

Nuclear Weapons-Free Zones (NWFZ) and WMD-Free Zones (WMDFZ)

While the world wrestles with the idea of a world free of nuclear weapons, some regions are already a step ahead. The whole southern hemisphere is a nuclear weapon-free zone (NWFZ) and also in the northern hemisphere such zones are being created. This learning unit focusses on NWFZ and the idea of broadening such zones both geographically and in relation to other weapons of mass destruction.

- 2 Introduction
- 4 The History of the NWFZs
- 7 Current NWFZs – Common Elements and Individualities
- 11 Open Issues
- 13 Case Study - The debate about a WMD-Free Zone in the Middle East
- 16 The EU and NWFZ/WMDFZ
- 17 Summary and Further Reading

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1. Introduction



Montage

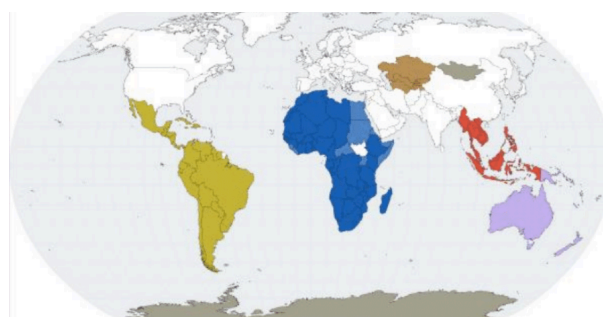
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The fear of nuclear weapons has haunted mankind since their first use in 1945 in Hiroshima and Nagasaki. However, nuclear weapons also pose many indirect dangers: For example, there is the possibility of accidents that could jeopardise settlements and cities in the vicinity of the deployment site or cause tragic natural disaster. In addition, nuclear weapons deployment sites were seen as potential first strike targets during the Cold War in order to make it impossible for an opponent to retaliate. As we will see, these are some, but not all, of the reasons that motivated people early on to campaign for nuclear weapon-free zones (NWFZ). But before we take a closer look at the respective motivations and the actually existing NWFZs, it is first necessary to consider the question of what exactly is meant by an NWFZ.^[1]

The establishment of Nuclear-Weapon-Free Zones (NWFZ) is a regional approach to strengthen global nuclear non-proliferation and disarmament norms and consolidate international efforts towards peace and security. The legal definition of the NWFZ is given by the General Assembly resolution 3472 B from 1975 and by the Guidelines and Principles for the Nuclear-Weapon-Free Zones as explained by the UN Disarmament Commission in its report of April 1999, based on Article VII of the NPT (Non-Proliferation Treaty).

In summary, a NWFZ is a multi-lateral treaty based on the initiation of the states of the zone to establish a zone free of nuclear weapons, with a content agreed among them, which includes a verification regime and the attached protocols, which include the NSAs of the nuclear weapon states. A NWFZ may consist of the territory of any number of states, but even just a small part of a state's territory can be acknowledged as a NWFZ. Typically, a NWFZ would cover a whole continent (as in the case of Latin America by the Tlatelolco Treaty, or Africa by the Pelindaba Treaty), but even one country can declare itself a NWFZ (as Mongolia did). The Treaty on the German unification

states that the territory of the former German Democratic Republic will be free of nuclear weapons.



NWFZ states

Own Figure, Data Source: <https://www.un.org/nwffz/content/overview-nuclear-weapon-free-zones>

NWFZ treaties are special treaties in the sense that the multilateral treaty is amended by one or more protocols which include the negative security assurances by the nuclear weapon states, and which may include other obligations by countries outside the region (such as not to perform a nuclear test there or the obligation by states outside the region but with legal authority within, such as the former colonial powers).

Over many decades NWFZ treaties have undergone a constant evolution as they came to cover an increasing number of issues relating to specific regional concerns and a shifting international context. The first treaties to include any restrictions or prohibitions on military nuclear activities were typically covering spaces outside the authority of any state, such as the Antarctica, the Outer Space, the Moon and the Seabed, prohibiting the use for military purposes including the deposit of nuclear weapons there.

The first treaty established over territory belonging to the legal authority of states, the Tlatelolco Treaty included the prohibition of the "testing, use, manufacture, production or acquisition", as well as "the receipt, storage, installation, deployment and any form of possession of any nuclear weapons". But it maintained the right to the peaceful uses of nuclear energy, and established the OPANAL as the organization verifying the treaty. And – in harmony with the technical thinking of the time – it still allowed so-called peaceful nuclear explosions.

However, the prohibition of any nuclear explosion (be it peaceful or military) was added in the following treaties established in zones where nuclear testing by the nuclear power states were seen as a great concern. The NWFZ treaties after Tlatelolco have been furthermore expanded by such clauses as the early notification of accidents, the physical protection of nuclear materials and equipment, the prohibition of

armed attacks on nuclear installations and of dumping nuclear wastes, mechanism for compliance, and the protection of the environment

1. Vignard Kerstin (ed.): Nuclear-weapon-free zones. Disarmament Forum 2011/2. United Nations Institute for Disarmament Research. pp.1-64. Available at unidir.org (www).

2. The History of the NWFZs

Introduction

As indicated above the establishment of Nuclear-Weapon-Free Zones is a regional approach to strengthen the global nuclear non-proliferation regime. It supports international efforts towards peace and security by the denuclearization of certain areas and by the consolidation of disarmament norms. Interestingly enough, the first Nuclear-Weapon-Free Zones were established for uninhabited areas, such as the Antarctica in 1959, the outer space in 1967, the seabed in 1971, as well as the Moon and other celestial bodies in 1979. More detailed information can be found behind the tiles if you are interested.

Antarctic Treaty

- Opened for signature: 1959
- Entry into force: 1961
- Article I: 1. Antarctica shall be used for peaceful purposes only. There shall be prohibited, inter alia, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers, as well as the testing of any type of weapons.
- Article V: 1. Any nuclear explosions in Antarctica and the disposal there of radioactive waste material shall be prohibited.

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies

- Opened for signature and entry into force: 1967
- Article IV: States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.

Agreement Governing the Activities of States on the Moon and Other Celestial Bodies

- Opened for signature: 1979
- Entry into force: 1984
- Article III: 3. States Parties shall not place in orbit around or other trajectory to or around the moon objects carrying nuclear weapons or any other kind of weapons of mass destruction or place or use such weapons on or in the moon.

