

On the Proposed Zone in the Middle East

An area free of Weapons of Mass Destruction[†]

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Resumé

Förslaget att skapa en kärnvapenfri zon i Mellanöstern fördes upp på världssamfundets dagordning 1974. Förslaget utvidgades 1990 till att omfatta en zon fri från alla massförstörelsevapen. Det har varje år rekommenderats av FN:s generalförsamling, sedan 1980 dessutom enhälligt. Dess politiska utveckling sedan dess redovisas. Relevanta komponenter för att skapa den föreslagna zonen analyseras. En struktur för ett avtal om en sådan zon föreslås. Två ur kärnvapensynpunkt centrala stater, Iran och Israel, kommenteras särskilt. Denna studie har sitt ursprung i ett projekt initierat 1988 av FN:s generalsekreterare.

THE NON-PROLIFERATION and successive elimination of weapons of mass destruction has been a priority issue in world security politics for many years, in the United Nations, in the European Union, in the League of Arab States, and in most other international and security-related organisations as well as among individual states. Nuclear weapons used to be a dominant global factor during the Cold War, but after the end of the Cold War and its superpower rivalry, non-proliferation of weapons of mass destruction has become more linked to regional situations and conflicts, in Northeast Asia, in South Asia and in the Middle East, although still attracting global concern. As a concept, weapons of mass destruction have more and more replaced nuclear weapons.

The Middle East is a large region with many states and hosting several political conflicts which occasionally and temporarily have turned into military ones. The eastern Gulf area, the Israel-Palestine area, and the western Magreb area all have their conflicts not necessarily directly inter-

linked. But whenever weapons of mass destruction are involved, such as when chemical weapons were used in the Iran - Iraq war in the 1980s or recently in Syria, or just rumoured to exist in the area, it will trigger the concern of the whole world. The strongest example of this is the invasion of Iraq in March 2003, with the purpose of removing weapons of mass destruction thought to be there. Another example is the sanctions imposed on Iraq by the UN Security Council following the Gulf War in 1991. A third is the concern widely expressed about Iran's current development of a nuclear power industry. Similar concerns were also expressed in the past regarding the nuclear activities of Algeria and Libya. Israel's nuclear policy of ambiguity has been the subject of concern for decades.

The reverse side of the coin is that most states in the Middle East over the years became parties to several or all of the arms control treaties of global application restricting or prohibiting weapons of mass destruction. Being a party to such treaties

does mean assuming a commitment to implement the provisions vis-à-vis the whole world, not only in relation to regional neighbours.

The issue of weapons of mass destruction in the Middle East is thus a legitimate concern of the whole world, while the prime concern of the regional actors is their regional neighbours. The possible possession of weapons of mass destruction by some of the states in the region or just rumours that this might be so, or prospects that some may acquire weapons of mass destruction in the future, will always dominate the security analysis both in the region and by the outside world, thereby overshadowing other relevant issues. In this connection, it should also be noted that weapons of mass destruction could be brought into the area or into its adjacent sea areas by outside states.

Should nuclear weapons be used in the Middle East, it would certainly provoke immediate involvement of extra-regional major powers. Therefore, it is not correct to compare any possible regional balance of power, including such weapons, in the region with the Cold War's East-West balance of terror. The one who uses nuclear or other weapons of mass destruction in the region will not dominate the world the next morning, however disastrous the local effects may be. Instead, and recognising the attitude of the world community towards weapons of mass destruction, the political situation created by such use could not serve any conceivable interest for the aggressor. An example in point is the reaction of the world to the recent and rather limited use of chemical weapons in Syria on 21 August 2013. The conclusion is that possible weapons of mass destruction, particularly the nuclear ones, are useless for an intelligent solution of conflicts in the region.

However, if all weapons of mass destruction were to be permanently removed from the area, preferably by legal treaty commitments subject to transparency and verification, it would be possible to regulate the inherent regional problems and conflicts on their own merits in the regional setting and by reasonable means.

An overall solution to the problem of creating such a permanent removal from the whole of the Middle East could theoretically be achieved in many ways. However, there is a way that is both obviously direct, fundamental in nature, and politically well prepared: the establishment of a zone free of weapons of mass destruction in the Middle East (WMDFZME).

As early as in April 1962, this idea of a nuclear weapons-free zone in the Middle East (NWFZME) was discussed in public by an Israeli NGO, *The Committee for the Denuclearization of the Middle East*. A year later, Egypt presented views on that same idea in the UN General Assembly. A decade later, in 1974, the idea was permanently introduced on the agenda of the General Assembly by the Shah of Iran supported by Egypt.² The UN General Assembly has every year since endorsed the proposal, since 1980 unanimously, including the support of all states in the region.³ In 1990 the president of Egypt widened the scope of the proposal to a zone free of weapons of mass destruction.⁴ Today, the expansion of the Middle East zone concept to include all weapons of mass destruction, and also their means of delivery, has been politically accepted. In May 1995, the Review and Extension Conference of the parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) adopted a resolution on the Middle East recognizing that the current peace process contributes to "a Middle East zone free of nuclear weap-

ons as well as other weapons of mass destruction” and calling upon all states in the Middle East to take practical steps towards “the establishment of an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems”.⁵ The resolution was reaffirmed by the 2000 NPT Review Conference.⁶

A very important aspect is the establishment, in April 1996, of a nuclear-weapon-free zone in Africa.⁷ Under that treaty, about half the Middle East as defined below – from Egypt in the west to Mauritania and south to Sudan – will be both nuclear weapons-free and subject to nuclear-weapon power guarantees. The denuclearisation of the African part of the prospective NWFZME could be considered as being the first step in a step-by-step approach to the zone-building.

At a summit meeting in Paris, on 13 July, 2008, 43 heads of state and government representing all 27 member states of the European Union and 16 Mediterranean states unanimously agreed to institute a Union for the Mediterranean and to “pursue a mutually and effectively verifiable Middle East Zone free of weapons of mass destruction”.⁸

An interesting initiative along the same lines is the proposal to establish a weapons-of-mass destruction-free zone in the Gulf area (GWMDZ) being researched by the Gulf Research Centre in Dubai, UAE, and politically supported by the member states of the Gulf Cooperation Council. The Centre also organized successful Track II conferences on the subject.⁹ This zone concept includes nine states, i.e. Bahrain, Kuwait, Iran, Iraq, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and Yemen. If this project is established as a second step to a Middle East wide zone, on-

ly Israel, Jordan, Lebanon, and Syria will remain to be included in order to make a WMDFZME complete.

The WMDFZME proposal should now be more than ripe for implementation. In addition, as the history of other nuclear weapons-free zones already established shows, a zone arrangement is a very flexible instrument that can accommodate many political and geographical peculiarities.

The remaining question is when to act. All states in the region except Israel prefer an early establishment in order to pave the way for the solution of various other problems and conflicts. Israel maintains that such a zone arrangement should crown the final and successful conclusion of the peace processes. As Israel’s concerns are substantial, a possible change of attitude on their part has to be compensated by substantial security privileges. Only then may the Middle East weapons of mass destruction be removed and other issues uncovered for solution.

The United Nations’ Expert Study

In the autumn of 1988, the annual UN General Assembly resolution, then initiated by Egypt, requested the Secretary General to “undertake a study on effective and verifiable measures which would facilitate the establishment of a nuclear weapons-free zone in the Middle East”.¹⁰ The Secretary General’s report¹¹ was prepared before Iraq’s invasion of Kuwait in August 1990, but submitted to the UN General Assembly after that invasion. Despite these changed circumstances, it was welcomed and adopted by consensus that same year.¹²

The UN report, which is still politically valid and still frequently referred to as a

background document, did not propose explicit language for a zone treaty. But it did suggest a catalogue of measures in order to build confidence and as steps to prepare for a regime that would finally establish a nuclear weapons-free zone. Obviously, the establishment of such a zone would require cooperation not only among the prospective zonal states but also between them and nuclear weapon states and other outside states.

Among confidence-building measures recommended by the report were a regional nuclear test ban, the application of International Atomic Energy Agency (IAEA) safeguards on nuclear facilities in the area not covered at present, accession to the Non-Proliferation Treaty (NPT) by states currently non-parties, and providing for transparency regarding all major nuclear projects in the area. International safeguard issues involved have been explored by the IAEA.¹³

The UN report further suggested that nuclear-weapon powers could extend negative nuclear security assurances to prospective zonal states and commit themselves not to station nuclear weapons in the area. Any outside state could declare the past, current, and future supply of nuclear material and equipment to recipients in the prospective zonal area in order to shed light on projects that might create suspicions about a potential military role.

The report recommends that outside support for peaceful nuclear activities in the area would be more appropriate if multilateral or regional in character. The institution of international facilities for nuclear waste disposal would help to ensure against the diversion of fissionable material for military purposes.

Finally, the UN report refers to the view, widely held in the Middle East, that verifi-

cation procedures must be more far-reaching than those currently implemented under the NPT.

Although negotiations to overcome the conflicts in the Middle East have proved to be complex and difficult, the consultations undertaken when preparing the UN report in the summer of 1990 showed a surprising measure of agreement on fundamental matters among the states in the region, including Arab states as well as Iran and Israel. These views were expressed before Iraq's invasion of Kuwait, the adoption of the Comprehensive Test Ban Treaty and the new strengthened IAEA safeguard procedures,¹⁴ the indefinite extension of the duration in force of the NPT and the adoption of modernized security guarantees by the UN Security Council¹⁵ in 1995.

