

## *Towards a world without nuclear weapons*

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**Abstract:** The paper provides a description of the history of nuclear weapons from the nuclear deterrence during the Cold War to the current nine nuclear countries which are upgrading their arsenals. It underlines the treaties to prevent a nuclear catastrophe and to halt proliferation and the initiatives to eliminate nuclear weapons. The last initiative is done by a global campaign, the International Campaign to Abolish Nuclear Weapons, which faces the argument of deterrence, the military mind-set, the nuclear weapons industry and the political conflicts by prioritizing the humanitarian impact of these arms.

**Keywords:** nuclear weapons, denuclearization, deterrence, arms industry, nuclear terrorism

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### **The deadly nuclear weapons, Hiroshima and Nagasaki**

In the beginning of 1939, when Europe was moving toward II World War, both Germany and the United States (US) launched a nuclear race. In July 1945, when Nazis were already defeated in Europe, the American nuclear program was ready and the first nuclear device was tested in Alamogordo, New Mexico. In the beginning, it was planned to deter a German nuclear attack. However, the 6th and the 9th of August, 1945, the US army dropped the atomic bomb on Hiroshima and Nagasaki (Japan). The two cities were destroyed and between 150.000 and 246.000 innocent civilians were killed.

“Nagasaki became a city of death where not even the sound of insects could be heard”, depicted former Mayor of Nagasaki Iccho Itoh in the International Court of Justice in 1995, and he added: “Four months after the atomic bombing, 74.000 people were dead, and 75.000

had suffered injuries, that is, two-thirds of the city population had fallen victim to this calamity that came upon Nagasaki like a preview of the Apocalypse”.

The first nuclear bomb showed the horror these weapons can create and set the beginning of the Nuclear Age. In Krieger view (2007, p.107), this era “opened the door to the destruction of the entire human species by tools of its own invention”. “A major exchange of nuclear weapons would so totally destroy places and people and so contaminate the earth’s capacity to provide uncontaminated food and water as to leave the planet unsuited to support life”, describes Pilisuk (2007, pp.98–99).

### **Nuclear weapons during the Cold War**

The United Nations (UN) was created in 1945 to prevent another conflict and the first resolution of the UN General Assembly in 1946 set up the Atomic Energy Commission for “the elimination from national armaments of atomic weapons and all other major weapons adaptable to mass destruction”. In the same year, the US presented the Baruch Plan in front of the UN Atomic Energy Commission to destroy weapons of mass destruction and control nuclear power. In his speech, Bernard Baruch said: “We must elect world peace or world destruction”, but the distrust between the US and the Soviet Union (USSR) frustrated the plan, the Cold War began and on 29 August, 1949, USSR tested its first nuclear weapon.

Since the very first day of the existence of nuclear weapons, nuclear states have tried to get rid of them, but failed.

During the Cold War (1946-1991), the US and the USSR used nuclear weapons to deter attacks and wars, even nuclear war, pushing their conflict to mutual assured destruction. According to this security doctrine, any nuclear attack from one country to the other could have meant the same retaliation, an escalation of violence and the annihilation of both. There was not any nuclear attack, although the Cuba missile crisis, with soviet ballistic missiles pointing the US, almost finished with a humanitarian catastrophe.

The US and the USSR modernized and strengthen their nuclear arsenal in order to maintain the balance of power and developed weapons even more lethal than the atomic bomb, like thermonuclear weapons. The race run until 1986 when the inventories of nuclear weapons arrived to 69.368, its peak, which 68.317 belonged to the US (23.317) and the USSR

(45.000), the remainder belonged to United Kingdom (UK) (422) which became a nuclear state in 1952, France (355), a nuclear state since 1960, China (230), nuclearized in 1964 and Israel (44) which had its first nuclear weapon in 1967, as details Norris and Kristensen (2010).

### **Attempts of denuclearization during the Cold War**

Despite the importance of nuclear weapons in the Cold War, there were attempts to control and diminish their proliferation, even pursuing their elimination.

The most important one is the Nuclear Non-Proliferation Treaty (NPT) in 1970, with 190 state-parties, that forbids each signed state to transfer or receive nuclear weapons or assist on its creation; keeps the nuclear power of the countries under control by the International Atomic Energy Agency (IAEA) and its safeguards system and underlines the right to develop nuclear power for peaceful purposes and to share information. Disarmament is stated in Article VI that says: “Each of the Parties to the Treaty undertakes 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”. In the five-yearly review conference of 1995, all states agreed to complete nuclear disarmament.

Four nuclear countries, Israel, India, Pakistan and North Korea, which withdrew in 2003, are not signatories.

The NPT separates countries into two categories, the nuclear-weapon states (NWS) which are the ones that had nuclear devices before 1967 (the US, Russia, China, France and the UK) and are the permanent members of the United Nations Security Council, and the non-nuclear-weapon-states (NNWS). According to the treaty, NNWS agree to do not develop nuclear weapons and the NWS commit to eliminate all nuclear arms, but there is not included any data limit.

There were also bilateral deals between the US and the USSR to disarmament. The period known as *détente*, a relaxation of the tension between the two countries, motivated agreements on arms control. In 1972, the two superpowers began the Strategic Arms Limitation Talks (SALT) and in 1979 they launched SALT II to stabilize the arm race. Also

in 1972, both countries signed the Anti-Ballistic Missile Treaty (ABM), with which they thought that limiting antiballistic missiles would avert the improvement of the offensive ones.

The following accords came in the end of the Cold War. Krieger (2007) underlines the effort of the USSR leader Mikhail Gorbachev to eliminate all nuclear weapons together with the US president Ronald Reagan. In the meeting of Reykjavik in 1986 the two leaders explored the possibilities of a world without nuclear weapons. The summit was later defined by the journalist Frances FitzGerald as “the most bizarre summit in the history of the Cold War”. Again, now in a confrontation, two nuclear states tried to eliminate these arms and failed. This time, Reagan rejection to halt the Strategic Defense Initiative, also known as Star Wars, collapsed the talks.

But some work was done and the Intermediate Nuclear Forces agreement (INF) in 1987 eliminated the ground and cruise missiles with a range from 300 to 3.400 miles. Nowadays, Russia and the US call other countries which have developed the technology to build that kind of missiles to respect the limits of INF.

The Partial Test Ban Treaty (PTBT) was signed in 1963 prohibiting tests of nuclear weapons in the atmosphere, outer space or under water. Almost thirty years later, in 1991, the USSR initiated a moratorium on nuclear testing that was imitate by the US the next year. Also in 1991, the two countries launched the Strategic Arms Reduction Talks (START) in order to reduce the number of nuclear weapons. This happened shortly before the disintegration of the USSR.

### **Nuclear Age after the Cold War**

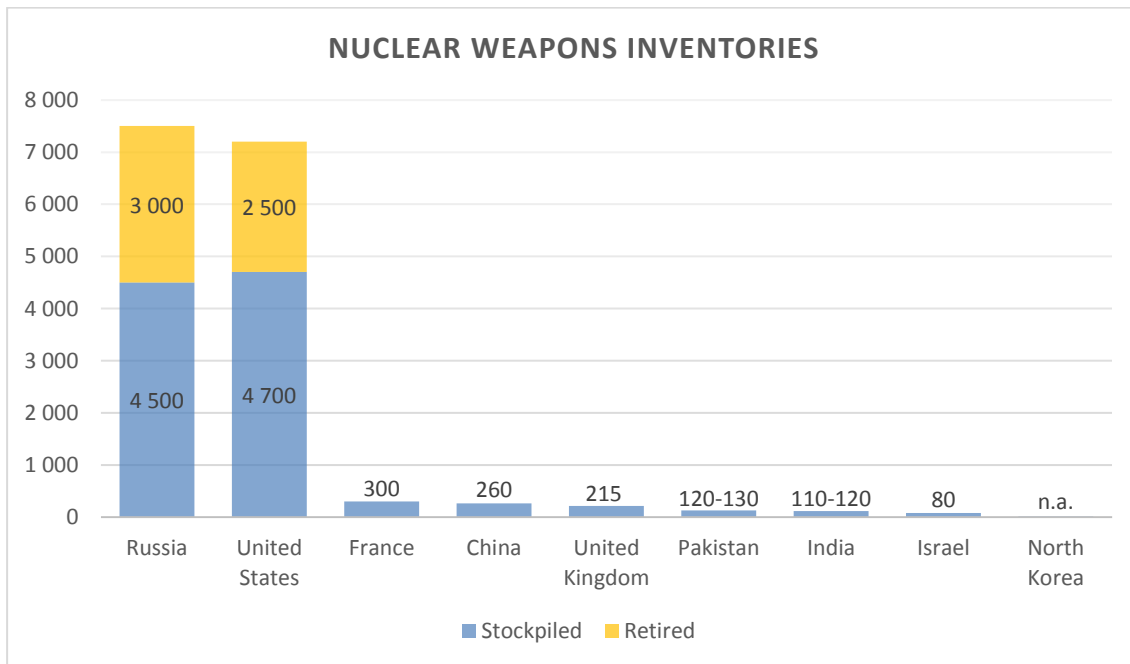
The Cold War finished in 1991, but bilateral agreements between the US and Russia have continued up to today. The negotiations of START II, in 1993, and START III, in 1997, never entered into force and were superseded by the Strategic Offensive Reductions (SORT) in 2002 and finally replaced by the Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START) in 2011 to reduce the deployed nuclear warheads, missiles, bombers and launchers.

In 1996 the Comprehensive Test Ban Treaty (CTBT) appeared as a consequence of the PTBT to end tests of nuclear weapons, but it has not come to force because not enough countries

have ratified it. Among the nuclear states, China and the US have not ratified it and Pakistan, India and North Korea have not even signed it. The study made in 1991 by the International Physicians for the Prevention of Nuclear War (IPPNW) concluded that 2.4 million people could die of cancer due to radioactive residues coming from atmospheric nuclear testing between 1945 and 1980.

In the last decades, more countries have built nuclear weapons to use them as a military and political tool and also as a reaction of politics of fear. India tested the first bomb in 1974 and Pakistan reacted developing the nuclear program and in 1998 it tested the nuclear weapon. India and Pakistan are caught in a dispute over Kashmir region. In 2006, North Korea tested it too, arguing it was to defend the sovereignty of the country against threats like the US.

In 2015, these are the nuclear weapons inventories:



Source: Federation of American Scientists, September 28, 2015.

Russia has an inventor of 7.500 nuclear weapons and the US of 7.200, but the two have 3.000 and 2.500 retired warheads waiting for dismantlement.

In 2015, more than two decades after the end of the Cold War, there are less nuclear weapons, but they are more powerful, precise, flexible, expensive and smaller. Despite treaties and talks, nuclear states are modernising their arsenal and spending 100 billion USD per year in

their programmes, says the report 'Don't Bank on the Bomb' (2014) in line with Global Zero (2011) that underlines the increasing spending on nuclear weapons in time of economic crisis.

The US is modernising the nuclear capabilities and only reducing a few number of arms, from 5.113 nuclear warheads in 2009 to approximately 4.700 in 2015. During the Obama Administration, the spending on nuclear weapons has been bigger than during any other post-Cold War Administration, says Kristensen (2014), even reaching the Reagan Administration level. According to the study 'The Trillion Dollar Nuclear Triad' by James Martin Center for Nonproliferation Studies (2014), the US will spend 1 trillion US dollars in the next three decades mostly in modernisation and purchasing nuclear submarines, bombers and Inter-Continental Ballistic Missiles (ICBM).

However, the US have reached the demands of New START on deployed warheads, reducing them from 1,800 in February 2011 to 1,538 in 2015, according to the US Department of State. The US has announced they will not use nuclear weapons against non-nuclear states that have signed the NPT.

Russia is replacing the obsolete nuclear arsenal. Global Zero (2011) underscores the Russian proliferation on submarines, rockets and warheads. In 2012, Moscow extolled they own ICBMs capable to overcome US defences, adds Arms Control (2015). Russia will only use nuclear weapons to react against a threat to the existence of the state or as a response to any attack with weapons of mass destruction against Russia or its allies.

Russia was already below the limit of New Start in 2011 with 1,537 deployed warheads. Since then, the country has begun to boost nuclear arms production, increasing deployed warheads to 1,648, according to the US Department of State.

France has 300 nuclear weapons mostly designed for submarine launched ballistic missiles. The country is modernising its bombers, submarines and missiles, but it has not increased the number of arms. France will use nuclear weapons if is invaded or if it or one of its allies are attacked by a nuclear-weapon state or by a country allied with one nuclear weapon-state.

The UK has 215 nuclear weapons exclusively deployed on submarines. There is a strong cooperation between the UK and the US in nuclear matters. The UK will use this arm only to defence in extreme circumstances.

China has 260 nuclear weapons and the plans of modernization and increase of nuclear capabilities last until 2050. In 2013, IAEA showed its concern about the growth of nuclear power in Asia. However, the nuclear Chinese policy relies on deploying the sufficient nuclear arms to deter an attack, according to the profile made by Arms Control (2015). China is related with exportation of missiles to Iran and Pakistan which is the most important partner in military technology, conforming to the US Director of National Intelligence. The government has ensured they will not be the first using a nuclear weapon.

India has between 110 and 120 nuclear weapons and it is working on expanding and developing its deployed ballistic missiles and a submarine launched ballistic missile capability. The government, stimulated by China and Pakistan proliferation, has said they will only use them to retaliate against a nuclear, biological or chemical attack. India was sanctioned by Bush Administration for exporting technologies to Iran and Iraq.

Pakistan launched their nuclear program just after India tested its first nuclear weapon. The uranium enrichment program was headed by Abdul Qadeer Khan who said that the main reason for developing the nuclear program in Pakistan was to “save my country from Indian nuclear blackmail”. “An issue of survival”, described it former Prime Minister Benazir Bhutto. Now, the country has between 120 and 130 nuclear weapons. The state is expanding faster than India its arsenal and its infrastructure. With cruise missiles and strategic bombers, it is planning to build a nuclear submarine.

Pakistan and India exchange information of their nuclear programmes to prevent any nuclear conflict. However, Pakistan has built nuclear ballistic missiles to respond to an Indian conventional threat. According to Khan, the mutual assured destruction logic of the Cold-War would have prevented a war with India. Khan was the responsible person of a clandestine network that transferred nuclear technology to Iran, North Korea and Libya.

It is difficult to know how many nuclear weapons have Israel and North Korea because their programs are veiled. Israel is supposed to have 80 nuclear weapons but enough fissile material to grow its stockpile up to 200, including missiles, submarines and bombers.

Among the nuclear states, North Korea is the only one considered a ‘rogue state’ by the US, which is the concept the US government use to refer countries which, inter alia, can destroy the current international system (George W. Bush called them “axis of evil, arming to threaten

the pace of the world”). The list of rogue states has changed over time, but all of them are perceived as a threat and the US and its allies keep them from building nuclear weapons<sup>1</sup>.

North Korea is supposed to have six or eight nuclear weapons and it has been accused of exporting nuclear technology to other countries like Pakistan, Egypt and Yemen, and also to rogue states like Iran, by the firm Changgwang Syinyong, and presumably to Iraq, Libya and Syria.

Neither the sanctions from the US and the UN Security Council (financial restrictions, asset freezes and sanctions) nor the Six-Party Talks between North Korea, China, Japan, Russia, the US and South Korea prevented North Korea to develop their clandestine nuclear program. The government argued that they did it to grant their sovereignty and in response to “the US nuclear threat, sanctions and pressure”. In 2010, only after becoming a nuclear state, North Korea called the other nuclear states to non-proliferation and disarmament.

The asymmetry value of nuclear weapons means that only one can cause deterrence or terror. “Even a few nuclear weapons in the arsenal of a country such as Iran or North Korea could be successful in deterring a far more powerful country from imposing its political or military will on that country”, says Krieger (207, p.113). Khan, who says that Pakistan nuclear program has saved the country, adds that Iraq and Libya would have not been destroyed if they had been nuclear powers.

Some states plan to nuclearize to defend themselves, but other nuclear countries prevent them because they are seen as a threat to the world. Pilisuk (2007, p.95) explains that this is called attribution error. “Armaments of an opponent are typically viewed as an indication of aggressive intent, while one’s own arms are seen as a defensive response to a situation presented by the behaviour of others”.

### **Nuclear deterrence today**

For many people, deterrence is seen as the best way to prevent wars between major nations. Waltz (2013, p.220) says that “the alternative to world government proved to be nuclear deterrence”. However, today nuclear deterrence is being challenged, also by political leaders,

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<sup>1</sup> “The establishment of a neo-liberal world order could therefore entail the paradox of fighting wars for the sake of disarmament”, says Pilisuk (2007, p.99).



influenced by the background of treaties preventing a nuclear catastrophe, a new international chessboard and the social pressure trying to stigmatise and eliminate nuclear weapons.

“Deterrence is just a theory and nuclear weapons are a reality. You only need deterrence to not work once in order to cause a huge humanitarian catastrophe. At this time there are bombs ready to launch in minutes and kill innocent civilians”, says Beatrice Fihn (2015), executive director of the International Campaign to Abolish Nuclear Weapons (ICAN), which has more than 400 partner organisations in 95 countries.

This opinion often meets political reality. Despite many politicians support a free-nuclear world, they reject denuclearization in their countries and alliances as long as other countries and alliances have nuclear weapons. In 2009, US President Barack Obama said: “I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons”, but he added: “Make no mistake: as long as these weapon exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defence to our allies”. Obama is promising they will get rid of a weapon that at the same time he encourages as a crucial tool to defence the country and its allies.

“If you fill the discussion saying that nuclear weapons are actually useful, it makes impossible to eliminate them”, says Fihn, who also talks about the attribution error. “If nuclear weapons are good, why other countries can’t have it? No, they are weapons of mass destruction that create more insecurity and they should be illegal”.

The International Court of Justice published in 1996 the advisory opinion ‘Legality of the threat or use of nuclear weapons’. Despite it was not unanimous, they underlined that “the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law”. However, they marked an exception saying that “the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence”.

The humanitarian law in armed conflicts prevent combatants to kill innocent civilians indiscriminately. The violation of humanitarian law is called war crime. The point of The International Court of Justice is that the use of nuclear weapons would kill thousands of civilians. Therefore, the nature of nuclear weapons violates the international humanitarian law.

To illegalize nuclear weapons, ICAN highlights a view. “We must focus on the humanitarian impact of the weapon instead of discussing about security. We must stigmatize nuclear weapons and define them as unacceptable weapons of mass destruction that can kill a lot of people in a very short time, and also radiation kills. They should be illegal”, says Fihn.

Focusing in the humanitarian impact of the nuclear weapons is the strategy of ICAN to aware society and to push countries to abolish and ban nuclear weapons. Before getting to this point, society must overcome the military security mind-set which reflects “a deep pathology of a system preparing for war but not for peace”, says Pilisuk (2007, p.99).

Along the same lines, Quinlan (2009) says nuclear weapons must be turned from an important tool to irrelevance. “I do not think that at least NATO countries need them to defend themselves”, says Fihn. In Mueller view, nuclear weapons are useless and even the atomic bombs dropped in Japan were probably unnecessary for the Japanese surrender.

### **A treaty prohibiting nuclear weapons**

“We need a treaty prohibiting nuclear weapons, to use, develop, possess and transfer them”, says Fihn. The treaty would defer from NPT by rejecting, eliminating and prohibiting nuclear weapons completely and without exceptions. With this treaty in mind, ICAN is following the path of the prohibition of biological and chemical weapons, landmines and cluster munitions.

Biological weapons were banned in 1972 under the Biological Weapons Convention (BWC) becoming the first disarmament treaty to ban the production, development and possession of one type of weapon. It entered into force in 1995. In 2015, there are 173 state-parties. The treaty does not prohibit the development of biological agents to peaceful purposes. It does not include any specific organisation to monitor the compliance.

Chemical weapons were banned in 1993 under the Chemical Weapons Convention (CWC). The treaty prohibits the creation, distribution and retention of chemical weapons and aims the destruction of any chemical weapons and its facilities. It was effective in 1997 with the creation of the Organisation for the Prohibition of Chemical Weapons (OPCW) in charge of monitoring the destruction activities and its compliance. In 2015, there are 192 state-parties, but North Korea has not signed it and Israel has not ratified it.

Land mines were banned in 1997 under the Anti-Personnel Mine Ban Convention. The treaty aims to destruct all the stockpiles and clean the mined areas, although it allows mines for training purposes. In 2015, there are 162 states-parties. However, China, Russia and the United States are non-signatories, the latter together with South Korea use landmines as an important part of their security policies against North Korea. According to Pilisuk (2007), landmines cause at least between 15.000 and 20.000 deaths per year.

Cluster munitions were banned in 2008 under the Convention on Cluster Munitions. The treaty prohibits to produce, develop, retain, transfer or use cluster munitions. In 2015, 108 countries have signed it and 98 have ratified it. The US<sup>2</sup>, China, Russia, India, Israel and Pakistan are not signatories.

The International Campaign to Ban Landmines (ICBL) and the Cluster Munition Coalition (CMC) succeeded and the treaties were done. “The treaty prohibiting nuclear weapons can be done now”, says Fihn. “It will probably not be signed by the nuclear weapons states, but the non-nuclear weapons states should go ahead with it anyway and create a norm that stigmatizes these weapons and makes them unacceptable. They can use the treaty to pressure nuclear states to get rid of their arsenal”.

In December 2014, ICAN and the Austrian government issued a humanitarian pledge to prohibit and eliminate nuclear weapons. In October 2015, it has been signed by 119 countries, and popular people such as politicians, activists and artists have shown their support by signing the appeal. Neither member of the nuclear countries nor any of the states of the North Atlantic Alliance (NATO) has signed the pledge.

There are three nuclear states in NATO, France, the United Kingdom and the United States, but the rest 25 countries also rely on nuclear weapons in their security policies and some of them have tactical US nuclear weapons deployed in their soil, especially the ones that were closer to the Soviet Union, like Germany, Belgium, Italy, the Netherlands and Turkey. They legitimate them as a defence tool.

Over the years, there have been many authorities who have rejected nuclear weapons. One of them was former Secretary of Defence Robert S. McNamara (1916-2009) who said that the

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<sup>2</sup> In the 2008 US Cluster Munitions Policy Released, cluster munitions are seen as a useful weapon in combat that saves lives and produce less collateral damage to civilians. “Blanket elimination of cluster munitions is therefore unacceptable due not only to negative military consequences but also due to potential negative consequences for civilians”, says the U.S. Department of Defense.

US nuclear weapons policies in the 21st century were “immoral, illegal, military unnecessary, and dreadfully dangerous”. He did not make his opinion public when he was in the administration because it was “totally contrary to established NATO policy”.

After collecting the support of non-nuclear states, ICAN’s next goal is getting the support of the NATO states which have an active civil society.

### **The importance of lobbies**

“Lobbies have strong interests to keep nuclear weapons, but the main obstacle is that the international community accepts the weapons”, says Fihn.

However, the report ‘Bombs vs. Budgets: Inside the Nuclear Weapons Lobby’ by the Center for International Policy (2012) connects the nuclear weapons industry with the US Congress. “In the 2012 election cycle, the top 14 nuclear weapons contractors (*Lockheed Martin, Honeywell International, Boeing...*) gave a total of \$2.9 million to key members of Congress with decision making power over nuclear weapons spending. These firms have donated \$18.7 million to these same members of Congress over the course of their careers”. These corporations gain lucrative Pentagon contracts to produce, maintain and modernize nuclear bombers, nuclear submarines, missiles, delivery vehicles, nuclear facilities of uranium, plutonium and nuclear-related materials, plants and laboratories and research and development.

These lobbyist undermine any effort towards denuclearisation in the US pushing to remove budget limits or even blocking signed treaties like New START<sup>3</sup>.

The report identifies a network of 137 lobbyist with decision making power, 96 of them from the Congress or the Congressional Committees, 26 from military services, 24 from the Department of Defense or the Department of Energy. It also specifies networks of hundreds of business and thousands of members interested in the proliferation and increasing spending on nuclear weapons. Only in the submarine lobby, it shows the Submarine Industrial Base Council, the Naval Submarine League and The Navy League. It also denounces the revolving door of the Pentagon executives to defence contractors, and conversely.

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<sup>3</sup> Congressman Denny Rehberg defended an amendment to prohibit taxpayer funds on reduction of America’s nuclear forces if there is no prove that Russia is complying the limits set on New START, and Rehberg argued that Russia has increased its inventory. The amendment passed at the House.

The Center for Public Integrity (2015) has pointed out that General Dynamics (70), Lockheed Martin (56) and Boeing (49) are the top three corporations with more lobbyists on defence issues from April to June 2015. Each company have spent millions on lobbying, especially to eliminate budget caps. Opensecrets (2015) has identified up to 718 lobbyist in the defence industry in 2015.

The ICAN publishes every year the report ‘Don’t Bank on the Bomb’ pushing companies to divest in the nuclear arms industry. The 2014’s report examines 28 nuclear companies, such as Boeing, Honeywell International or Lockheed Martin, which earn millions in contracts and work on the nuclear programmes of France, India, Israel, the United Kingdom and the United States. In Russia, China, Pakistan and North Korea this work is mostly or completely done by government agencies.

The report profiles 411 financial institutions investing in these corporations, the 62% from North America. The top-ranked are State Street, Capital Group and Blackrock, all three based in the US. It also congratulates financial institutions with a nuclear weapons exclusion policy banning investment on the nuclear weapon industry.

### **The threat of nuclear terrorism**

While working towards denuclearization, a new nuclear threat has appeared. The US President Barack Obama said in 2008 that nuclear terrorism was “the gravest danger we face”. The asymmetry of nuclear weapons plays a key factor in terrorism groups, which can possess these arms by exploiting gaps in security, stealing fissile material, buying it in the nuclear black market or taking over a nuclear facility. During that year, 2008, the IAEA reported nearly 250 thefts. “The possibility of terrorists obtaining nuclear or other radioactive material remains a grave threat”, said former IAEA chief Mohamed El Baradei, although it was not enough material to build one nuclear weapon. From 1993 to December 2013, IAEA confirmed 2.477 incidents like illegal possession, black market, thefts or losses.

Terrorists could access to proper technology through the nuclear black market of proliferation networks. The most remarkable was the network of A.Q. Khan which illustrated the possibility to move nuclear technology clandestinely. Khan sold it, including centrifuges and weapons design, to ‘rogue states’ like Iran, North Korea and Libya.

“Acquiring (*nuclear*) weapons for the defense of Muslims is a religious duty”, said former leader of Al-Qaeda Osama Bin Laden (1957-2011). For decades, the US has been examining Al-Qaeda, but there is no evidence they have got nuclear weapons. Also Chechnya-based separatists, Lashkar-e-Taiba and Aum Shinrikyo have shown interest in developing nuclear weapons and together with Hezbollah and the Taliban are the terrorist groups capable of using them according to Allison (2010). In 2015, the threat of nuclear smugglers linked with Islamic State or the possibility that ISIS could steal nuclear material is raising.

To avert this to happen, the international community has put effort in strengthening the security of nuclear materials.

Nuclear terrorism was already a worry in the eighties. The Convention on the Physical Protection of Nuclear Weapons (CPPNM) in 1980 established measures to protect physically nuclear facilities and expand global cooperation. The Resolution 1540 of the UN Security Council adopted in 2004 says that all states must develop and maintain measures to secure the productions, use, storage and transport of materials related to nuclear, chemical and biological weapons and prevent non-State actors to get, possess or develop them. In order to achieve the nuclear part of that the UN General Assembly created in 2005 the International Convention for the Suppression of Acts of Nuclear Terrorism which also criminalizes nuclear terrorism and fosters international cooperation. However, there is no specific organisation in charge to avert nuclear terrorism.

There are also NPT and IAEA safeguards and international nuclear conventions, treaties, partnerships and initiatives like the Nuclear Security Summits (NSS) that have gathered states against nuclear terrorism, raising awareness, reducing high enriched uranium and working together securing nuclear material.

Even though Obama is sure that “terrorist are determined to buy, build or steal one (*nuclear bomb*)”, there are contrarians who think that nuclear terrorism is unlikely if not incomprehensible. “First, no one could seriously intend to kill thousands of people in a single attack. Second, only states are capable of mass destruction; nonstate actors would be unable to build or use nuclear weapons. Third, terrorist would not be able to deliver a nuclear bomb to an American city”, says Allison (2010). “It is not the way they work”, says Fihn, but adds: “as long as they exists there is a risk that something can happen”. In Jenkins view, author of the book ‘Will Terrorists Go Nuclear’, there are nuclear terrorism and nuclear terror. The former is the actual possibility of a nuclear terrorist attack and the latter is the concern of an attack.

“It’s about our imagination. And while there is no history of nuclear terrorism, there is a rich history of nuclear terror. It’s deeply embedded in our popular culture and in policy-making circles”, says Jenkins.

### **A new world without nuclear weapons**

Intentions of disarmament usually focus more on mechanisms rather than political conditions, criticizes Quinlan (2009), and conditions are more important. Disarmament, he says, can only be reached if geopolitical antagonism like the conflicts between Israel and Palestine, India and Pakistan over Kashmir or China and Taiwan are resolved or at least reduced to a relation in which war is not imaginable.

Blanton and Savranskaya (2011) say that denuclearization needs so much level of trust that they doubt it can be achieved in the current globalized and decentralized international system involving countries like Pakistan and North Korea. Pilisuk (2007, p.96) stresses the importance of transparency, openness and a restructuration of the world. “Hence, disarmament is often considered a long-range goal that is associated with a fundamental reordering of the international political environment. That change aims inevitably at ending the law of the jungle among nations by establishing some form of world government or an effective system of collective security”. The world, in order to build a culture of peace, also needs “to deal with gross inequality and exploitation of people and of habitats”, says Pilisuk.

In the same vein, Quinlan (2009) adds that to guarantee the abolishment of nuclear weapons the world needs “stronger political arrangements and better probabilities of obedience to them”.

However, not every supporter of denuclearization thinks it would come with some sort of world peace or readjustment. “The world will look exactly the same but without nuclear weapons. There will always be conflict, but what we can do is to limit and reduce the militarization of conflicts”, says Fihn.

## Conclusions

Since the creation of the first nuclear weapon, there have been several treaties to prevent its catastrophic impact and even attempts to eliminate them. Today, nuclear deterrence is more challenged than ever before, but in many countries it is still considered crucial for security.

Social pressure to abolish nuclear weapons is increasing, but campaigns like ICAN still have a lot of work to create an active majority against them. However, to focus on the humanitarian view is a good path because in this area no one should defend these arms.

The nuclear-weapon states of the NPT –the US, Russia, France, the UK and China- are not taking serious steps towards complete denuclearization, as it is declared in the treaty. It is contradictory for the US President Barack Obama to increase the spending of nuclear weapons when he has pledged to work for a world without them. To achieve this, these countries, together with NATO states, should soften their military mindset on security knowing that they would have to face the arms industry.

Those nuclear countries that are not signatories to the NPT -Israel, India, Pakistan and North Korea- see the weapon as a tool to grant their sovereignty against their respective threats, so, in line with Quinlan, they would only eliminate nuclear weapons if these arms turn to irrelevance or there is another alternative for these states to feel safe. This task has to be done by the international community and, adapting the words of Pilisuk, it is about preparing the system for peace.

Whatever solution is found, it should come with more international communication, cooperation and transparency. In the current international chessboard with several political conflicts, disputes and conflicting interests it does not seem that this alternative can be achieved soon, but as Fihn and Pilisuk have stated, disarmament is a long-range goal and small steps can be done.

A stronger international cooperation would also help to prevent nuclear terrorism which, whether is real or not, aware us that some incident may happen if nuclear weapons and its related material are available.

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