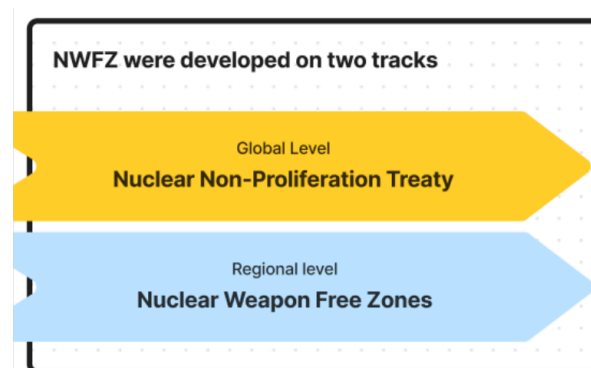
Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof

- Opened for signature: 1971
- Entry into force: 1972

- Article I: 1. The States Parties to this Treaty undertake not to emplant or emplace on the sea-bed and the ocean floor and in the subsoil thereof beyond the outer limit of a sea-bed zone, as defined in article II, any nuclear weapons or any other types of weapons of mass destruction as well as structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons.

It seems that it was relatively easy to reach agreement that certain "public" areas and spaces should not be considered for the deployment of nuclear weapons. For populated areas, the discussions proved to be much more difficult.

The history of Nuclear-Weapon-Free Zones over inhabited areas also goes back to the Cold War. The idea was first introduced by the Soviet Union in 1956 to establish a Central European zone. The Polish government embraced the proposal and suggested a Nuclear-Weapon-Free Zone covering Poland, Czechoslovakia, and both German states under the so called Rapacki Plan. During the 1950s and 1960s, a number of new initiatives were introduced in Europe with the goal of maintaining independence from the two superpowers and staying out of the nuclear arms race. From the second half of the 1960s, Nuclear-Weapon-Free Zones were developed on two parallel tracks. On the global level, the Nuclear Non-Proliferation Treaty became the backbone of these zones, which was supplemented by several regional arrangements.



Development of NWFZ
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Until today, we have five Nuclear-Weapon-Free Zones and a few additional cases of nuclear weapon-free states or even sub-state territories. The first successful initiative was realized in Latin America. Banning nuclear weapons on the continent was first proposed by Costa Rica in 1958. However, the Cuban missile crisis was also needed to generate the necessary

support among regional states. After several years of negotiations, the so called Treaty of Tlatelolco or the “Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean” was opened for signature in 1967. It entered into force in 1969, and it became universal when Cuba also joined the zone in 2002.

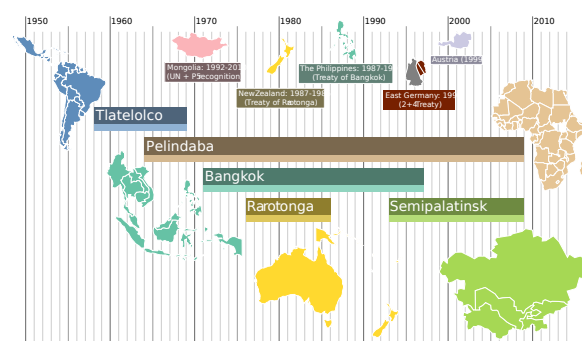
Africa was the next continent where negotiations were launched to establish such a zone. In this case, the French nuclear tests in Algeria and South Africa’s nuclear weapons programme were the catalysts of the initiative. The Organization of African Unity was the first to call for the establishment of a zone in 1964. However, the proposal could not move forward until South Africa agreed to dismantle its nuclear weapons in 1991. The “African Nuclear Weapon-Free Zone Treaty” or the Treaty of Pelindaba was opened for signature in 1996 and it entered into force in 2009.

In the case of Southeast Asia, the 1971 Kuala Lumpur Declaration of ASEAN was the first to call for a zone of peace, freedom and neutrality, which included the goal of a Nuclear-Weapon-Free Zone. But due to the presence of American nuclear weapons in the region, negotiations did not begin until the 1990s. After the US withdrew its forces from the Philippines, the drafting process of the treaty was started. The so called Bangkok Treaty, or the Treaty on the Southeast Asia Nuclear Weapon-Free Zone was opened for signature in 1995 and entered into force in 1997.

Negotiations to establish a zone in the South Pacific were also launched during the 1970s. New Zealand introduced the idea in 1975 in response to the devastating effects of the ongoing nuclear tests in the region. Australia also embraced the idea in 1983 and the treaty was opened for signature two years later, in 1985. The Treaty of Rarotonga, or the South Pacific Nuclear Free Zone Treaty entered into force in 1986.

The last zonal arrangement was realized in Central Asia. The first proposals were introduced by Uzbekistan and Kyrgyzstan in the first half of the 1990s. However, negotiations were jammed due to disagreements over the delineation of the zone and the relations towards Russia. The Treaty of Semipalatinsk, or the Treaty on a Nuclear-Weapon-Free Zone in Central Asia was opened for signature in 2006 and it entered into force in 2009.

In addition to these zonal arrangements, some countries or smaller regions have also declared their desire to outlaw nuclear weapons by their own law. Austria made such a declaration in 1999, and the so-called 2+4 Treaty of German Unity also banned nuclear weapons in the territory of the former Democratic Republic of Germany in 1990. The Philippines and New Zealand also made such declarations but they are covered by zonal arrangements today. Mongolia was a special case, which established a single-state zone in 1992. Although it took almost two decades, the United Nations and the nuclear-weapon-states have also given their consent to this declaration in 2010.



Table; Time from first proposal to entry into force of all Nuclear Weapon Free Zones in inhabited areas (as by June 2024)

Source: Grubelfabrik, CC BY SA

In addition to the NWFZs described above, there are additional “special cases”, where individual countries, or parts of a country, unilaterally declared themselves as a nuclear weapon-free zone. They are not normally shown in the lists of global NWFZs. However, they should at least be mentioned here for the sake of completeness: Austria, the former GDR, the Philippines, New Zealand and Mongolia. More detailed information can be found behind the tiles if you are interested.

NWFZ Special Cases

Austria

- Declaration: 1999
- Federal Constitutional Act for a Nonnuclear Austria: § 1. Nuclear weapons must not be manufactured, stored, transported, tested or used in Austria. Facilities for stationing nuclear weapons must not be set up.

Former German Democratic Republic

- Declaration: 1990
- Treaty on the Final Settlement with Respect to Germany: Article V: 3. Following the completion of the withdrawal of the Soviet armed forces from the territory of the present German Democratic Republic and of Berlin, units of German armed forces assigned to military alliance structures in the same way as those in the rest of German territory may also be stationed in that part of Germany, but without nuclear weapon carriers. [...] Foreign armed forces and nuclear weapons or their carriers will not be stationed in that part of Germany or deployed there.