The Weapons of Mass Destruction Commission (WMDC) report

In June 2003, the Swedish government, responding to an invitation from the United Nations, decided to set up an international and independent expert panel to consider and summarize the world situation regarding weapons of mass destruction and to recommend realistic proposals aimed at the greatest possible reduction of the dangers of such weapons. Dr Hans Blix was appointed to be the panel's chairman.¹⁶ The Commission issued its report on 1 June, 2006.¹⁷

The Commission report resulted in 60 specific recommendations covering the whole range of weapons of mass destruction plus a number of organizational proposals. The report considered the establishment of a zone free of weapons of mass destruction in the Middle East as one of three top priority issues.¹⁸

As regards recommendations specifically addressing the Middle East, the report recommends:

- The resolution adopted by the Nuclear Non-Proliferation Treaty extension and review conference in 1995 on the Middle East as a zone free of nuclear and all other weapons of mass destruction, should be implemented by all parties to the Non-Proliferation Treaty (recommendation 2);
- Negotiations must be continued to induce Iran to suspend any sensitive fuel cycle-related activities and to ratify the 1997 Additional Safeguards Protocol. The international community and Iran should build mutual confidence through a number of measures, i.a. the reliable supply of fuel-cycle services, suspending or renouncing sensitive fuel-cycle activities by all states in the Middle East, and assurances against attacks and subversion aiming at regime change (6);
- The nuclear-weapon states being parties to the Non-Proliferation Treaty should provide legally binding security assurances to non-nuclear weapon parties. The states not party to the Non-Proliferation Treaty that possess nuclear weapons should provide such assurances separately (7);
- States should make active use of the IAEA as a forum for exploring various ways of reducing proliferation risks connected with the nuclear fuel cycle (8);
- All states should support continued efforts to establish a zone free of weapons of mass destruction in the Middle East as part of the overall peace process. Steps can be taken even now. As a confi-

dence-building measure, all states in the region, including Iran and Israel, should commit themselves to a verified arrangement not to have any enrichment, re-processing or other sensitive fuel-cycle activities on their territories (12);

- All nuclear-weapon-states being parties to the Non-Proliferation Treaty must take steps towards nuclear disarmament, as required by the treaty. While Israel, India, and Pakistan are not parties to the Non-Proliferation Treaty, they, too, have a duty to contribute to the nuclear disarmament process (20);
- Every state that possesses nuclear weapons should make a commitment not to deploy any nuclear weapon, of any type, on foreign soil (22);
- All states that have not already done so should sign and ratify the Comprehensive Nuclear-Test-Ban Treaty unconditionally and without delay (28);
- All states possessing nuclear weapons should commence planning for security without nuclear weapons (30).

Beside these recommendations, the WMDC report includes many recommendations regarding the promotion of treaties and regimes of global application, thus having more or less far-reaching relevance for the states in the Middle East as well.

Further studies

The UN report was later followed up to take into account the Mubarak plan.¹⁹ The issue of establishing a nuclear weapons-free zone in the Middle East has also been researched by the Egyptian scholar and diplomat Mahmoud Karem.²⁰ Important analytical contributions were made in 1997

by Shai Feldman and Abdullah Toukan,²¹ in 1998 by Ibrahim Karawan and Gerald Steinberg,²² and in 2004 by Ephraim Asculai.²³ The effect of a comprehensive test ban on nuclear proliferation risks in the Middle East, including Iran, Iraq, and Israel, has been analysed by Eric Arnett.²⁴ In 2004, the United Nations Institute for Disarmament Research (UNIDIR) in cooperation with the League of Arab States published an ambitious symposium report on the Middle East zone issue.²⁵

The recent political development

At the 2010 Review Conference of the NPT parties, the resolution adopted on the Middle East in 1995²⁶ was discussed again. The conference took note of the reaffirmation of the five nuclear weapon states recognized by the NPT of their commitment to a full implementation of the resolution. Regrets were expressed over the up to then slow process of implementation. The conference endorsed a programme of practical steps including that "the Secretary-General of the United Nations and the co-sponsors of the 1995 resolution (Russian Federation, UK, and USA depositary governments of the NPT,) in consultations with the states of the region, will convene a conference in 2012 to be attended by all states in the Middle East, on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction on the basis of arrangements freely arrived at by the states of the region and with the full support and engagement of the nuclear-weapon states". The terms of reference of the conference should be the 1995 resolution.²⁷ It was later decided that the conference would take place in Finland, possibly in the autumn of 2012, and that a ranking

Finnish diplomat would serve as the coordinator of the conference.²⁸

Approaching the envisaged conference to be summoned by the UN Secretary-General in 2012, further publication and discussion were organized. The Stockholm International Peace Research Institute (SIPRI) issued an updated version of its Middle East report.²⁹ The EU Non-Proliferation Consortium held an expert seminar³⁰ devoted to the zone issue in Brussels, Belgium, in July 2011, and the Landau Network-Centro Volta held another similar seminar in Como, Italy, in November 2011. Further expert seminars were organized by several others.³¹ Issues related to the scheduled conference has since 2011 been discussed in various journals and publications, such as the "Arms Control Today carrying several articles relevant to the upcoming conference³² and the "Policy Brief for the Middle East Conference on a WMD/D v s Free Zone"³³ – a track II initiative. Ambitious reports were published by the University of New York in April 2012³⁴ and by the Arab Institute for Security Studies in Amman in October 2012.³⁵

However, preparations for the conference run into difficulties. In late November 2012, the co-sponsors Russia, the UK, and USA, issued press releases indicating that the conference would be postponed because some states in the region had at that time not agreed to participate. Still at the time of writing it is unclear when in the future the conference could be summoned again.

The zone experience up to now

The first proposal on regional limitation of nuclear weapons was introduced by the Soviet Union in the United Nations in

1956.³⁶ It referred to Central Europe and was proposed by one superpower directed towards its adversary superpower. A year later, Poland proposed the so-called Rapacki Plan on the permanent absence of nuclear weapons from the entire territory of several states in Central Europe.³⁷ The latter proposal was thus made by one of the states within the prospective zone region.

At that time, two different approaches to military denuclearization were pursued in parallel. One was the open-ended and global non-proliferation approach which started with the "Irish resolution"³⁸ and finally lead to the adoption, in 1968, of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).³⁹ The purpose of that treaty was to prevent the number of nuclear weapon states to grow beyond the five existing at the time. It was recognized that the risk of an outbreak of nuclear war would grow dangerously greater if the number of "fingers on the trigger" would be permitted to increase.

The other approach was the regional or zonal one. An important difference between the two approaches is that while the NPT prohibits non-nuclear weapons parties from "controlling" nuclear weapons but permits them to host nuclear weapons of others in their territories, zonal agreements prescribe the complete absence of nuclear weapons from the territories of a defined region whoever controls them.

The fact that today (October 15th, 2013), all states of the world but four, the five recognized nuclear-weapon states included, are parties to the NPT is a most important basis for the discussion of the prospects for the establishment of further nuclear weapons-free zones (NWFZ) in the future. Indeed, the NPT (article VII) encourages such an establishment.

The first result of the zonal approach was the Antarctic Treaty agreed already in 1959 and declaring the White Continent a demilitarized zone and by implication also a zone free of nuclear weapons.⁴⁰

The first major achievement regarding a "densely populated" area⁴¹ was the agreement in 1967 by states in Latin America and the Caribbean to create a nuclear weapons-free zone on their continent, the Treaty of Tlatelolco.⁴²

A similar contribution was made in 1985, when the countries who were members of the South Pacific Forum agreed to establish a nuclear-free zone ranging from Latin America to the West coast of Australia and from the Antarctic area to the Equator; the Treaty of Rarotonga.⁴³

In 1992, the Korean peninsula was declared denuclearized by the two Korean states.⁴⁴ That agreement, however, has not yet been implemented. Since then, the DPRK has test-fired three nuclear explosive devices.

An additional nuclear weapons-free zone treaty was signed in Bangkok in December 1995 by the members and potential members of the Association of South-East Asian Nations (ASEAN).⁴⁵

In 1995, Mongolia declared itself a single state nuclear weapons-free zone, and in 1999 adopted national legislation defining and regulating that status. In 2000, Mongolia got its nuclear weapons-free status endorsed by the UN General Assembly.⁴⁶

In April 1996, the Treaty of Pelindaba on a nuclear weapons-free zone in Africa was signed in Cairo at a meeting of the Organization of African Unity (OAU).⁴⁷

In 2006, five former Soviet republics now independent states – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan – agreed to establish a nuclear weap-

ons-free zone in Central Asia (NWFZCA)⁴⁸ – the Semipalatinsk Treaty. The zone is separated from Mongolia by a narrow corridor, only 40 kilometres wide, where the nuclear-weapon states of China and Russia meet.

A new idea was introduced in 1982 — during the Cold War — with the proposal for the creation of a corridor in Central Europe from which tactical or battlefield nuclear weapons would be withdrawn. Unlike earlier proposals, the area of application would be unrelated to national borders of the states involved and no security assurances would apply. The rationale of the proposed measure was reducing the risk of such weapons becoming immediately involved in any conflict or incident by geographically separating adversaries' tactical or battlefield nuclear weapons in the area.⁴⁹ Today, however, the specific proposal for such a corridor in Central Europe has become irrelevant due to the dissolution of the Warsaw Pact and the reunification of Germany. This same development resulted, however, in a treaty provision that no nuclear weapons are to be stationed in the territory of the former German Democratic Republic, in fact defining a nuclear weapons-free corridor in central Europe.⁵⁰

Many treaties of an arms control nature applying in various parts of the world have been concluded since the 17th century⁵¹ including a number of demilitarised zones according to treaties concluded long ago, most of them before the atomic bomb was invented. Among such areas are a number of islands in the Mediterranean as well as in the Baltic and Arctic seas. By implication, such areas should today be considered nuclear weapons-free as well.

A number of proposals which never materialized, however, have been made for the creation of nuclear weapons-free zones in

many other regions of the world, including South Asia, the Middle East, and various parts of Europe. The possibility of including international sea areas in proposed nuclear weapons-free zones has also been envisaged, such as the Baltic Sea, the Mediterranean, the Indian Ocean, the South Atlantic, and the circumpolar Arctic; such arrangements would require a special legal basis taking into account relevant provisions of international laws of the sea.

Two United Nations expert studies have contributed to establishing the scope and the frame of the NWFZ concept.⁵² A thorough discussion within the United Nations Disarmament Commission 1997 - 1999 resulted in a set of recommendations for zone-making adopted on 30 April 1999 and later unanimously endorsed on 1 December that same year by the UN General Assembly.⁵³

In 1990, President Mubarak of Egypt proposed the establishment of a zone free of all types of weapons of mass destruction in the Middle East.⁵⁴ This proposal expanded the scope of the NWFZ concept regarding the Middle East, a formula that has afterwards been used in relation to other regions as well.

Reference should finally be made to the possibility envisaged in the humanitarian laws of war to establish by agreement temporarily demilitarized zones.⁵⁵

Sometimes when reference is made to nuclear weapons-free zones, two other treaties are mentioned, the contents of which are theoretically close to the zone concept. One is the Outer Space Treaty⁵⁶ of 1967 prohibiting the placement of nuclear weapons and other weapons of mass destruction in satellite orbit around the Earth and on the moon and other celestial bodies. The latter could theoretically thus be considered to be nuclear weapons-free. The other is the Sea Bed Treaty⁵⁷ of 1971 prohibiting

the emplacement of nuclear weapons and other weapons of mass destruction on the sea bed, which, likewise, could be considered a nuclear weapons-free area.

All in all, the eight major nuclear weapons-free zones established thus far, cover more than half of the world's landmass (74 % of all land outside of nuclear-weapon state territory), including 99 % of the Southern Hemisphere land areas, while excluding most sea areas. They encompass 120 states (out of some 196) and 18 other territories. Some 1.9 billion people live in the zones. The remaining 26 % outside the nuclear weapons states include primarily Canada and Greenland in the Western Hemisphere, and Europe, the Asian part of the Middle East, South and North Eastern Asia of the Old World. And, not to be forgotten, almost all seas and oceans covering almost 70 % of the surface of the earth.

Which are the Weapons of Mass Destruction, and what is Mass Destruction?

Traditionally, nuclear weapons have been referred to an exclusive category of weapons based on their surprise showdown in Hiroshima on August 6th, 1945, featuring enormous destruction caused by a single weapon and the new effect of radioactive fallout. Later, a category of "weapons of mass destruction" has been used as a standard concept in strategic and security analysis, also including chemical and biological weapons and the means of their delivery. The traditional concept of nuclear weapons-free zones has been replaced by zones free from weapons of mass destruction. The mandate of the "Weapons of Mass Destruction Commission" appointed by the government of Sweden in 2004 reflects this conceptual development.

The first definition of the concept of weapons of mass destruction was outlined by the UN Commission for Conventional Armaments on 13 August 1948 as "atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above"⁵⁸ or expressed in modern terminology as nuclear, biological, chemical, and radiological weapons, or weapons with similar effects. It should be noted that this definition was indirect as the mandate of the UN commission was to discuss conventional weapons arms control and there was a need to define away weapons irrelevant for them.⁵⁹

Two attempts to define in broad terms the concept of "mass destruction" was made in 1977. The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD)⁶⁰ prohibits certain means of warfare "having widespread, long-lasting or severe effects" (Art. I:1). An authoritative interpretation defined 'widespread' as "encompassing an area of the scale of several hundred square kilometres"; 'long-lasting' as "lasting for a period of months, or approximately a season"; and 'severe' as "involving serious or significant disruption or harm to human life, natural and economic resources or other assets".⁶¹ The 1977 Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) refers to "widespread, long-term, and severe damage to the natural environment" (Arts. 35:3 and 55:1).⁶² The similar wordings of the ENMOD Convention and Protocol I were not intended to coin-

cide but were independently drafted as two separate concepts.

None of the multilateral arms control treaties of global application concluded so far contain a physical definition of "nuclear weapons". In the regional Treaty of Tlatelolco establishing the nuclear weapons-free zone in Latin America and the Caribbean, an attempt is made to elaborate a definition in its Article 5 without succeeding to fully clarify the concept.⁶³ The Rarotonga (Art. 1c), the Pelindaba (Art. 1c) and the Semipalatinsk (Art. 1b) treaties establishing nuclear weapons-free zones in the South Pacific, Africa and Central Asia, respectively, include in their general definitions also unassembled or partly assembled nuclear weapon devices. So far, a general understanding of what a nuclear weapon is has been accepted as sufficient for strategic analysis and drafting of arms control treaties. Sometimes, it has been discussed whether the concept of nuclear weapon would relate to just nuclear warheads, or to all nuclear explosive devices including those intended for peaceful purposes - so far a theoretical possibility - as is the case of the Rarotonga, Pelindaba, Bangkok, and Semipalatinsk treaties, or whether to also include the delivery vehicles carrying nuclear warheads, which is obvious in strategic analysis but not the case in these treaties.

As to the "biological and toxin weapons", the 1972 Biological Weapons Convention⁶⁴ does not include any explicit definition of prohibited agents. The World Health Organization (WHO) concluded in 1970, however, that biological agents are those that depend for their effects on multiplication within the target organisms, and that toxins are poisonous products of organisms not able to reproduce themselves.⁶⁵ The biological and toxin agents are cen-

tral to the analysis as a variety of delivery means, overt and covert deployment, and national and sub-national aggressors have to be considered.

The concept of "chemical weapons" is defined in great detail in the Chemical Weapons Convention⁶⁶ of 1993. Its Article II elaborates definitions of chemical weapons, toxic chemicals, toxic agent precursors, key components, old chemical weapons, riot control agents, etc., further specified in its Annex on Chemicals. The need for a detailed definition was prompted by the fact that the chemical industry produces large amounts of similar chemical substances for legitimate civilian use. The use in war of chemical agents on a limited scale has been known since the beginning of history. Attempts were made in the 19th century to prohibit such use by international agreement.⁶⁷ But it was during the First World War that for the first time such use began on a massive scale. The combination of industrial production of agents and greatly improved transport capability provided the tools for mass destruction. The general public was horrified and a political basis emerged for a modern and general prohibition.

The idea of "radiological weapons" - to contaminate enemy forces and territory with deadly radiating material - is today considered impractical and no international convention prohibiting such weapons has been concluded so far. The amount of radioactive material necessary for having a military meaning must be so heavily shielded that it could hardly be moved to the enemy, or, if unshielded, it will kill the people handling the "weapons" before they have moved them to the enemy. The related measure of prohibiting attacks on nuclear reactors or other nuclear facilities potentially resulting in spreading ra-

radioactive material on a mass destruction scale has been subject to negotiation but no comprehensive global agreement has been reached. The African nuclear weapons-free zone treaty includes such a prohibition (Art. 11), however, as does a bilateral agreement between India and Pakistan of 1988.⁶⁸ In June 1977, an Additional Protocol to the Geneva Conventions on the humanitarian laws of war was agreed upon including provisions on the “protection of works and installations containing dangerous forces” such as dams, dykes, and nuclear electrical generating stations.⁶⁹ The Protocol indicates that attacks on certain dams, dykes, and nuclear reactors could result in effects of mass destruction.

The idea of radiological weapons has lately again been focussed on, now labelled “dirty bombs” carrying radioactive material. The use of such bombs presumes that the amount of radioactive material used would be too small to create material effects of mass destruction, but could certainly create panic and similar psychological effects if deployed against an uninformed public.

In recent years, long-range missiles have frequently been considered related to weapons of mass destruction both as carriers of warheads of mass destruction and as instruments of long- distance surprise attacks. In 1987, seven western industrialized states agreed to establish “Guidelines for Sensitive Missile-Relevant Transfers” or the “Missile Technology Control Regime” (MTCR) as it is now usually called. Today, 34 states have adopted these guidelines and become members of the regime. The common guidelines on exports specify what missile equipment and technology should be restricted in order to prevent the proliferation of delivery vehicles for weapons of mass destruction. The regime focus-

es on missile systems including both ballistic missiles and cruise missiles with a range exceeding 300 kilometres and with a payload capacity exceeding 500 kilograms.

The UN Security Council resolution on Iraq,⁷⁰ adopted following the 1991 Gulf War, includes specifications on weapons of mass destruction. Besides nuclear (Op. 12), chemical, and biological weapons (Op. 8a), the resolution also addresses “ballistic missiles with a range greater than 150 kilometres” (Op. 8b). The short range compared to the MTCR regime was due to the geographically short distances in the Middle East.

An international regime covering the non-proliferation efforts regarding ballistic missiles usable for delivering weapons of mass destruction was agreed upon at a conference in The Hague, the Netherlands, in November 2002.⁷¹ The regime is politically rather than legally binding for the parties, but does not mention any physical specifications except the concept of ballistic. It does, however, oblige them to execute considerable transparency regarding their missile activities and programmes.

Obviously, the nuclear weapons are the most dangerous ones among the mass destruction weapons. But they are also the most difficult for a newcomer to acquire. Biological means of warfare could create widespread damage, but many of the contagious agents have the potential disadvantage of striking back in an uncontrollable way. Chemical weapons are the smallest sibling, although the oldest one. While some chemical agents are most effective against a single individual victim, large amounts are required for producing an effect of mass destruction. They are, on the other hand, relatively easy to manufacture.

In 1977, when the treaty prohibiting “new weapons of mass destruction”

(ENMOD) was agreed, a number of fancy ideas of possible future weapons and methods of warfare was mentioned, such as the creation of artificial flooding rainfalls and the turning of the earth's axis to move the North Pole to the location of the enemy.⁷² So far, this initiative has had no practical effect.

It should be noted that mass destruction effects could be inflicted upon geographically very small countries also by other means than the use of recognized weapons of mass destruction, such as, for instance, massive conventional attack and invasion. There are seven such small states in the prospective zonal area of the Middle East, i.e. Bahrain (0.717 thousand square kilometres), Comoros (1.862), Lebanon (10.452), Qatar (11.521), Kuwait (17.818), Israel (22.145), and Djibouti (23.200),

The possibility that terrorists may use weapons of mass destruction, especially nuclear weapons, with potentially disastrous effects, cannot be excluded. An increased number of states able to manage nuclear explosive technology and the availability of large amounts of surplus highly enriched Uranium 235 have made this new threat a reasonably realistic one, if countermeasures are not taken in time. So far, no unauthorized nuclear explosion has occurred in the world. This possibility has been analysed by several authors.⁷³

The Geographical Middle East Concept

The Middle East is a well-known and traditional geographical concept used in everyday political discussion. Its geographic scope, however, may vary with the purpose of the analysis. Different definitions have been used for different purposes.

One definition related to the issue of non-proliferation of nuclear weapons was introduced in 1989 by the International Atomic Energy Agency (IAEA) when discussing the application of safeguards in relation to the Non-Proliferation Treaty (NPT) or a nuclear weapons-free zone in the Middle East, i.e. "the area extending from the Libyan Arab Jamahiria in the West, to the Islamic Republic of Iran in the East, and from Syria in the North to the People's Democratic Republic of Yemen in the South".⁷⁴ This definition was later found to have a somewhat limited scope for the purpose. The current understanding as expressed in various official UN documents is rather that the Middle East zonal area should encompass "all states members of the League of Arab States (LAS⁷⁵), the Islamic Republic of Iran and Israel".

This area includes the actors central to the specific conflicts of the Middle East. The most publicized is the Arab-Israeli conflict. But there are also others involving many of the same states as demonstrated by the recent examples of the Iran-Iraq war, the Gulf War, and the Polisario conflict. Since 2011, the "Arabic Spring" has created internal political instability in several Middle Eastern states.

Geography clearly makes Djibouti, the Comoros, Somalia and the Sudan peripheral in this connection, but their membership of the League of Arab States makes their participation in any regime for the Middle East politically feasible.

The current UN definition excludes Turkey, Cyprus and Malta for good reasons. Turkey was for centuries the central power in the Middle East but is today a NATO member state where nuclear weapons are still stationed. Cyprus and Malta do not host any such weapons, although there are two British military bas-

es on Cyprus. All three states are participating in the Confidence and Security-Building Measures (CSBM) regime of the Organisation on Security and Cooperation in Europe (OSCE). Cyprus and Malta are members of the European Union. Spain is obviously outside the scope of the Middle East concept despite its possession of a few small enclaves on the western part of the North African coast.

Afghanistan and Pakistan border Iran to the west and their inclusion in a Middle East regime has sometimes been suggested as desirable. However, their main interests focus in other directions.

The same can be said about the newly independent states, the former Soviet republics of Armenia, Azerbaijan, and Turkmenistan also bordering the area. Among these, Turkmenistan recently became part of the nuclear weapons-free zone in Central Asia (NWFZCA) involving five former Soviet republics now independent states.

With those understandings, a definition of the Middle East would be self-contained, include all essential states, and give the area politically established limits for the purpose of an analysis of the weapons of mass destruction issues.

Adjacent to the basic Middle East area are several sea areas, where the United Nations Convention on the Law of the Sea (UNCLOS) applies.⁷⁶ Both the Red Sea and the Persian Gulf are enclosed within the area. Parts of the area have coasts in the Mediterranean, the Atlantic, and the north western Indian Ocean. The area is also adjacent to a few international straits which are subject to the regime of transit passage, i.e. the straits of Gibraltar, Tiran, Bab al Mandab, and Hormuz, offering considerable transit rights to all states of the world.⁷⁷

Among the 23 states in the region, all are coastal states.⁷⁸ Among them, 5 are not parties to the UN Convention on the Law of the Sea (UNCLOS); Iran (signatory), Israel, Libya (signatory), Syria, and United Arab Emirates (signatory).

The Law of the Sea does currently not apply to the Caspian Sea, which is considered to be a lake not subject to UNCLOS provisions and which used to be divided by demarcation between Iran and the Soviet Union. As the Iranian part would be the only part to be included in a Middle East regime, a division of the Soviet part of the sea among the four new states of Azerbaijan, Kazakhstan, Russia, and Turkmenistan would not matter. It has been suggested by some of the littoral states of the Caspian Sea, however, that the Convention on the Law of the Sea by special agreement among the coastal states should be applied also to this lake, thereby introducing there such legal concepts as territorial waters and exclusive economic zones.

Also important in this respect is the Suez Canal, an international waterway crossing through Egyptian territory and open "in time of war as in time of peace, to every vessel of commerce or of war, without distinction of flag" according to the 1888 Constantinople Convention.⁷⁹ Only a ship flying the flag of a state at war with Egypt can be prevented from passing the Canal. Aircraft are not referred to as they did not exist at the time. The Constantinople Convention is also referred to in the Egypt - Israel Peace Treaty of 1978, which provides i.a. that the Strait of Tiran and the Gulf of Aqaba are "international waterways open to all nations".

It should be recognized that the law of the sea and its traditional provisions for freedom of navigation gives all states of the world, including major maritime states and

their naval vessels, access to the Middle East sea areas.

The Current Legal Situation

A number of global arms control treaties in force are relevant for the deployment of weapons of mass destruction, i.e. primarily the 1925 Geneva Protocol,⁸⁰ the 1963 Partial Test Ban Treaty (PTB),⁸¹ the 1968 Non-Proliferation Treaty (NPT),⁸² the 1972 Biological Weapons Convention (BWC),⁸³ and the 1993 Chemical Weapons Convention (CWC).⁸⁴ For detailed descriptions and texts of arms control treaties referred to in this paper, compare J. Goldblat, *Arms Control: The New Guide to Negotiations and Agreements*, Sage, 2003; and the United Nations website <http://www.un.org>.

As of 15 October 2013, among the 23 states in the region, 17 were parties to the 1925 Geneva Protocol prohibiting the use of chemical and bacteriological warfare, while 6 were not: the Comoros, Djibouti, Mauritania, Oman, Somalia, and United Arab Emirates.

All states in the area except Israel were parties to the Non-Proliferation Treaty. Also important are the security guarantees provided to NPT parties by the UN Security Council Resolution S/RES/984 (1995), as well as the unilateral negative guarantees extended by the five nuclear weapons powers. The treaty was originally scheduled to be in force for 25 years (Art. X:2). However, in 1995 the parties decided to extend its duration in force indefinitely.⁸⁵ Almost unnoticed, the NPT parties decided in 1985 that the treaty should be implemented "under any circumstances", i.e. also in wartime.⁸⁶

14 states in the region were parties to the 1963 Partial Test Ban Treaty, while

9 were not: Algeria (signatory), Bahrain, Comoros, Djibouti, Oman, Qatar, Saudi Arabia, Somalia (signatory) and the United Arab Emirates. More important is that many states in the region signed the Comprehensive Test Ban Treaty (CTBT)⁸⁷ prohibiting all nuclear test explosions including all nuclear explosions for peaceful purposes for all time. The entry into force process of the CTBT is currently in progress. So far, 16 states in the region have become parties, 5 more have signed, while 3 states have not: Saudi Arabia, Somalia, and Syria.

13 states were not parties to the 1971 Sea-Bed Treaty,⁸⁸ i.e. Bahrain, Comoros, Djibouti, Egypt, Israel, Kuwait, Lebanon (signatory), Mauritania, Oman, Somalia, the Sudan (signatory), Syria, and the United Arab Emirates. Their accession to the treaty would be a desirable contribution as long as one nuclear weapons power, France, is not a party to the treaty.

16 states were parties to the Biological Weapons Convention, while 7 states were not: the Comoros, Djibouti, Egypt (signatory), Israel, Mauritania, Somalia (signatory), and Syria (signatory).

21 states were parties to the Chemical Weapons Convention, while 2 states were not: Egypt and Israel (signatory).

20 states were parties to the Protocol (I) Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflict,⁸⁹ while 3 states were not: Iran (signatory), Israel, and Somalia.

The African part of the prospective Middle East Zone is already subject to the application of the African nuclear weapons-free zone treaty (The Pelindaba treaty)⁹⁰ which was signed at an OAU meeting in Cairo on 11 April 1996 and entered into force on 15 July 2009. As of

15 October 2013, 36 states in Africa were parties to the Pelindaba treaty and an additional 16 states were signatories. Among Middle East states situated in Africa, only Algeria, the Comoros, Libya, Mauritania, and Tunisia are parties while Djibouti, Egypt, Somalia, and Sudan, are signatories and Morocco is not.

This legal situation means that most states in the Middle East are currently legally restricted one way or another as regards the possible acquisition or possession of weapons of mass destruction. Restrictions on possession of long range missiles apply only to Iraq.

An important convention was opened for signature as recently as September 14th, 2005, of great relevance for the future. It is the International Convention for the Suppression of Acts of Nuclear Terrorism.⁹¹ The provisions of the convention cover both nuclear explosive devices and “dirty bombs”. As of 15 October 2013, Algeria, Bahrain, the Comoros, Lebanon, Libya, Mauritania, Morocco, Saudi Arabia, Tunisia, and United Arab Emirates were parties, 7 additional states in the region had signed the convention while Iran, Oman, Somalia, Sudan and Yemen had not.

General Objectives and Measures

There would be three measures of central importance for the achievement of the objectives of a zone free of weapons of mass destruction in the general case. These are:

- *non-possession* of prohibited weapons by zonal States,
- *non-stationing* of prohibited weapons by any State within the geographical area of application of the zone, and

- *non-use or non-threat of use* of prohibited weapons throughout the zone or against targets within the zone.

The meaning of these measures might seem clear enough. However, their legal representation could be complicated, as shown, for instance, by the definition of “nuclear weapon” in the Tlatelolco Treaty (Art. 5) and by the definition of chemical weapons in the Chemical Weapons Convention (Art. II).

The non-possession measure would apply to zonal states. Its codification could be much simplified if relying on the concepts of the NPT (Article II), the BWC, and the CWC. If the zone encompasses only territories of states being parties to the NPT, the BWC, and the CWC, most of the non-possession requirement would be fulfilled. Only the non-possession of long-range missiles might require special regulation in detail in the absence of a comprehensive treaty on such missiles. If the zone is to encompass states that are not parties to one or several of these treaties or states which are nuclear weapon states, a special regime must be defined. The same would be true in the special case that only a part of a state will be included in the zone.⁹²

The non-stationing measure would primarily apply to the territories of zonal states with the exception that zonal states could not by agreement among themselves restrict or prohibit innocent passage (or transit passage) by vessels of nuclear-weapon states and other extra-zonal states with prohibited weapons onboard in their territorial and archipelagic waters.

Non-stationing measures applying to international land and sea areas, such as Antarctica, would require special legal arrangements.

Related to the non-stationing measure is the "transit" of prohibited weapons through zonal territory — an issue primarily related to nuclear weapons. The transit concept would include "innocent" transit over a limited period of time of otherwise prohibited weapons by an extra-zonal state, on land, by air or in internal waters including calls at ports by ships or landing of aircraft carrying such weapons. Universal adherence to the BWC and the CWC would limit consideration of transit to nuclear weapons and missiles.

The transit issue was extensively discussed when the nuclear weapons-free zone in Latin America was negotiated. The problem was solved by not being solved. Transit was left to the individual zonal states to permit or deny in each case.⁹³ The other nuclear weapons-free zones have similar transit regimes.

A zonal treaty should prescribe if transit would be generally prohibited or arranged in a way similar to the Tlatelolco formula. Transit through zonal high sea areas or through territories which are dependencies of extra-zonal nuclear-weapon states could not be permitted without making the zonal regime of such areas an illusion.⁹⁴

While "innocent transit" has been considered tolerable under all zone regimes so far, "hostile transit" would probably not be accepted, i.e. the passage of delivery vehicles with prohibited weapons across zonal territory towards targets beyond the zone. This rule would apply to sea-borne and airborne manned or unmanned vehicles and to ballistic missiles in so far as they penetrate zonal air space, while crossing overhead zonal territory in international space could not be prohibited by agreement among the zonal states.⁹⁵

The special transit issue of ships and aircraft which may carry nuclear weapons

and call at ports or land at airports in zonal states has been particularly sticky because nuclear weapon powers usually "neither confirm nor deny the presence or absence of nuclear weapons on board specific ships or aircraft at specific times".⁹⁶ A political problem of considerable dimension some years ago, the issue of neither confirming nor denying has lost most of its former importance following the withdrawal by major nuclear weapons powers of sub-strategic nuclear weapons from naval ships.⁹⁷

The non-use measure would be a commitment by states controlling prohibited weapons. Legally, this provision has been given the form of a separate protocol to existing zone agreements.

Consideration of the non-use measure should be made against the background of the UN Security Council resolution taking note of both existing negative nuclear assurances and the positive assurances where the five nuclear weapons states undertake to provide "immediate assistance, in accordance with the UN Charter, to any non-nuclear weapons state party to the NPT that is a victim of an act of, or an object of a threat of, aggression in which nuclear weapons are used" (Op. 7).⁹⁸

So far, all discussion on nuclear security assurances assumes that the nuclear weapons powers are the five recognized by the NPT (China, France, the Russian Federation, the United Kingdom, and the USA). After the nuclear test explosions of India and Pakistan in May 1998, both states identify themselves as nuclear weapons states, a status that is not recognized by most other states of the world.⁹⁹ But the issue of including them as guarantor states is raised from time to time.¹⁰⁰ Should they become widely recognized as nuclear weapons states, however, they too would prob-

ably be recognized as legitimate guarantor states.¹⁰¹

One should also note the ongoing negotiations on general negative security assurances at the Conference on Disarmament in Geneva and the assistance and support to victims of biological and chemical warfare effects prescribed by the BWC and the CWC. All five nuclear weapons states have made unilateral declarations that they would not attack or threaten to attack with nuclear weapons states that do not possess such weapons themselves or host those of others on their territories. These declarations are not coordinated and include some conditions and reservations linked to the question of whether a state can be a member of a nuclear weapons-free zone and simultaneously be an ally or partner of a nuclear weapons state. Theoretically, that may be possible provided, however, that the two sets of commitments are not contradictory. Whether or not that would be politically desirable is another matter.

No general policy commitments related to long-range missile attack or surprise attack exists within the international community. For a zonal agreement, such guarantees must thus be drafted from scratch. A WMDFZ prohibition of long-range missile presence in the zone would obviously lose much of its meaning if not matched by a non-use measure covering such missiles.

Linked to the non-use measure has been the idea that this measure should be complemented by a "thinning-out" arrangement in areas adjacent to the proposed zone where nuclear weapons are deployed. The "thinning-out" idea implies the withdrawal of such weapons that are targeted against the zone or that have short ranges and are deployed very close to the zone, thus making them usable primarily against the zone. If such weapons are not with-

drawn, non-use commitments would be less credible.¹⁰²

Treaty design

A treaty establishing a zone free of weapons of mass destruction in the Middle East should preferably be based on the global treaties prohibiting nuclear, biological, and chemical weapons (NPT, BWT, and CWT) and thus share the general objectives of those treaties, i.e. the complete renunciation of those weapons, except that the nuclear weapons of the five recognized nuclear weapon states will remain until nuclear disarmament is completed. In addition, a zone agreement should prescribe regional application of the non-possession, the non-stationing, and the non-use measures, and institute a verification machinery.

Furthermore, the original Mubarak plan document¹⁰³ outlined, when presented, three general components:

- (a) All weapons of mass destruction in the Middle East should be prohibited;
- (b) All states of the region should make equal and reciprocal commitments in this regard;
- (c) Verification measures and modalities should be established to ascertain complete compliance by the states in the region."

The same Mubarak proposal also pointed to certain desiderata:

- (d) A qualitative as well as quantitative symmetry of the military capabilities of individual states of the Middle East; asymmetries cannot prevail in a region striving for a just and comprehensive peace;
- (e) Increased security at lower levels of armament; security must be attained th-

rough political deliberations and disarmament rather than through the force of arms;

- (f) Arms limitation and disarmament agreements should consider equal rights and responsibilities, and states should equally issue legally binding commitments in the field of disarmament.

The obvious way of designing a draft treaty on a zone free of weapons of mass destruction is to begin drawing on the application of general arms control treaties to the area. In case there are states in the area which are both non-parties to such treaties and essential for the operation of a zone, such states should, as part of the establishment process of the zone, be encouraged to subscribe to all those treaties. The situation as regards the global treaties is referred to above.

Also, basic for drafting the non-use provisions of a Middle East zone agreement would be the security guarantees provided to NPT parties by the UN Security Council Resolution S/RES/984 (1995), as well as the unilateral negative guarantees extended by the five nuclear weapons powers. The Chemical Weapons Convention also includes non-use provisions.

The establishment of a WMDZME building on a general subscription in the region to the global treaties must be complemented by several other provisions.

One important such addition would be special commitments not to possess or deploy ballistic and cruise missiles with ranges exceeding 300 (or 150) kilometres.

Several additional protocols to a zone treaty would be desirable. The nuclear weapons powers should be invited to sign one in order to commit themselves not to use or threaten to use weapons of mass destruction against zonal states and

generally to support the zone regime. As a Middle East zone would have neighbours around almost its entire periphery, it might be desirable to invite non-African neighbouring states, e.g. Afghanistan, Armenia, Azerbaijan, Cyprus, Greece, Italy, Malta, Pakistan, Spain, Turkey, Turkmenistan, and perhaps others, to sign another protocol assuming special commitments to respect and support the zone regime and to assist in its implementation, particularly regarding border policies. In addition, both protocols should include a commitment not to direct prohibited missiles against targets in the zone. In addition, a special protocol could define restrictive measures applying to sea areas adjacent to the zone

Neighbouring states in Africa could be engaged based on the fact that the African Nuclear Weapons-Free Zone and a Middle East zone would not only be each other's neighbours but partly overlap. Therefore, a protocol common to both zone treaties on mutual respect and collective support and signed by the authorities of the two zones could provide for mutual neighbouring state functions. A protocol on cooperation between the authorities of a Middle East zone and the Central Asian Nuclear Weapons-Free Zone which will border each other, could provide for similar functions.

Special provisions prohibiting nuclear weapons testing, the dumping of radioactive waste, and attacks on nuclear facilities containing large amounts of radioactive material could be included in the zonal legal instruments in harmony with the African zone treaty.

A special organization for implementation and supervision of the zone arrangements would have to be instituted.

A verification machinery could be based on those of the general arms restriction treaties applying in the region, as comple-

mented by special verification rights similar to those operating according to other zonal treaties and the regime of the Organisation of Security and Cooperation in Europe (OSCE).

An organization for cooperation in the field of nuclear energy production for peaceful purposes in the region, similar to the Euratom organization of the European Union and the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC), could contribute substantially to confidence-building in the region as it will institutionalize transparency and management-sharing regarding the nuclear industry. This aspect has been analysed by Dr Mustafa Kibaroglu.¹⁰⁴

As a starting signal of substantial negotiation of a WMDFZME, Iran, Israel, and the USA, who all signed the Comprehensive Nuclear-Test-Ban Treaty in the past, could simultaneously ratify that treaty.

Special provisions for sea areas

There is a significant difference between applying arms control in sea areas as compared to land areas, because of different legal regimes. Almost all land is subject to the jurisdiction of one state, a well-known exception being Antarctica. As a consequence, adversary military forces on land are geographically separated from each other in peacetime. Naval forces of different states, on the other hand, may mix all over the sea, on the surface, in the water, under the ice, and on the seabed. Indeed, they frequently do so.

The very elaborate and detailed United Nations Convention on the Law of the Sea (UNCLOS) was agreed upon in 1982, entered into force in 1994, and functions as the "constitution" of the sea areas cover-

ing more than 70 % of the surface of the earth. Many of its sovereignty-related provisions are today considered customary law binding for all states whether parties to the convention or not. UNCLOS entitles all states to utilize the "freedom of the high seas", mostly applicable also in the exclusive economic zones, including the freedom of navigation and the freedom of overflight.¹⁰⁵ But the convention also prescribes that "the high seas shall be reserved for peaceful purposes"¹⁰⁶ and that "states shall refrain from any threat or use of force against the territorial integrity or political independence of any state, or in other manner inconsistent with the principles of international law embodied in the Charter of the United Nations",¹⁰⁷ implying that use of military force at sea must comply with the UN Charter.¹⁰⁸

Coastal states have full jurisdiction over their internal waters only. Their jurisdiction also extends to their territorial seas and archipelagic waters; except that any flag state enjoys the right of innocent passage for its ships in such waters (there is a more liberal regime of transit passage through territorial waters of states present in international straits).¹⁰⁹ The provisions granting the right of innocent passage to men-of-war make no distinction between ships because of the types of weapon they may carry.

In exclusive economic zones or on the high seas, the coastal states have no jurisdiction related to nuclear weapons.

The states of a nuclear weapons-free zone would be obliged not to possess, deploy, or otherwise operate nuclear weapons anywhere, including at sea, but they would have no right according to international law to limit by agreement among themselves the general right of flag states to navigate ships or fly aircraft in such wa-

ters which all states have the right to enter and use.

Zonal commitments applying to sea areas should, therefore, preferably be prescribed in a separate legal instrument or protocol linked to the main nuclear-weapon-free zone treaty and expressed in terms referring to the general law of the sea. The precise objective of such obligations must not necessarily coincide with those of the main zone treaty applying to the land areas of the zone. Maritime zonal commitments could be assumed by the zonal states, as well as by the nuclear weapon states and other extra-zonal states subject to invitation to sign special marine protocols. The restrictions could include all nuclear weapons, or only some, or only nuclear weapons with a regional role. Such restrictions could also include "thinning-out" and confidence-building measures. The formula to be chosen would respond to the relative importance in each case of restricting the zonal states, the nuclear weapons states, and other extra-zonal states.

Needless to say, negotiating and drafting of a maritime additional protocol to a nuclear weapons-free zone treaty would be a delicate matter to undertake. There is no historical precedent so far. In formal principle, it should be done at a special world conference of all states having access to the sea areas concerned. But more practically, it could be done in the same way as guarantee protocols, i.e. by zonal states versus nuclear weapons states negotiations.

The application of confidence-building measures at sea in the Middle East environment has been discussed in some detail by David N. Griffiths¹¹⁰ of the Centre for Foreign Policy Studies at Dalhousie University, Halifax, NS, Canada. Maritime confidence-building measures in the wider Gulf area has been discussed by several au-

thors in a special issue of the Gulf Research Center publication.¹¹¹

The case of Israel

When designing a WMDFZME, special considerations should be applied to Israel, which is widely considered to possess nuclear weapons.¹¹² But details regarding Israel's nuclear programme are essentially unknown. It was started in 1957 when France provided technical and industrial assistance to build a nuclear reactor and a spent fuel separation plant at Dimona in the Negev desert. Israel has since then repeatedly stated that it will not be the first to introduce nuclear weapons in the Middle East, a statement seldom taken seriously but which is nevertheless true, as NATO states have for almost half a century stationed nuclear weapons in Turkey and onboard the US Sixth Fleet in the Mediterranean.

Instead, Israel has pursued a "policy of ambiguity" regarding its nuclear capability, has never conducted any test explosion,¹¹³ has never denied frequently published assessments that it may have manufactured several hundred nuclear warheads,¹¹⁴ and did not sign the NPT. Israel also reached a secret agreement with its close ally, the USA, that its nuclear weapons activities would be silently tolerated as long as their existence would not be acknowledged in public.

In addition, whatever the status and size of the Israeli nuclear arsenal, it could not be used for any conceivable purpose in a conflict, because of the reaction of the surrounding world that could be expected to turn heavily against Israel. There seems to be understood that there would not exist any positive outcome of such a "next morning problem". Or as prominent Israelis

have concluded: “We are not the ones who will spread a holocaust around us”.

The policy of ambiguity has, on the other hand, provided Israel with a great advantage that all its neighbour states in their defence planning must assume that Israel is a nuclear weapons state, although very few people know the status of its weaponry - if any. In this respect, the nuclear weapons-state image is the point, and hardware would be less relevant. Therefore, if Israel should adhere to a WMDFZME regime at an early stage, the security value of this image must be replaced by an external security guarantee of equal value possibly equivalent to what a membership of NATO would provide.¹¹⁵ One idea expressed would be that the US Sixth Fleet, which, after the Cold War, must not necessarily be home ported at Naples (Gaeta), Italy, any more, could instead be redirected to Tel Aviv and Haifa thus providing and demonstrating a substantial security guarantee, which it for practical purposes already has.¹¹⁶

The Israeli policy of ambiguity would be linked to the progress of the Iranian nuclear industry. If Iran will acquire nuclear weapons in the future, it should be understood that their weapons cannot be used for any conceivable purpose for the same reason as Israel cannot use theirs. But the closer Iran comes to an image of being able to become a possible manufacturer of nuclear weapons, that fact would gradually outbalance and erode the security value of the Israeli image of being a nuclear weapons power. Thus Israel’s growing anxiety regarding the nuclear developments in Iran.

The case of Iran

For a couple of years, the nuclear energy ambitions of the Islamic Republic of Iran

have become an issue in world politics. Is Iran moving to become a nuclear weapons power, as suspected by many in the West? Or is Iran developing an exclusively peaceful nuclear energy industry, as Iran insists?

Iran has for some time been encouraged to cancel parts of its nuclear industry by diplomatic pressure, occasionally upgraded to gunboat diplomacy. The UN Security Council has enforced political sanctions against Iran. A military intervention has been discussed. These policies are unfortunate and beside the point.

The current crisis has its roots in two factors. Firstly, in the 1970’s – during the time of Shah Reza Pahlavi – Iran started to build a nuclear power industry. The idea was that Iran’s large but limited oil reserves should be used primarily for the processing industry and not be just burnt to generate raw energy, which, instead, should be produced by nuclear power. Secondly, after the Islamic revolution in 1979, Iran is a partly isolated country subject to various economic and diplomatic restrictions.

Iran signed the Non-Proliferation Treaty on July 1st 1968 and became a party to the treaty on February 2nd, 1970, a month before the NPT itself entered into force. Iran is thus committed not to acquire nuclear weapons, and to report its nuclear activities to the IAEA and to receive their inspectors according to a subsequent safeguards agreement with the agency, in force since May 15th, 1974.

In the 1970s, the construction of several nuclear reactors was planned. A German contractor began building two. But this work was stopped in 1979 following the Islamic Revolution. Due to the imposed restrictions that followed, Iran has had difficulties in taking part in international cooperation on nuclear technology matters, an explicit right for all NPT parties (Art. IV).

Today and after the Iran – Iraq war in the 1980s, the construction work has been restarted with Russian assistance. For Iran, a prudent conclusion was that safe operation of a nuclear industry would require a complete domestic fuel cycle.

Today, Iran is criticized on three points. One is that Iran has not complied with some of its reporting commitments to the IAEA. Some reports were incomplete, delayed or just absent; secondly, for constructing an ultracentrifuge facility for enrichment of uranium 235; thirdly, for constructing a nuclear reactor to be fuelled with natural uranium and for producing a heavy-water moderator for that reactor.

It is primarily the latter two projects that have attracted suspicion, because such facilities could be rearranged for the production of weapons-grade uranium and plutonium. Even if Iran's nuclear activities today are exclusively peaceful, once these facilities are fully completed, the lead time from a possible future decision to make nuclear weapons until fuel for a first explosive device will be available would be dramatically shortened.

According to an Israeli "worst-case-analysis" in 2006 assuming that Iran already decided to acquire nuclear weapons, sufficient weapon-grade uranium for a first explosive device could have been produced late in the year 2010, if nothing went wrong.¹¹⁷ Apparently, this suspicion had to be rescheduled. In addition, to go from there to establish itself as a militarily significant nuclear weapons power, would require expensive and time-consuming additional efforts. But there is, however, the additional risk that limited amounts of weapon-grade uranium once available could be transferred to terrorists at an earlier point in time. An assessment of the current (24 February 2012) stage of development of

the Iranian nuclear industry was published by David Albright et al. following an IAEA Report of that same date.¹¹⁸

Suspicion in the surrounding world has been enhanced not only by Iran's incomplete reporting to the IAEA but also by some startling statements by Iranian leaders as well as by the domestic debate in Iran, where some people may be attracted by the idea of an Islamic bomb.¹¹⁹

The criticism for incomplete reporting is formally correct but overemphasized. Incomplete reporting is not unusual among the NPT parties. The NPT requires that a new party shall conclude an inspection agreement with the IAEA within 18 months. But as of 24 September 2013, 12 out of 185 non-nuclear weapons states parties are delayed in concluding even that basic agreement - sometimes by years.¹²⁰ While formally in error, Iran's behaviour is thus not extraordinarily dramatic.

More important in comparison is that ultracentrifuge enrichment of uranium has gone on for many years on an industrial scale in other non-nuclear weapons states, including Germany and the Netherlands, and that a new facility was constructed in Brazil. In addition, the whole nuclear power industry of Canada is based on natural uranium heavy water reactors – currently 18 – and another 18 such reactors are operated in India. It may be added that some 50 tons of surplus plutonium are stockpiled with Japan. But these facts have caused no raised eyebrows in the UN Security Council.

There seems to be no equity applied under the laws to the disadvantage of Iran, which is unfairly treated in NPT terms. There is a great difference between how the Security Council handles nuclear weapons issues in relation to India, Israel and

Pakistan as compared to Iran and North Korea.

Obviously, the current Iranian nuclear crisis is also a substitute for other and wider political ambitions. Some states primarily in the West want a change of regime in Iran. Others, such as Russia, may want to build closer relations with Iran for future oil market purposes. Iran itself wants existing restrictions and sanctions to be cancelled and seems willing to trade some parts of its nuclear fuel cycle in exchange. Interestingly, recent Security Council resolutions on Iran open for such a trade as do other diplomatic communications.¹²¹ If Iran would be treated like most other states in the world, Iran would have no more need for a domestic and complete fuel cycle than most other states with a nuclear power industry, such as Sweden.

Preventing the proliferation of weapons of mass destruction in the Middle East is

a fundamentally important objective. But to approach that problem indirectly by requiring a limitation of fuel-cycle elements of non-nuclear weapons states is beside the point. The demands by the Security Council are legally correct but unfortunate. What Iran has done so far is permitted and encouraged by the NPT as agreed after careful negotiations and compromises in 1966-1968.

In conclusion, for the purpose of avoiding the disadvantages of the current adversary policies against Iran, the direct approach of establishing a WMD FZME should be advanced, i.e. addressing directly the nuclear weapons themselves and solving the Israel issue at the same time.

The author is a fellow of the RSAWS.

Notes

1. The origin of this article is a project initiated by the UN Secretary General in 1988 as requested by the UN General Assembly. The author presented earlier versions at the “Istanbul Workshop on Nuclear Dangers in the Middle East”, 17 - 21 November 2005, at the 1st Conference on The Middle East Weapons of Mass Destruction Free Zone in London on 7 November 2006, at the 2nd Conference on The Middle East Weapons of Mass Destruction Free Zone in London on 17 September 2007, at the Seminar on Middle East Security and WMD Non-Proliferation/Disarmament organized by the Institute for Security Studies of the European Union in Paris 19-20 June 2008, and at a conference on “Nuclear Energy and Proliferation in the Middle East” at the Arab Institute for Security Studies (ACSIS) in Amman, Jordan, 22-24 June 2009. A brief version was published in *International Relations*, Vol. 22 No. 3 (Sep 2008), pp. 331-337. This version updated as of 15 October 2013.
2. UN Document A/RES/3263 (XXIX).
3. A recent resolution on the matter was adopted by the UN General Assembly on 11 December 2012, UN Document A/RES/67/28. Its preamble includes a list of all previous resolutions on the matter.
4. UN Document CD/989 (20 April 1990).
5. Document NPT/CONF.1995/32/RES/1.
6. UN Document NPT/CONF.2000/28.
7. The African Nuclear-Weapon-Free Zone Treaty was signed at an OAU meeting in Cairo on 11 April 1996 and entered into force on 15 July 2009. For text, see UN Document A/RES/50/426 Annex.
8. Joint Declaration of the Paris Summit for the Mediterranean, Paris, 13 July 2008.
9. The project is described in the Gulf Research Centre’s Research Bulletin ‘Security and Terrorism’ issues No. 1-3 and 7, *A Gulf WMD Free Zone*. It is also discussed in Jones, Peter: *A Gulf WMD free Zone within a Broader Gulf and Middle East Security Architecture*, Gulf Research Centre, March 2005; and in Alani, Mustafa: *The Case for a Weapons of Mass Destruction Free Zone in the Gulf (GWMDFZ)*, Gulf Research Centre, Dubai, March 2006.
10. UN Document A/RES/43/65.
11. UN Document A/45/435; UN Sales No.E.91.IX.3. The group who prepared the report included Ambassador (ret) James F. Leonard (USA), former UN Expert Ben Sanders (the Netherlands), and this author (Sweden) together with two senior UN Officers, Prvoslav Davinic (Yugoslavia) and Silvana da Silva (Brazil).
12. UN Document A/RES/45/52, Op. 8.
13. The Proceedings of the Workshop in Vienna 4-7 May 1993 on “Modalities for the Application of Safeguards in a Future Nuclear-Weapon-Free Zone in the Middle East” including the presentations made, is available from the International Atomic Energy Agency, Division of External Relations, in Vienna.
14. Past experiences, primarily in Iraq and North Korea, did provoke a revision of the IAEA safeguards system to make it more effective, resulting in the so-called 93+2 upgrade codified 1997 in the *Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards* (IAEA Document INF/CIRC/540).
15. In April 1995, the UN Security Council adopted a modernized resolution taking note of both existing negative nuclear assurances and the positive assurances where the five nuclear weapons states undertake to provide “immediate assistance, in accordance with the UN Charter, to any non-nuclear-weapon state party to the NPT that is a victim of an act of, or an object of a threat of, aggression in which nuclear weapons are used”. UN Document S/RES/984 (1995), unanimously adopted on 11 April 1995, Op. 7.
16. The panel is frequently called the Blix commission after its Chairman, Dr Hans Blix, an international lawyer who served as Sweden’s Minister of Foreign Affairs 1978-79, and as General Director of the International Atomic Energy Agency in Vienna 1981-1997.
17. *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms*. ISBN 91-38-22582-4. Electronically available at www.wmdcommission.org, Stockholm 2006.
18. The other two were the entry into force of the Comprehensive Nuclear-Test-Ban Treaty, and measures to prohibit terrorists from ac-

- cess to weapons of mass destruction or materials for such weapons.
19. Prawitz, Jan and Leonard, James F.: *A Zone Free of Weapons of Mass Destruction in the Middle East*, Document UNIDIR/96/24 (UN Sales No. G.V.E.96.0.19); and Prawitz, Jan and Leonard, James F.: *A Zone Free of Weapons of Mass Destruction in the Middle East: A Political Project*, Pacific Review, Vol. 11 No. 3, October 1999, pp. 257-271.
 20. Karem, Mahmoud: *A Nuclear-Weapon-Free Zone in the Middle East: Problems and Prospects*. Greenwood Press. New York. 1988. The same author has later published "A Nuclear-Weapon-Free Zone in the Middle East: An Historical Overview of the Patterns of Involvement of the United Nations" in Rauf, Tariq (Ed.): *Regional Approaches to Curbing Nuclear Proliferation in the Middle East and South Asia*, Aurora Papers 16, Canadian Centre for Global Security, December 1992.
 21. Feldman, Shai: *Nuclear Weapons and Arms Control in the Middle East*, MIT Press, Cambridge MA, 1997; and Feldman, Shai and Toukan, Abdullah: *Bridging the Gap: A Future Security Architecture for the Middle East*, Carnegie, Rowman & Littlefield Publishers, Lanham MD, 1997.
 22. Karawan, Ibrahim A: "The Case for a Nuclear-Weapon-Free Zone in the Middle East", and Steinberg, Gerald M.: "The Obstacles to a Middle East Nuclear-Weapon-Free Zone", both papers in Thakur, Ramesh (Ed.): *Nuclear-Weapon-Free Zones*, MacMillan Press Ltd, 1998, pp. 184-193 and 194-209.
 23. Asculai, Ephraim: *Rethinking the Nuclear Non-Proliferation Regime*, Memorandum 70, Jaffee Centre for Strategic Studies, Tel Aviv, June 2004.
 24. Arnett, Eric: *Nuclear Weapons after the Comprehensive Test Ban: Implications for Modernization and Proliferation*, SIPRI, Oxford University Press, 1996.
 25. *Building a Weapons of Mass Destruction Free Zone in the Middle East: Global Non-Proliferation Regimes and Regional Experiences*, Document UNIDIR/2004/24 (Sales No. G.V.E/A.04.0.30).
 26. Document NPT/CONF.1995/32/RES/1.
 27. Document NPT/CONF. 2010/50 (Vol. I)*, pp. 29-31.
 28. UN Press Release 14 October 2011.
 29. *Towards a Regional Security Regime for the Middle East: Issues and Options*. Report of the SIPRI Middle East expert Group, SIPRI, Oct. 2011.
 30. Two papers issued at the seminar could be noted. Santoro, David: *Status of non-proliferation treaties, agreements, and other related instruments in the Middle East*; and Fitzpatrick, Mark: *Nuclear Capabilities in the Middle East*. These papers define the Middle East concept as encompassing 18 states. Compared to the 23 states referred to in this paper, the Comoros, Djibouti, Mauritania, Somalia, and Sudan were left out.
 31. Compare, for example, the paper by Ariel Levite on Non-Proliferation and Security in the Middle East presented at the EU Non-Proliferation and Disarmament Conference in Brussels in February 2012, where he discusses the upcoming conference from an Israeli perspective.
 32. *Arms Control Today*, Vol. 41-43, published by the Arms Control Association Washington D.C., USA.
 33. The Policy Briefs are published by the Academic Peace Orchestra Middle East (APOME) of the Peace Research Institute Frankfurt.
 34. Sidhu, Waheguru Pal Singh; Jones, Bruce and Jaycox, Collette (Eds.): *Preparing for a Constructive 2012 Conference on the Middle East Weapons of Mass Destruction Free Zone*, Center for International Cooperation, New York University, April 2012. The report includes a Chapter written by Emily Landau on *Israeli Calculations and Concerns*.
 35. Ayman Khalil and Marc Finaud: *The Conference for a Middle East Weapons of Mass Destruction Free Zone - A Synopsis of Engagement of International and Regional Organisations, and Civil Society*, The Arab Institute for Security Studies, Amman, October 2012.
 36. UN Document DC/SC.1/41
 37. UN Document A/PV. 697, also called the Rapacki-plan after the Minister for Foreign Affairs of Poland at the time. Mr Adam Rapacki (1906-1970) was Poland's foreign minister 1956-1968. This early proposal has been analysed by Marutzsa, Zoltán: *Denuclearization in Central Europe? The Rapacki Plan during the Cold War*, Öt Kontinens, Eötvös Loránd Tudományegyetem, Budapest, 2008.

38. UN Document A/RES/1665 (XVI).
39. UN Documents A/RES/2373 (XXII) and S/RES/255. The Treaty on the Non-Proliferation of Nuclear Weapons (UN *Treaty Series*, Vol. 729, No. 10485).
40. The Antarctic Treaty (UN *Treaty Series*, Vol. 402, No. 5778) entered into force in 1961. For an analysis of the demilitarization regime of Antarctica, see Jacobsson, Marie: *The Antarctic Treaty System — Erga Omnes or Inter Partes?*, Thesis, University of Lund, Sweden, 31 January 1998.
41. The term "densely populated" area is frequently used to distinguish the Latin American and the South Pacific zones from the Antarctic, which some states for political reasons prefer to designate as a "populated" area rather than the "unpopulated" place it is otherwise considered to be.
42. The Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (UN *Treaty Series*, Vol. 634, No. 9068) was opened for signature in 1967, The entry into force process lasted for a long time and was fully completed in 2002.
43. The South Pacific Nuclear Free Zone Treaty (UN *Treaty Series* No. 24592).
44. Joint Declaration of South and North Korea on the Denuclearization of the Korean Peninsula, signed on 31 December 1991 and entered into force on 19 February 1992.
45. Treaty on the South-East Asia Nuclear-Weapon-Free Zone (Treaty of Bangkok) signed by ten member states and potential member states of ASEAN at a Summit meeting in Bangkok on 15 December 1995. The treaty entered into force in March 1997, although no nuclear weapons state has so far signed the guarantee protocol. UN *Treaty Series*, Vol. 1981, No. 33873
46. UN Document RES/A/55/33 S.
47. The African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) was opened for signature at an OAU meeting in Cairo on 11 April 1997, and entered into force on 15 July 2009. For text, see UN Document A/50/426, Annex.
48. The treaty entered into force 21 March 2009. This zone treaty has been analysed by Roscini, Marco: "Something Old, Something New: The 2006 Semipalatinsk Treaty on a Nuclear-Weapon-Free Zone in Central Asia", *Chinese Journal of International Law* (2008), Vol. 7 No.3, pp. 593-624. Mongolia is recognized as a single-state nuclear-weapon-free zone separated from the NWFZCA by a narrow corridor, only 40 kilometres wide, where the nuclear-weapon states of China and Russia meet.
49. *Common Security*, Report by the Independent Commission on Disarmament and Security Issues, Simon and Schuster, New York 1982, p 147. UN Document A/CN.10/38.
50. According to the Treaty on the Final Settlement with Respect to Germany, the so called 4+2 treaty on reunification of Germany, signed in Moscow on 12 September 1990, by the Federal Republic of Germany, the German Democratic Republic (DDR), France, the UK, the USA, and the USSR, the former DDR territory was designated as denuclearized. Article 5:3 prescribes that "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 in the rest of German territory may also be stationed in that part of Germany, but without nuclear weapon carriers. This does not apply to conventional weapon systems which may have other capabilities in addition to conventional ones but which in that part of Germany are equipped for a conventional role and designated only for such. Foreign armed forces and nuclear weapons or their carriers will not be stationed in that part of Germany or deployed there".
51. Compare Subedi, Surya P.: *Land and Maritime Zones of Peace in International Law*, Clarendon, Oxford, 1996; Coutau-Bégarie, Hervé: *Le Désarmement Naval* [Naval Disarmament, In French], Economica, Paris, 1995; and Ahlström, Christer: *Demilitarised and Neutralised Territories in Europe*, The Aaland Islands Peace Institute, Mariehamn, 2004.
52. *Comprehensive Study on the Question of Nuclear-Weapon-Free Zones in all its Aspects*, United Nations Document A/10027/Add. 1 (UN Sales No. E.76.1.7); and *Study on the Question of Nuclear-Weapon-Free Zones*. The latter report was not entirely finalized but "exists" as an annex to a letter of 9 February 1985 from the Chairman of the expert group, Dr Klaus Törnudd of Finland, to the Secretary General. The formal status

- of this annex is subject to dispute. It is, however, very informative.
53. Report of the Disarmament Commission's substantial meeting 12-30 April 1999 (UN Document A/54/42), Annex I: *Establishment of nuclear-weapon-free Zones on the basis of arrangements freely arrived at among the States of the region concerned*, unanimously passed by the General Assembly (UN Document A/RES/55/56 A).
 54. UN Document CD/989, 20 April 1990. The Mubarak plan has been described by Mohamed Shaker in "Prospects for Establishing a Zone Free of Weapons of Mass Destruction in the Middle East", *Director's Series on Proliferation*, No. 6 Oct. 1994, Lawrence Livermore National Laboratory (UCRL-LR-114070-6). Compare also Zahran, M. Mounir: *Towards Establishing a Mass-Destruction-Weapon-Free-Zone in the Middle East*, Institute for Diplomatic Studies, Ministry of Foreign Affairs of Egypt, October 1992.
 55. Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflict (Protocol I), Art. 60.
 56. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, entered into force on 10 October 1967 (UN *Treaty Series* Vol. 620); and Agreement governing the Activities of States on the Moon and Other Celestial Bodies, entered into force on 11 July 1984, UN Document A/RES/34/68.
 57. 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 entered into force on 18 May 1972, UN *Treaty Series*, Vol. 955.
 58. UN Document RES/S/C. 3/30.
 59. Historically, it should be noted that the use of the atomic bomb against Hiroshima and Nagasaki in August 1945 was sensational both because of the immediate and enormous effect of a single weapon and the new radioactive effects. At the time, however, no one talked about mass destruction. For the US President Harry Truman and his administration, these attacks were considered technologically elegant solutions of a problem carried out by one aircraft rather than solved by one of the daily and massive conventional air attacks - often more devastating. An impression of immediate mass destruction struck the people on the ground, however, to such an extent that the Japanese Emperor Hirohito II got sufficient political basis for overruling his conservative government and terminating the war. The stigma connected to nuclear weapons today that make them political weapons rather than instruments of war-fighting did not exist at the time. It is the current masses of weapons of mass destruction that have made them impossible to use and to a large extent also illegal.
 60. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) entered into force on 5 October 1978.
 61. Document CCD/520, 3 September 1976.
 62. Protocol (I) Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflict. Entered into force on 7 December 1978.
 63. The Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (UN *Treaty Series*, Vol. 634, No. 9068); Article 5 reads: "For the purposes of this Treaty, a 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. An instrument that may be used for the transport or propulsion of the device is not included in this definition if it is separable from the device and not an indivisible part thereof."
 64. The "Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction" entered into force on 26 March 1975, UN *Treaty Series*, vol. 1615, No. 14860.
 65. *Health Aspects of Chemical and Biological Weapons*, Report of a WHO group of Consultants. Geneva 1970.
 66. The "Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction" entered into force on 29 April 1997, UN *Treaty Series*, vol. 1974, No. 33757.
 67. The 1868 St. Petersburg Declaration to the Effect of Prohibiting the Use of Certain Projectiles in Wartime, prohibited the use between the parties of "any projectile of a

- weight below 400 grams, which is either explosive or charged with fulminating or inflammable substances”; The 1874 Brussels Declaration concerning the Laws and Customs of War, prohibited the “employment of poison or poisoned weapons” (Art. XIII); The 1899 Hague Declaration (IV, 2) concerning asphyxiating gases, added a prohibition of the “use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases”; and the 1907 Hague Convention (IV) respecting the laws and customs of war on land repeated these provisions (Art. 23a). These early agreements have mostly historical interest today, as some of the contracting parties at the time do not exist any more and as most states of today did not exist at the time.
68. The “Agreement Between Pakistan and India on the Prohibition of Attack Against Nuclear Installations and Facilities” was agreed upon in December 1988 and entered into force in January 1991.
69. Protocol (I) Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflict (Art. 56). Entered into force on 7 December 1978.
70. UN Document S/RES/687 (1991). The resolution “takes note” that destruction of the weapons specified in the resolution “represent steps towards the goal of establishing in the Middle East a zone free from weapons of mass destruction and *all missiles for their delivery* (emphasize added) and the objective of a global ban on chemical weapons” (Op. 14).
71. The International Code of Conduct Against Ballistic Missile Proliferation, signed in The Hague on 25 November 2002. As of May 2013, the Code had been signed by 134 states.
72. Another fanciful idea was referred to at the Pugwash annual conference in San Diego in 2002. William Perry, former Secretary of Defence in the Clinton administration, in his key note address referred to a letter he got from a citizen who suggested that the USA should construct a “moon bomb”. A huge space missile with flukes on its nose was to be fired in the direction of the moon tied to a wire unrolled from an anchor point on Earth. With the missile firmly tied to the surface of the moon, the rotation of the earth would haul in the wire and the moon. The problem was to correctly calculate the proper length of the wire for landing the moon in Russia.
73. Allison, Graham: *Nuclear Terrorism: The Ultimate Preventable Catastrophe*, Times Books, New York 2004; Furgeson, Charles D.; Potter, William C.; Sands, Amy; Specter, Leonard S. and Wehling, Fred L.: *The Four Faces of Nuclear Terrorism*, Routledge, 2005; and Levi, Michael: *On Nuclear Terrorism*, Harvard University Press, Boston 2007.
74. *Technical Study on Different Modalities of Application of Safeguards in the Middle East*. Document IAEA-GC (XXXIII)/887, 29 August 1989. A similar definition was suggested in the 1975 UN study *Comprehensive Study on the Question of Nuclear-Weapon-Free Zones in all its Aspects*. United Nations Document A/10027/Add. 1, (UN Sales No. E.76.1.7). para 72. (On 22 May 1990, the People’s Democratic Republic of Yemen and Yemen merged to form a single state with the name “Yemen”).
75. The League of Arab States (LAS) has 22 member states: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen. While being a member, Palestine can for the time being not become party to international treaties on arms control. The number of sovereign states in the area thus amounts to 23, i. e. the LAS members but Palestine, Iran and Israel.
76. *United Nations Convention on the Law of the Sea, UNCLOS* (UN Sales No. E.83.V.5, United Nations *Treaty Series*, vol. 1833, No. 31363), signed on 10 December 1982 and entered into force on 14 November 1994. As of 20 September 2013, 166 states were parties to UNCLOS. All major maritime states except the USA are parties.
77. UNCLOS Art. 38-44.
78. Jordan is essentially landlocked but has a narrow access to the sea at its harbour city of Aqaba.
79. Convention Respecting Free Navigation of Suez Canal of 29 October 1888.
80. The Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous, or Other Gases, and of Bacteriological Methods of Warfare (League of Nations *Treaty Series*, Vol. XCIV (1929), No. 2138), was signed

- on 17 June 1925 and had, as of 15 October 2013, 138 parties.
81. Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (United Nations *Treaty Series*, Vol. 480, No. 6964) entered into force in October 1963 and had, as of 15 October 2013, 126 parties and an additional 7 signatories.
 82. The Treaty on the Non-Proliferation of Nuclear Weapons (UN *Treaty Series*, Vol. 729, No. 10485) was opened for signature on 1 July 1968 and entered into force on 5 March 1970. All states of the world but four (DPRK, India, Israel, Pakistan) are currently parties to the NPT. Two more states, Cook Islands and Niue in the South Pacific, never signed the NPT nor are they members of the United Nations. However, as independent in free association with New Zealand, they could be considered bound by the adherence to the NPT by New Zealand. As members of the South Pacific Forum, they are ratified parties to the South Pacific Nuclear-Free Zone Treaty. DPRK became a party to the NPT on 12 December 1985 but withdrew from the treaty on 11 January 2003.
 83. The "Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction" entered into force on 26 March 1975. It had 165 parties and 11 additional signatories as of 15 October 2013.
 84. The "Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction" was opened for signature on 13 January 1993 and entered into force on 29 April 1997. It had 190 parties and 2 additional signatories as of 15 October 2013.
 85. Document NPT/CONF. 1995/32/DEC. 3 (11 May 1995), contained in an annex to document NPT/CONF. 1995/32 (Part I).
 86. Document NPT/CONF. III/64/I, Annex I.
 87. The Comprehensive Nuclear Test-Ban Treaty was opened for signature on 24 September 1996 but has not yet entered into force. As of 15 October 2013, it had 161 parties. An additional 22 had signed. For text, see UN Document A/RES/50/245.
 88. Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof (UN *Treaty Series* Vol. 953) entered into force on 18 May 1972. The treaty had as of 15 October 2013 94 parties including all recognized nuclear-weapon states but France and an additional 20 signatories.
 89. Protocol (I) Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflict. The Protocol was agreed on 8 June 1977 and entered into force on 7 December 1978. As of 15 October 2013, 173 states were parties. All recognized nuclear weapons powers were parties but the USA (signatory).
 90. For text of the Pelindaba treaty, see UN Document A/RES/50/426 Annex.
 91. The Convention (UN *Treaty Series*, Vol. 2445, p 69) entered into force on 7 July 2007 the 30th day following the deposit of the 22nd instrument of ratification, acceptance, approval, or accession with the Secretary General of the United Nations. As of 1 February 2012, the Convention had 77 parties and an additional 57 signatories.
 92. Sometimes the circumstances are such that only part of a state will be considered for inclusion in a zone.
 - * One clear category is when a considerable part of a state is denuclearized while other parts are not, an example being the territory of the former German Democratic Republic now nuclear-weapon-free and part of unified Germany.
 - * Another category refers to dependencies of states being part of a zone while their mainland belongs to other regions. Protocols of the Tlatelolco, Rarotonga, and Pelindaba treaties apply to such cases.
 - * A third category refers to states belonging to a nuclear-weapon-free zone but a far away dependency does not. In the discussions on a Nordic European nuclear-weapon-free zone, Norway was considered an obvious part of the zone while its dependency in the South Atlantic, Bouvet Island, was not.
 - * A fourth category refers to the case where a separate part of a country is a denuclearised or a demilitarised entity and the mainland is not. Examples are the demilitarized Spitsbergen and Aaland Islands archipelagos, dependencies of Norway and Finland respectively not parties to a zone.
 93. Document COPREDAL/76 p. 8, or UN document A/6663.
 94. The fact that three nuclear-weapon powers, France, the UK, and the USA, are parties to

- Protocol I of the Latin American zone treaty and to Protocol I of the South Pacific zone treaty, and that France is a party to Protocol III of the African zone treaty poses this problem which has, however, not been raised or referred to politically.
95. The problem of drawing a line between the territorial airspace, subject to national jurisdiction of the underlying state, and the international outer space where the underlying state would have no responsibility, has been on the agenda of the United Nations Committee on the Peaceful Uses of Outer Space for very many years. Many difficult issues must be taken into account when defining such a line. Without a final solution, a reasonable assumption would be that the line would be drawn at approximately 100,000 metres above sea level.
96. For an account of the consequences of these policies, see, for example, Prawitz, Jan: "The 'Neither Confirming nor Denying Policy at Sea' in Goldblat, Jozef (Ed.): *Maritime Security: The Building of Confidence*, Document UNIDIR/92/89 (Sales No. G.V.E.92.0.31); and Prawitz, Jan: *The Neither Confirming Nor Denying: Thoughts on a Principle*, in KkrVAT, 1989, pp. 197-214 (5. häftet); and in Lodgaard, