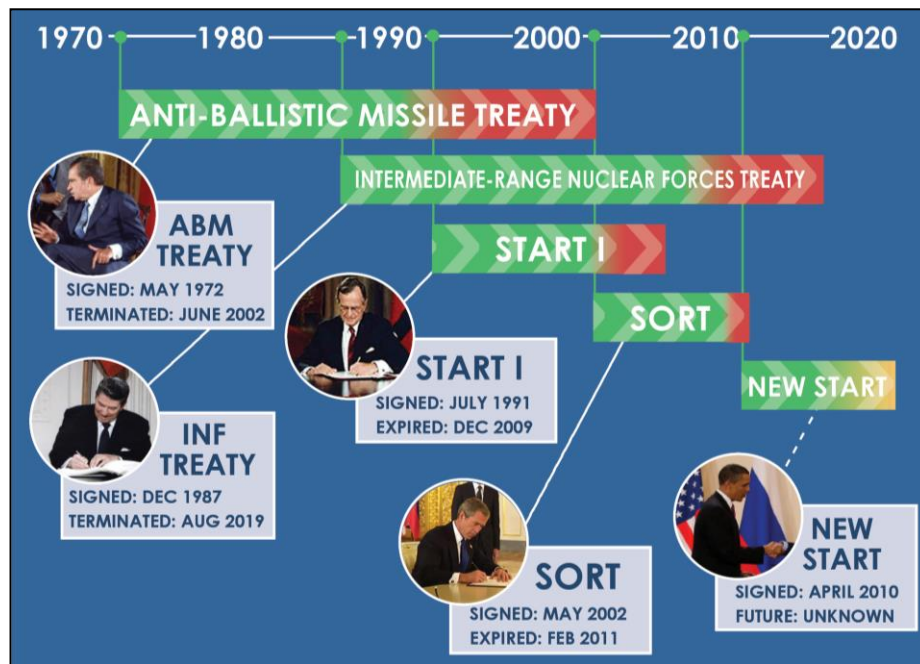


Figure 2. Major nuclear arms control treaties signed between the USSR/Russia and the US Source. "US-Russian arms control agreements". Center for Arms Control and Non-Proliferation. <https://armscontrolcenter.org/issues/russia/> (accessed 21/08/2020).

The first warning that things would not be as they were before came with the US withdrawal from the ABM treaty which had established, as a confidence-building measure between the two blocs, the removal of ballistic missile shields. The so-called September 11 attacks of 2001 caused the US to withdraw from the treaty in 2002, perhaps hastily, giving way to missile defenses that later sowed new mistrust among the rivals of the new global order.

The need to protect their immediate periphery made the Russians look for a solution against what they considered harassment from the West in the "escalate to de-escalate" strategy. To do so, they needed to equip themselves with new nuclear weapons that could provide a gradual response to a crisis. Russia's intentions included the INF or Intermediate Nuclear Forces Treaty, which envisaged the disappearance of all Russian and American land-based missiles with ranges of between 500 and 5,000 kilometres.

Although the Americans observed some anomalies on the Russian side around 2009, they let them pass, perhaps to avoid major problems for the renewal of the New START Treaty (discussed later) on strategic nuclear weapons the following year. Russian technological advances, based on the Kalibr and Iskander missiles, meant that from 2015 onwards tensions between the two began to increase significantly.

The Russians had their own vision of the treaty, which they considered that the US would be breaching, as remotely manned armed air vehicles, such as Predators, could be considered included. In addition, MK-41 anti-aircraft launchers were being installed in the Aegis Ashore anti-missile systems near the Russian borders. The Russians considered that this type of launcher could have a double use if it was adapted for the launch of the Tomahawk missile, so they considered that the Americans were not complying with the agreement³².

The INF Treaty eventually expired in 2019 while, on the other side of the world, China was beginning to develop different missile models, with dual capabilities and diversity of range.

The next agreement at risk is the New START Treaty which had been renewed in 2010 and will expire in February 2021. This document consists of setting a maximum ceiling for strategic nuclear weapons for both Russians and Americans. It basically limits both to no more than 1550 deployed nuclear warheads and 700 launch vehicles, both missiles and strategic bombers. These limits were reached in 2018 and are currently estimated to be met³³. Although the treaty has verification measures, they are not being carried out due to the pandemic.

³² Sputnik News, "The US missile test used an MK41 shuttle with a new configuration", 20.08.2019. Available at: <https://mundo.sputniknews.com/defensa/201908201088435175-prueba-de-misiles-de-eeuu/> (accessed 21/08/2020).

³³ US State Department, "New START Treaty Aggregate Numbers of Strategic Offensive Arms", 1 July 2020. Available at: <https://www.state.gov/new-start-treaty-aggregate-numbers-of-strategic-offensive-arms-14/> (accessed 21/08/2020).

In the summer of 2020, the talks were at an impasse due to, among other considerations, concerns about hypersonic weapons, missile shields or long-range, precision conventional weapons, although the US Senate does not want these last two points to be addressed in the talks³⁴.

In the event that it is not renewed, the agreement could be extended for five years by the Russian and American presidents. Putin has shown his willingness to extend the agreement, but the Trump Administration believes that the agreement is outdated and needs to be reviewed.

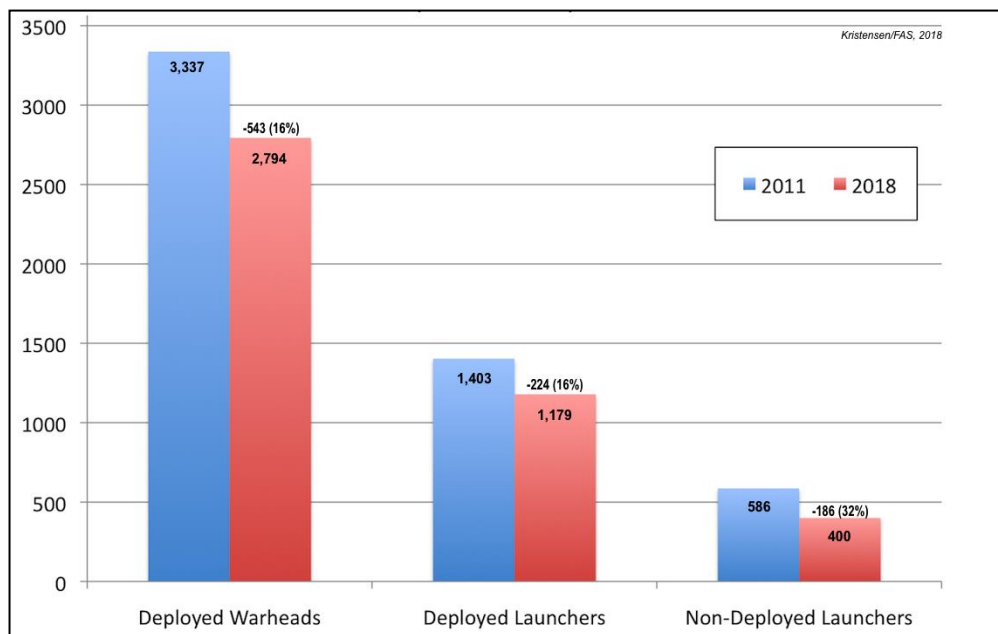


Figure 3. Evolution of US and Russian strategic nuclear forces between 2011 and 2018. Source. KRISTENSEN, Hans M., "After Seven Years of Implementation, New START Treaty Enters Into Effect". Federation of American Scientists. <https://fas.org/blogs/security/2018/02/newstart-ineffect/> (accessed 21/08/2020).

The Chinese nuclear issue is a major stumbling block for the talks. The US has invited China to join this reduction treaty in a trilateral agreement with important verification measures and covering all types of nuclear warheads. Despite the invitation, the Chinese have not joined the negotiations³⁵. For Fu Cong, the head of arms control at

³⁴ DE KLERK, Piet, "The end of New START: The start of a new beginning?", *Clingendael spectator* 11/7/2020. Available at: <https://spectator.clingendael.org/en/publication/end-new-start-start-new-beginning> (accessed 21/08/2020)

³⁵ REIF, Kingston; BUGOS, Shannon, "No Progress Toward Extending New START", *Arms Control Today*, July/August 2020. Available at: <https://www.armscontrol.org/act/2020-07/news/progress-toward-extending-new-start> (accessed 18/08/2020).

the Chinese Foreign Ministry, his country would be willing to join a trilateral agreement as long as the Americans were willing to reduce their nuclear arsenal to China's level. The Chinese perception is that the US is trying to divert attention as it seeks to abandon the New START Treaty for the sole purpose of circumventing all restrictions to gain military superiority over any adversary³⁶.

In this extremely delicate situation, the review of the Nuclear Non-Proliferation Treaty (NPT) was due in 2020, on a date as significant as its fiftieth anniversary and twenty-fifth of its indefinite extension. Its three fundamental pillars are that non-nuclear States should commit themselves not to accede to this type of weaponry; that nuclearized States should aim at disarmament; and that all of them should make peaceful use of nuclear energy under safeguards. The purpose of the reviews is to evaluate compliance with the provisions of the treaty and to provide a set of recommendations every five years³⁷.

Despite good intentions, no further progress has been made since the 2010 NPT Review Conference established an action plan. In addition, the last conference in 2015 was considered a failure because no official consensus document was issued. The conference scheduled for 2020 has been postponed owing to the pandemic and is expected to be held no later than February 2021, but in the situation in which the main global players find themselves, it seems difficult to achieve decisive results. In addition, the major trend of the non-aligned movement is to equate non-proliferation and disarmament obligations, the latter being understood as the elimination of nuclear weapons. This requirement on the one hand has led to the blocking of the other³⁸.

³⁶ TIAN, Yew Lun, "China challenges US to cut nuclear arsenal to matching level", *Reuters*, 11/7/2020. Available at: <https://www.reuters.com/article/us-china-usa-arms/china-challenges-u-s-to-cut-nuclear-arsenal-to-matching-level-idUSKBN2490C9> (accessed 19/08/2020).

³⁷ "Treaty on The Non-Proliferation Of Nuclear Weapons (NPT)", *Nuclear Threat Initiative*, Last Updated: 30 April 2020. Available at: <https://www.nti.org/learn/treaties-and-regimes/treaty-on-the-non-proliferation-of-nuclear-weapons/> (accessed 19/08/2020).

³⁸ DE CHAMPCHESEL, Tiphaine, "ThucyBlog n° 52 – Que peut-on attendre de la dixième conférence d'examen du TNP ?", Centre Thucydide, le 9 juillet 2020. Available at: <https://www.afri-ct.org/2020/thucyblog-n-52-que-peut-on-attendre-de-la-dixieme-conference-dexamen-du-tnp/> (accessed 19/08/2020).

Apart from the treaties currently under discussion, the question must be asked as to what will happen in the future if states feel the need to test the performance of new nuclear weapons for graduated responses. In this scenario the aforementioned CTBT could also be at risk.

Conclusions

This document has studied the nuclear strategy of the major players in the global panorama, taking into account their evolutionary process, thus providing an idea of their trends in the field of their respective nuclear strategies. It should be borne in mind that these strategies are no more than a reflection of the major general strategies, strongly influenced by the predisposition that these actors have in shaping the new global order.

It is clear that the US is willing to continue to maintain its status as a major power while securing its interests. Due to these causes, it does not intend to give in easily to the revisionist pressures of a rapidly rising China or to Russia disputing plots of power beyond the limits of overextension. That is why, in the nuclear field, the Americans need to equip themselves with capabilities that maintain the superiority they have always possessed, which obliges them to modernise their nuclear weapons and their command and control networks in order to always ensure the possibility of first use and assured retaliation.

The new global order has led Americans to perceive that there may be situations where they have to provide a proportionate response to the crises they may face. The use of a high-powered strategic nuclear weapon could be disproportionate, so its use would not be considered. To this end, different powers are equipping themselves with weapons to ensure nuclear credibility in crises that may arise in the near future.

This may involve two components in the new nuclear order: On the one hand, there is the possibility of an increase in US nuclear weapons, since their ceiling, limited by the current treaties, was designed for situations that have now been exceeded. On the other hand, there will be a greater risk of use as there are more scenarios in which nuclear weapons may be present, where the diversity of sub-strategic powers may allow their use without the qualms of using strategic weapons, the use of which would be restricted to survival situations.

Russia has shown that it is ready to take on the status it deserves in the new world order. After feeling harassed by the Western bloc, it perceives that its national territory and its immediate periphery are aspects on which it is not willing to give in, as it identifies them with its vital interests. To this end, it has modernized its nuclear potential, playing with mastery in the field of international negotiations, reaching the level of the United States in terms of strategic weapons deployed.

Similarly, the Russians perceive that without a credible nuclear capability they won't be able to protect themselves or maintain their global position. That is why they need to equip themselves with a variety of nuclear weapons of different powers and ranges that will enable them to escalate a crisis to the desired location, and then reduce the tension to points where they can resolve conflicts in situations favourable to their interests.

Russia cannot allow the Western bloc's anti-missile capabilities to make its new nuclear strategy irrelevant, so it must always seek to reduce this possibility through negotiations or by bringing into service new weapons that can circumvent the anti-missile shields. For this reason it is understandable that the Russians have made a strong commitment to weapons technology, including hypersonic and other types of weapons, ensuring responsiveness.

Meanwhile, the Chinese have shown themselves to be the great power that aspires to take the lead in the near future. Its traditional geopolitical focus has been to protect its territory by surrounding itself with a defensive glacis of contiguous states. The current circumstances force expansion and, in order to do so, they need to equip themselves with a nuclear force that is credible enough to force the Americans to give in the China Sea area.

The traditional nuclear stance of the Chinese, refusing the first use of nuclear weapons, could be overcome in a short period of time if they see that it does not suit their interests. For this reason, it is understandable that they have increased the production capacity of this type of armament, while at the same time achieving new launch vehicles suitable for other types of strategies that provide them with new options.

The modernization of its command and control network and the establishment of new types of surface missiles, with a much higher reaction capability than its old weaponry, give an idea of the possibilities open to China's nuclear strategy. In addition to this, there are new underwater capabilities and a clear commitment to credible air capabilities. The possession of the nuclear triad, together with China's production potential, could open up a range of possibilities that would put it on a par with the Americans and Russians.

In the new situation that is being perceived, Europeans are in an increasingly compromised position. Global and regional nuclear players are on a real upswing, while the threat is looming ever closer to Europe's territory. With only France's nuclear power within the Union, it is time to start rethinking the strengthening of alliances and the possibilities that anti-missile shields can offer in the face of new armaments.

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