The Philippines

- Declaration: 1987
- The 1987 Constitution of the Republic of the Philippines: Section 8. The Philippines, consistent with the national interest, adopts and pursues a policy of freedom from nuclear weapons in its territory.

New Zealand

- Declaration: 1987
- New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987: An Act to establish in New

Zealand a Nuclear Free Zone, to promote and encourage an active and effective contribution by New Zealand to the essential process of disarmament and international arms control.

Mongolia

- Declaration: 1992

- Law of Mongolia on its nuclear-weapon-free status:
The purpose of the present Law is to regulate relations pertaining to the preservation of the territory of Mongolia in its entirety, including its air space, land, waters and the sub-soil free from nuclear weapons, which constitutes an important factor for ensuring Mongolia's security.

3. Current NWFZs – Common Elements and Individualities

Common Elements of NWFZs



Presentations by the Representatives of NWFZs at the IAEA Forum on Experience of Possible Relevance to the Creation of a Nuclear-Weapon-Free Zone in the Middle East

Dean Calma/IAEA (CC BY-SA 2.0) <https://flic.kr/p/aHrpVc>

Even though we will see later that there were also individual reasons behind the establishment of each NWFZ and that each is unique, they all have a common reference: the Non-Proliferation Treaty (Treaty on the Non-proliferation of Nuclear Weapons, NPT) from 1968 (see Learning Unit 05 for more information).

Article VII of the NPT states:

Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories.

THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS (NPT)

It is therefore important to understand how the logic of the NPT and the logic of a NWFZ are related.

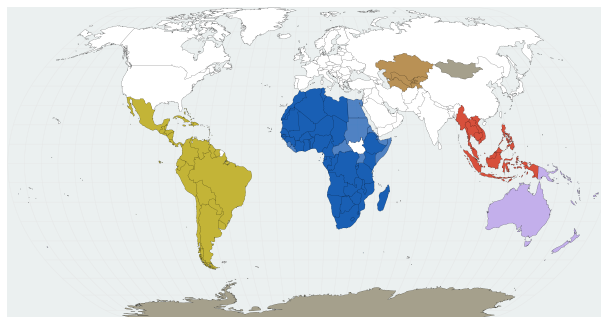
The Nuclear Non-Proliferation Treaty, or the NPT, is the cornerstone of global non-proliferation efforts. Nuclear Weapon-Free Zones complement this agreement by strengthening nonproliferation and disarmament norms. These zonal arrangements also restrict the maneuvering capability of nuclear-weapon-states with regards to the stationing and the use of nuclear weapons. This is why Article VII of the NPT recognizes the right of any group of states to conclude regional treaties which ban nuclear weapons in their respective territories. Besides, Nuclear Weapon-Free Zone arrangements make a step forward by unquestionably banning the stationing of nuclear weapons, which the NPT could not entirely prohibit. Over time, the establishment of these zones was triggered by different historic, geographic, and political considerations. However, there are several common benefits of Nuclear Weapon-Free Zones. The most important security benefit for the states of the region is provided by the negative security assurance of the nuclear weapon states. In the framework of these legally binding assurances, the five nuclear-weapon-

states promise not to use or threaten to use nuclear weapons against members of the zone.

Besides, these zones also reinforce the right of members to the peaceful uses of nuclear energy. From a global perspective, Nuclear Weapon-Free Zones are considered a step towards the establishment of a nuclear-weapon-free world by freeing considerable areas of nuclear weapons. These zones also facilitate technical cooperation among nations, and constitute important confidence-building measures in conflict-torn regions. In certain cases, they can also promote environmental protection by outlawing nuclear tests and by restricting the dumping of radioactive waste in the oceans, and they can also strengthen nuclear security by introducing strict safety standards for nuclear materials.

In light of all these benefits, Nuclear-Weapon-Free Zones constitute an important contribution to global peace and security, and their future expansion would continue to serve these goals.

Today, more than a hundred states have already joined one of the existing Nuclear-Weapon-Free Zones. These zones cover the entire Southern Hemisphere and a large part of the Northern Hemisphere. This means almost 40% of the world's



Map showing the Nuclear Weapon Free Zones.
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Above the seabed, however, the oceans are not covered by Nuclear-Weapon-Free Zones as the freedom of seas does not allow restrictions in international waters. Therefore, the transit of nuclear weapons is possible both in international waters and in outer space as well.

Regarding their duration, all Nuclear-Weapon-Free Zone treaties are in force indefinitely but states-parties have the right to withdraw and end their treaty obligations. In terms of verification, each zonal arrangement requires the states-parties to conclude Comprehensive Safeguards Agreements with the International Atomic Energy Agency, which verifies that none of the member states starts pursuing nuclear weapons. In this regard, the Treaty of

Semipalatinsk introduced the strictest conditions, as it requires the ratification of the International Atomic Energy Agency's Additional Protocol, as well. The territory of the zones includes land, internal waters, territorial seas, and archipelagic waters. The Bangkok Treaty, however, also included Exclusive Economic Zones and continental shelves, which is why none of the nuclear-weapon-states has ratified its protocols as of today.

Regarding the principle obligations, all zones share some guiding principles. They all prohibit the development, manufacturing, control, possession, testing, or transporting of any type of nuclear explosive device by states-parties. The treaties also prohibit the stationing of any such devices within the zone by any other states. However, each state-party has the sovereign right to allow or to ban the overflight and the transit of nuclear equipped vessels in their own territories. Besides, the treaties guarantee the right to the peaceful uses of nuclear energy and, in terms of trade, most of them require comprehensive safeguards as a condition of supply.

In addition to these principles, each zone has unique characteristics, based on the historic, geographic and political circumstances. As these treaties involve a limited number of states, the complexity is substantially reduced and the treaties are tailored to the particular needs of the region.

The individual NWFZs: Individualities and specialities

The Treaty of Tlatelolco introduced the basic obligations and mechanisms of Nuclear-Weapon-Free Zones. Due to the different historic circumstances in the 1960s, it allows nuclear explosions for peaceful purposes, which none of the later agreements included. It was also ground-breaking as it established the precedent for the relevant extra-regional states to contribute to Nuclear-Weapon-Free Zones. These commitments by extra-regional states are included in protocols. The most important type of protocols includes the negative security assurances of nuclear-weapon-states. The second type of protocols requires the consent of those extra-regional powers which administer colonies within the zone.



Treaty of Tlatelolco
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The Treaty of Rarotonga was the next that was opened for signature. In addition to the basic prohibitions, a ban on testing and stationing was more explicitly described, as well as a prohibition on dumping nuclear waste in the South Pacific. It also introduced a third type of protocol in which nuclear-weapon-states had to pledge not to test nuclear weapons in the region. This prohibition was also enacted by the Pelindaba Treaty. Besides, the Treaty of Rarotonga was also the first one to tie the trade of nuclear materials to comprehensive safeguards agreements with the IAEA.



Treaty of Rarotonga
Max Köhler / EUNPDC eLearning (Public Domain)

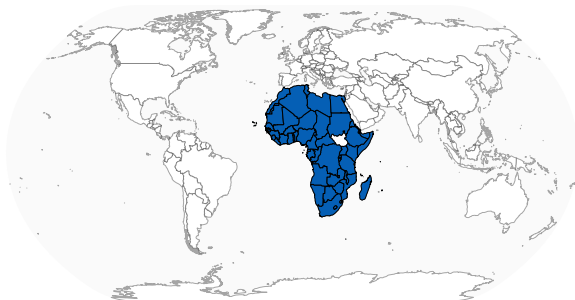
The Treaty of Bangkok also addresses the issue of dumping, and it includes definitions for radioactive material and waste. It requires the handling of nuclear materials in accordance with IAEA standards and procedures. It also obligates the members to accede to the Convention on Early Notification of Nuclear Accidents. The Treaties of Pelindaba and Semipalatinsk also make reference to nuclear safety and security, and the Central Asian zone specifically requires accession to the Convention on the Physical Protection of Nuclear Materials. The Treaty of Semipalatinsk also prohibits disposal of radioactive waste in the zone by other states, and it promotes environmental rehabilitation of contaminated territories. The mostly unique feature of the Bangkok Treaty was the delineation of the zone, which includes

the Exclusive Economic Zones and continental shelves. According to nuclear-weapon-states, this provision creates political control over sea territories, not allowed by the Law of the Sea. Therefore, to guarantee the free-transit of their nuclear armed and powered vessels, they are not willing to ratify the protocols.



Treaty of Bangkok
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The novel provision of the Treaty of Pelindaba relates to the existing nuclear weapons programme within the region. Accordingly, parties have to declare their capabilities to manufacture nuclear explosive devices, and they also have to dismantle such devices. It also includes a unique provision against armed attacks on any nuclear installations. The Treaty of Semipalatinsk was the first zone established entirely in the Northern Hemisphere. As mentioned before, it enacted enhanced verification and safety measures.



Treaty of Pelindaba
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Treaty of Semipalatinsk
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Besides, this was the first agreement, where transit by land was specifically addressed, and states-parties were individually given the right to decide over transit rights. The most problematic part of the document was the treaty's relation to other agreements, most importantly the Tashkent Collective Security Treaty with Russia. While the zone requires all necessary measures for effective implementation, it also reaffirms the parties' rights and obligations under previous treaties. The US found this problematic in light of the provisions of the Tashkent Treaty to provide all necessary assistance in case of aggression. Although Washington finally ratified the protocol of the Treaty of Semipalatinsk, interpretive statements by the US Senate have been attached.

	TLATELOCO (1967) Latin America and the Caribbean	RAROTONGA (1986) South Pacific	Bangkok (1995) Southeast Asia	Pelindaba (1996) Africa	Semipalatinsk (2006) Central Asia
Peaceful uses	Allowed	Allowed	Allowed	Allowed	Allowed
Prohibitions	testing, use, manufacture, production or acquisition + receipt, storage, installation, deployment and any form of possession	Manufacture or otherwise acquire, possess or have control + seek or receive any assistance in the manufacture or acquisition	Develop, manufacture or otherwise acquire, possess or have control over + station, transport, test or use	Conduct research on, develop, manufacture, stockpile, acquire, possess or have control over + seek/receive or grant assistance	Conduct research on, develop, manufacture, stockpile, acquire, possess or have control over + seek/receive or grant assistance + stationing
Testing	PNEs are allowed	No testing of any NEDs	No testing of any NEDs	No testing of any NEDs	No testing of any NEDs
Stationing	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
Dumping / disposal of radioactive waste	----- ---	Prohibited	Prohibited	Prohibited	Prohibited
Transit	Left to the discretion of the states	Left to the discretion of the states	Left to the discretion of the states	Left to the discretion of the states	Left to the discretion of the states
Providing nuclear material	-----	Linked to IAEA safeguards	Linked to IAEA safeguards	Linked to IAEA safeguards	Linked to IAEA safeguards
Nuclear safety / physical protection	-----	-----	Nuclear safety: IAEA guidelines and standards	Physical protection: apply equivalent measures to CPPNM	Physical protection: ratify the CPPNM
Other features		Continental shelves and EEZs included, Accession to CENNA, Remedial measures	Reversal of nuclear weapons programs, Prohibits armed attack against nuclear installations		Environmental rehabilitation of contaminated territories
Verification	IAEA safeguards, OPANAL	IAEA safeguards	IAEA safeguards, Commission for the SEANWFZ	IAEA safeguards, AFCONE	IAEA safeguards, Additional protocol

Treaty for the Prohibition of Nuclear Weapons in Latin America (Tlatelolco Treaty)



Treaty of Tlatelolco
Max Köhler / EUNPDC eLearning (Public Domain)

Tlatelolco basic facts

- Opened for signature: 1967
- Entry into force: 1969
- Member states: 33
- Extraterritorial states with obligations: the US, the UK, France, Russia, China and the Netherlands
- Exact delineation: 'territorial sea, air space and any other space over which the State exercises sovereignty in accordance with its own legislation'
- Nuclear weapon: 'is any device which is capable of releasing nuclear energy in an uncontrolled manner

and which has a group of characteristics that are appropriate for use for warlike purposes'

- Obligation for an indefinite period
- Significance:
- The first treaty to establish a NWFZ on inhabited areas → provides a pattern, and sets the most important elements of any similar treaty

Main obligations

- Peaceful uses: 'Nothing in the provisions of this Treaty shall prejudice the rights of the Contracting Parties, in conformity with this Treaty, to use nuclear energy for peaceful purposes, in particular for their economic development and social progress'
- Prohibitions: 'undertake to use exclusively for peaceful purposes the nuclear material and facilities which are under their jurisdiction'; Prohibit / prevent in their territories: 'testing, use, manufacture, production or acquisition by any means whatsoever of any NW' + 'receipt, storage, installation, deployment and any form of possession of any NW'; Refrain from engaging in, encouraging or authorizing, directly or indirectly, or in any way participating in: testing, use, manufacture, production, possession or control of any NW'
- Control system: Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL)
- Compliance: IAEA safeguards, reports to OPANAL + IAEA
- Protocols: Protocol I: extra-regional states with territories in the region; Protocol II: negative security assurance of NWSs

4. Open Issues

Further NWFZ Proposals and Negative Security Assurances

Despite the fact that the Southern Hemisphere is almost entirely covered by Nuclear-Weapon-Free Zones, a number of open questions remains on the table. Regarding the challenges ahead, the ratification of protocols is still incomplete. The United States has not ratified the negative security assurances of the Treaties of Rarotonga and Pelindaba, and none of the nuclear-weapon-states has ratified the Bangkok Treaty because of their concerns over the transit rights. In the case of the Pelindaba Treaty, there are still more than a dozen African states which have not ratified the treaty and did not accede to the zone.

In addition to the existing arrangements, there are a number of proposals for the establishment of new Nuclear-Weapon-Free Zones. These initiatives include zones in South Asia, the Middle East, the Korean Peninsula, Europe, and the Arctic, as well. However, these proposed zones face even bigger challenges as all of them would include territories where states-parties have their own nuclear weapons capabilities, and in some cases they also host the nuclear weapons of extra-regional states. Therefore, the disarmament aspect of Nuclear-Weapon-Free Zones should be strengthened in the future, and the negotiations should build on the African and Central Asian precedents.

Besides the existence of nuclear weapons, another huge challenge for future zones is the increased threat of nuclear terrorism and black market proliferation. This means that issues of safety and security will become more imperative and added safety measures of the Semipalatinsk Treaty should be further elaborated.

Regarding the prospects of future zones, 2010 was a year of success stories and the NPT Review Conference used this momentum to explicitly call for the establishment of further Nuclear-Weapon-Free Zones. The relations between great powers, however, have significantly deteriorated in recent years and we witnessed heightened nuclear rhetoric between them. This means that for those who live under a nuclear umbrella, there might be less appetite to establish such zones but this does not mean that Nuclear-Weapon-Free Zones would no longer be useful tools to strengthen non-proliferation, promote disarmament and outlaw nuclear weapons.



IAEA Director General Yukiya Amano at the opening meeting of the 2010 NPT RevCon

Mark Garten / United Nations, CC BY-SA 2.0

In addition to the stalled debates about new NWFZs, there are currently intense discussions about the validity of the declarations of the nuclear weapon states vis-à-vis the individual NWFZs (i.e. the acceptance of the Additional Protocols) and about how far negative security (i.e. the commitment of nuclear weapon possessors not to attack or threaten to attack a non-nuclear weapon state with nuclear weapons) really extends. Not all nuclear weapon states have issued such guarantees to all NWFZs and ratified the corresponding additional protocols.

The following overview shows the status in summer 2024.

	Tlateloco	Rarotonga	Bangkok	Pelindaba	Semipalatinsk
United States	+	-	-	-	+
United Kingdom	+	+	-	+	+
France	+	+	-	+	+
China	+	+	-	+	+
Russia	+	+	-	+	+

Table: Ratification Status of the NWFZ protocols - Negative Security Assurances of NWSs

The Idea of WMDFZ (Weapons of mass destruction-free zone)

The idea of „managing“ all weapons of mass destruction (WMD) is not restricted to the nuclear weapon-free-zone concept. For example, export control regulations in the European Union include both EU-wide restrictions covered by EU legislation, as well as EU Member State specific export controls set out at a national level. As a result, EU export control is performed on the basis of a combined list of the different WMD export control regimes, such as the Nuclear Suppliers Group, or the Australia Group. These mechanisms cover all materials, equipment and

technologies falling under the respective export control lists. Another example is UN Security Council Resolution 1540 which was adopted unanimously in 2004 and aims to curtail the proliferation of all forms of weapons of mass destruction. This resolution requires all UN member states to develop and enforce appropriate legal and regulatory measures against the proliferation of chemical, biological, radiological, and nuclear weapons and their means of delivery.

The idea of a WMDFZ was first raised in the specific circumstances of the Middle East,^[1] where the NWFZ proposal has been on the agenda since 1974, but it could not be realized due to the never publicly acknowledged Israeli nuclear weapon capability, the presence of nuclear weapon states in the region, the efforts of several Arab states (Egypt, Libya, Syria, Iraq) to achieve nuclear weapons or establish a nuclear breakout capacity, and more recently, the Iranian nuclear program.^[2] Parallel to the failure of such efforts, Israel and many Arab states also ran chemical and/or biological weapons programs, to the effect that chemical weapons were often called “the nuclear bomb of the poor man”. (This can be refuted by the fact that those states that did develop a chemical weapon capability were typically the ones who also had a try at nuclear weapons.) Consequently, there seemed to be some kind of connection among the different categories of the WMD programmes whereby Arab states saw their chemical (and to a lesser extent biological) weapons programs as a countermeasure to the Israeli nuclear deterrent. These linkages made the proposal of a WMDFZ a rational arms control measure.

The resolution on the Middle East at the 1995 NPT Review and Extension Conference called for “the establishment of an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems.”^[3]

The territory of the zone most probably would be the same as defined for the ME NWFZ, i.e. all League of Arab States members, plus Israel and Iran. The zone should also establish a mutually agreed verification mechanism. This is a very complex issue as most multilateral arms control treaties have their own specific verification organization - the IAEA for the nuclear, the OPCW for the chemical. In the meanwhile, biological weapons do not have an institutionalized verification mechanism, and there is no multilateral treaty to control WMD delivery vehicles, especially ballistic missiles. Therefore, such a zonal arrangement would require a new - combined - verification mechanism or procedure. In addition, due to the specific sensitivities and threat perceptions among the potential member states, a specific mechanism might also be needed. As an example, a WMD verification regime should build on the experience of the Brazilian-Argentine Agency for Accounting and Control of

Nuclear Materials (ABACC), the Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL), the IAEA multi-level set of verification mechanism, and the active and passive quota system included in the Open Skies Treaty (OST).

It should also be taken into account that the Middle Eastern WMDFZ in spite of several years of international efforts has still not been realized. However, since the first proposal for the zone was put forward, most potential member states have joined key multilateral arms control treaties (such as the NPT, the CTBT, the CWC, the BTWC), and some of these treaties came into effect after the ME WMDFZ was first proposed. Consequently, many aspects of the different WMD categories is already covered and verified under other agreements, and, outside of the Middle East region, there seems to be little rationale and/or political appetite to establish further WMDFZs, or to expand existing NWFZs into WMDFZs.

NPT not signed	CTBT (Annex 2) not signed	CTBT (Annex 2) signed, but not ratified	TPNW signed and ratified (in the region)	TPNW signed, but not ratified (in the region)	CWC signed, but not ratified	CWC not signed	BTWC signed, but not ratified	BTWC not signed
India, Israel, Pakistan, North Korea (withdrawn), South Sudan	India, North Korea, Pakistan	Egypt, Iran, Israel, China, US	Comoros, Palestine	Algeria, Djibouti, Libya, Sudan	Israel	Egypt, North Korea, South Sudan	Egypt, Haiti, Somalia, Syria, Tanzania	Chad, Comoros, Djibouti, Eritrea, Israel, Kiribati, Micronesia, Namibia, South Sudan, Tuvalu
4	3	5	2 (out of 68 state parties)	4 (out of the 27 signatories)	1	3	5	10

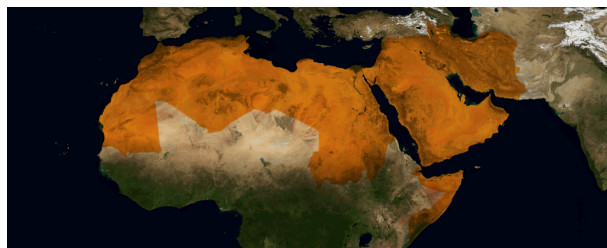
Quiz

View quiz at <https://eunpdc-elearning.netlify.app/lu-06/>

- The detailed development of the concept see in Kelsey Davenport: WMD-free Middle East Proposal at a glance.
[<https://www.armscontrol.org/factsheets/mewmdfz>]
- For more information on the WMD pursuits of these states see: Nuclear Threat Initiative: Countries and Areas.
[<https://www.nti.org/countries/>]
- Para 5. Calls upon all States in the Middle East to take practical steps in appropriate forums aimed at making progress towards, inter alia, the establishment of an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems, and to refrain from taking any measures that preclude the achievement of this objective; Para 6. Calls upon all States party to the Treaty on the Non-Proliferation of Nuclear Weapons, and in particular the nuclear-weapon States, to extend their cooperation and to exert their utmost efforts with a view to ensuring the early establishment by regional parties of a Middle East zone free of nuclear and all other weapons of mass destruction and their delivery systems. Resolution on the Middle East, The Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, NPT/CONF.1995/32 (Part I), Annex Source:
[https://www.unidir.org/sites/default/files/2020-06/1995-05-11_1995%20NPT%20Review%20and%20Extension%20conference%20adopt%20the%20Resolution%20on%20the%20Middle%20East.pdf]

5. Case Study - The debate about a WMD-Free Zone in the Middle East

The History of the Idea of a Nuclear Weapon free zone in the Middle East



North Africa and the Middle East.

NASA Visible Earth, <https://visibleearth.nasa.gov/images/74192/november-blue-marble-next-generation>

The Middle East, the term coined by the European colonizers to denote the territory neighbouring Europe in the south, has never been defined properly. For the purpose of the zone, the Middle East was originally delineated as the territory from Libya in the west to Iran in the east, from Syria in the north and Yemen in the south, but was later expanded to include all Arab League member states, plus Iran and Israel. Although there were suggestions to include Afghanistan, Pakistan and Turkey, for the purpose of the NWFZ/WMDFFZ these have been left outside the official concept of the region.



Map of the Middle East

Max Köhler / EUNPDC eLearning (Public Domain)

The Middle East NWFZ was first proposed in 1974 by Iran and Egypt. However, the complex security situation in the Middle East made the establishment of such a zone impossible to this day. While for several decades it was the Arab/Palestinian-Israeli conflict that was the main obstacle, in the 2000s this has been complemented by the Israel-Iran nuclear controversy. Besides the lack of formal peace between the Arab states and Israel, the other striking feature of the conflict was the asymmetry in capabilities: Israel is believed to have a nuclear arsenal as well as a

chemical and a biological weapons programme. Some – but not all – Arab states have had chemical and biological weapons capability. In realization of this asymmetry Egyptian President Mohamed Hosni Mubarak in 1990 proposed to expand the NWFZ into a zone free of all weapons of mass destruction (WMDFFZ), which was referred to in UNSC Resolution 687 (1991) and then set as an aim by the 1995 NPT Review and Extension Conference. In spite of the fact that the 1995 Resolution on the Middle East calls on the states of the region to join the NPT in a general way only, it has become the main point of reference for any future initiative. Although neither the 2000 nor the 2005 NPT Review Conferences led to a breakthrough, it was the 2010 NPT Review Conference that set five “practical steps” towards the realization of the Middle East zone. It was agreed that a conference on the zone should be organized in 2012.^[1]

However, due to the political events of the year (most of all the presidential campaign and elections in the US) and the differences of opinion by some regional states (first of all Israel and Iran), the conference on the Middle East NWFZ/WMDFFZ had to be indefinitely postponed. The lack of progress on the Middle East zone was expected by many to threaten the outcome of the 2015 NPT Review Conference as well. At the 2015 Review Conference Egypt supported by the Arab League put forward a new proposal in which the UN Secretary General would be the sole authority in charge of convening the conference on the Middle East zone, transferring the issue from the NPT framework to the UN. This way Israel would also be included, and the original sponsors, first of all the US, would lose their responsibility in the setting of the agenda and convening the conference. The proposal also included the establishment of two working groups, one for scope, geographic demarcation, prohibitions and interim measures, and one for verification and implementation mechanisms. The final document draft included elements of the Egyptian proposal (like that the Secretary General should convene the conference by March 1, 2016 and a special representative was to be appointed). However, the US, the UK and Canada did not support the draft. Thus, in the absence of a consensus – among others over the Middle East zone – the final document was not adopted.

The failure of the decision on the Middle East zone put an extra pressure on the 2020 Review Conference, ^[2] where Egypt and the United States agreed on language regarding the Middle Eastern zone free of weapons of mass destruction (WMD), and reaffirmed

the importance of establishing such a zone. The text also acknowledged the developments in the first two sessions of the new conference process on the Middle East zone established by the UN in 2018. The Swiss government, therefore, proposed to put up an open-ended working group to facilitate the dialogue.^[3] At the moment the parties seem to be at a loss regarding how to proceed with the Middle East zone. Arab frustration has increased and there is a sense of waiting. The Israeli position is a sense of satisfaction of having put the issue off at least till the next review conference. Iran feels relatively safe after the nuclear deal and with ally Syria having joined the Chemical Weapons Convention it could support the expansion of the NWFZ concept to that of a WMDFZ, which so far it has not.

1974 · Iranian proposal for a nuclear weapon-free zone in the Middle East

1980 · UN General Assembly supports ME NWFZ

1990 · Egyptian President Mubarak proposes WMDFZ in the Middle East

1991 · UN Security Council Resolution 687 supports Middle East WMDFZ

1991-1995 · Arms Control and Regional Security (ACRS) group meetings

1995 · NPT Review and Extension Conference adopts Middle East WMDFZ resolution

2010 · NPT Review Conference agrees on steps for Middle East WMDFZ

2012 · Planned Middle East WMDFZ conference postponed indefinitely

2015 · NPT Review Conference draft on WMDFZ rejected by US, UK, and Canada

2019 · Regional conference on WMDFZ (except Israel) issues political declaration

2022 · 10th NPT Review Conference affirms progress on Middle East WMDFZ

The Middle East and WMD Programmes: Current Status and Relevant Treaties

It has become obvious that different actors in the Middle East do have very different positions when it comes to the idea of creating a NWFZ in the Middle East. It is, therefore, important to understand the position of the key players, especially Egypt and the Arab League, Iran and Israel. Although not from the region itself, the EU has been very much committed to non-proliferation in the region in recent years, especially, but not only, as part of the Joint

Comprehensive Plan of Action see LU-14 [/1u-14/], as you will see below.

Egypt/Arab League

As the first initiator/supporter of the idea of the Middle East NWFZ, then the WMDFZ, and the non-official leader and spokesman of the Arab states (Egypt has traditionally given the Secretary General of the Arab League except for a brief period), Egypt is frustrated at the failure of the initiatives to achieve a Middle East WMDFZ. The frustration is shared by the other Arab states since their position has been defined to this day by their stance towards Israel, but their capabilities have been shifting away from WMD arsenals and programs: no Arab state has any nuclear weapon program or known biological program either, and Egypt is the last Arab state to be suspected with having remnants of its old CW program.

The Iranian nuclear program has been an added challenge, on the one hand exposing the lack of Arab 'matching' capabilities, on the other hand giving an extra urgency to the issue of the zone.

This urgency was reflected in the Egyptian proposal at the 2015 NPT Review Conference, and its failure increased the Arab frustration again.

Iran

Iran was the first to initiate the idea of the Middle East NWFZ and has supported the plan to this day. Iran was the victim of Iraqi chemical weapon attacks during the 1980-1988 Iran-Iraq war, consequently enthusiastically supported the CWC.

Although at first Iranian behavior seemed hesitant regarding the regional conference called by the 2010 NPT Review Conference, in the close run-up to it (late 2012) Iran announced its participation. While some say Iran announced its readiness only when it was clear that the conference would be postponed, its position as the president of the NAM (Non-Aligned Movement) at the time was an important pressure as well. Although Iran was not enthusiastic about the WMDFZ concept, late 2015 – with its Syrian ally safely within the CWC and the Iranian nuclear deal concluded – supporting the WMDFZ was politically possible.

Israel

The Israeli position to WMD arms control and disarmament has been defined by the "peace first, disarmament afterwards" sequencing (as reflected, among others, in the negotiations in the ACRS group).^[4]

The initiative of the conference on the Middle East NWFZ in 2012 was accepted by the international community in the absence of Israel as it is not a party to the NPT, therefore, was not present in the 2010 Review Conference where the decision was taken.

EU position

The EU supports the 1995 resolution on the Middle East and regrets that the conference on the Middle

East NWFZ/WMD-FZ has not been held yet. It was responsible for the organization of two major international workshops on the zone in Brussels in 2011 and 2012 and a capacity building workshop in 2013 and is ready to promote the issue through similar events in the future.

Article 1 of the COUNCIL DECISION 2012/422/CFSP (23 July, 2012) ruled that „the Union shall support activities in order to further the following objectives: (a) to support the work of the Facilitator for the 2012 Conference on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction; (b) to enhance the visibility of the Union as a global actor and in the region in the field of non-proliferation; ... (d) to identify concrete confidence-building measures that could serve as practical steps towards the prospect of a Middle East zone free of WMD and their means of delivery; ...”

In the EU statement on Nuclear Weapons Free Zones in January 2023 in Geneva, the EU reaffirmed “its full support for the establishment of a Middle East Zone Free of Nuclear Weapons and Other Weapons of Mass Destruction and their delivery systems, as agreed by NPT States Parties”.

While not an official European endeavor, there has also been activity from the scientific community, to bring key actors together in an academic setting to debate their differences in so-called “track 2” or “track 1.5 diplomacy”. For example, between 2010-2014 the self-called “Academic Peace Orchestra Middle East” [<https://academicpeaceorchestra.com/>], an initiative run by the Peace Research Institute Frankfurt in Germany, held a series of conferences/workshops and published some 40 Policy Briefs to contribute to the work of the Facilitator, Finnish Ambassador Jaakko Laajava.

View quiz at <https://eunpdc-elearning.netlify.app/1u-06/>

1. In preparation for the conference and to support the Facilitator, Finnish diplomat Jaakko Lajaava, the Academic Peace Orchestra Middle East project (2011-2014) - under the leadership of Dr. Bernd Kubbig, HSFK/PRIF, Frankfurt - prepared some 40 Policy Briefs on the different aspects of an eventual WMD-FZ in the Middle East. [<https://academicpeaceorchestra.com/>]
2. Due to the COVID-19 pandemic, the 10th NPT Review Conference was held in August 2022.
3. Middle East WMD-free zone - UNIDIR
4. The Arms Control and Regional Security (ACRS) group was one of the five multilateral working groups within the Arab-Israeli peace process (1991-1995).

6. The EU and NWFZ/WMDFZ

Being on the frontline between the two Cold War adversaries, the NATO and the Warsaw Treaty Organization, on October 1957 Polish Foreign Minister Adam Rapacki introduced a plan to the UN General Assembly to establish a nuclear weapon-free zone in Central Europe, including the People's Republic of Poland, the Federal Republic of Germany and the German Democratic Republic. The zone proposal was later extended to include Czechoslovakia. During the Cold War there were other proposals at establishing a NWFZ in some part of Europe (the Balkans, the Mediterranean, the Nordic initiatives), yet the idea of a Central European NWFZ was raised again following the regime changes, especially during the NATO extension process there. Between 1990-1995 Belarus put forward three proposals, however, no European NWFZ/WMDFZ has been established to this day.^[1]

Nevertheless, the withdrawal of the US tactical nuclear weapons deployed in some EU member states in the framework of the NATO nuclear sharing has been raised on a national level among domestic political parties, e. g. in Germany and the Netherlands.

While the European Union supports NWFZs in general, and the establishment of a NWFZ/WMDFZ in

the Middle East in particular, an eventual European NWFZ would have several obstacles. First of all, there are different types of states among the potential members: NWS, NATO NNWS with nuclear weapons on their territory, NATO NNWS which had formerly nuclear weapons on their territory, as well as NATO NNWS with no "history" of nuclear weapons. [For a detailed analysis see Harald Müller et al.: A Nuclear Weapon-Free Zone in Europe ...]

In the course of Russia's war in the Ukraine the eventual possibility of the use or threat of use of nuclear weapons has been raised. Although no nuclear weapons have been used so far, an element included in other bilateral or multilateral agreements, namely, the prohibition of armed attacks on nuclear on nuclear installations, has been clearly violated by Russia. And although it refers to non-European territory, Russia is a signatory to the Protocols of the Pelindaba Treaty, Article 11 of which includes the clear prohibition.

1. Harald Müller – Giorgio Franceschini – Aviv Melamud – Daniel Müller – Anna Péczeli – Annette Schaper: A Nuclear Weapon-Free Zone in Europe: Concept – Problems – Chances. Federal Ministry for Europe, Integration and Foreign Affairs of the Republic of Austria. May 2015, pp. 1-92. Available at bmeia.gv.at (www).

7. Summary and Further Reading

Looking at the development of nuclear-weapon-free zones over the years, there is no other judgement than to call them a success story. Current NWFZs cover the entire Southern Hemisphere and a large part of the Northern Hemisphere. This means almost 40% of the world's population, 56% of the Earth's land area, and the entire seabed – not to mention the Moon and other celestial bodies. All NWFZs share common guiding principles strengthen non-proliferation, the promotion of disarmament and ultimately the call to ban of nuclear weapons.

All prohibit the development, manufacturing, control, possession, testing, or transporting of any type of nuclear explosive device by states-parties and prohibit the stationing of any such devices within the zone by any other states. With the exception of the earliest NWFZ treaty, the Tlatelolco Treaty, all NWFZs require their states-parties to “undertake not to provide source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material for peaceful purposes to: (i) any non-nuclear-weapon State unless subject to the safeguards required by Article III.1 of the NPT, or (ii) any nuclear-weapon State unless subject to applicable safeguards agreements with the International Atomic Energy Agency (IAEA).” While the earlier treaties do not speak of the security aspects of the possession of nuclear material, Both the Pelindaba Treaty and the Semipalatinsk Treaty have specific articles (Art. 10 and Art. 9. respectively) on the physical protection of nuclear material and installations.

They support international efforts for peace and security through the denuclearization of certain areas and the consolidation of disarmament norms and restrict the manoeuvring capability of nuclear-weapon-states with regards to the stationing and the use of nuclear weapons. At the same time, their states-parties benefit from the negative security assurance of NWSs and from the reinforced right to the peaceful uses of nuclear energy.

Zonal arrangements also facilitate technical cooperation among nations, and constitute important confidence-building measures in conflict-torn regions, promote environmental protection by outlawing nuclear tests and by restricting the dumping of radioactive waste in the oceans.

However, what might be most important: The establishment of NWFZs is a regional, bottom-up approach to strengthen the global nuclear non-proliferation regime, with regional stake-holders being the main driving forces, taking matters in their own hands rather than being objects to great power politics.

However, many key challenges for future and existing NWFZs remain.

While there are a number of initiatives for future zones, including South Asia, the Middle East, the Korean Peninsula, Europe, and the Arctic, most seem to have no chance of being realized at the moment, given the decline in great power relations, as well as increasing regional disputes. Even the most advanced, the NWFZ for the Middle East, is stuck in regional rivalries and power struggles of some actors.

But even for those existing, challenges remain, as all of them include territories where states-parties have their own nuclear weapons capabilities and in some cases they also host the nuclear weapons of extra-regional states. Finally, the growing threat of nuclear terrorism and the proliferation of nuclear weapons on the black market is a major challenge for the NWFZ, which means that security and safety issues are becoming increasingly important.

Further readings

- Vignard Kerstin (ed.): *Nuclear-weapon-free zones*. Disarmament Forum 2011/2. United Nations Institute for Disarmament Research. pp. 1-64. Available at unidir.org [<https://www.unidir.org>]
- Harald Müller – Aviv Melamud – Anna Péczeli: *From nuclear weapons to WMD: the history and development of regional 'free zone' arrangements*. EU Non-Proliferation Papers No. 31, September 2013. pp. 1-19. Available at sipri.org [<https://www.sipri.org>]
- Harald Müller – Giorgio Franceschini – Aviv Melamud – Daniel Müller – Anna Péczeli – Annette Schaper: *A Nuclear Weapon-Free Zone in Europe: Concept – Problems – Chances*. Federal Ministry for Europe, Integration and Foreign Affairs of the Republic of Austria. May 2015, pp. 1-92. Available at bmeia.gv.at [<https://www.bmeia.gv.at>]
- Erzsébet N. Rózsa: *Weapons of Mass Destruction in The Middle East and North Africa*. Menara Working Papers No. 24, November 2018. Available at menaraproject.eu [<https://www.menaraproject.eu>]

Relevant external links

United Nations Office for Disarmament Affairs:
Nuclear-Weapon-Free Zones
[<https://www.un.org/disarmament/wmd/nuclear/nwfz/>]

Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean
[<https://treaties.unoda.org/t/tlatelolco>]

South Pacific Nuclear Free Zone Treaty
[<https://treaties.unoda.org/t/rarotonga>]

Treaty on the Southeast Asia Nuclear Weapon-Free Zone [<https://treaties.unoda.org/t/bangkok>]
African Nuclear-Weapon-Free Zone Treaty [<https://treaties.unoda.org/t/pelindaba>]
Treaty on a Nuclear-Weapon-Free Zone in Central Asia [<https://treaties.unoda.org/t/canwzfz>]

Regularly updated information on NWFZs

Kelsey Davenport: Nuclear-Weapon-Free Zones [<https://www.armscontrol.org/factsheets/nwzfz>]
Nuclear Threat Initiative - Treaties: Nuclear Weapons: NWFZs [<https://www.nti.org/education-center/treaties-and-regimes/>]
Middle East WMD-free zone - UNIDIR [<https://unidir.org/programme/middle-east-weapons-of-mass-destruction-free-zone/>]

Terms

Negative Security Assurances (NSAs)

NSAs, sometimes referred to as negative security assurances, are a binding commitment by a state that possesses nuclear weapons (a so-called Nuclear Weapon State, NWS) to a Non-Nuclear Weapon State (NNWS) not to use or threaten to use nuclear weapons against the NNWS.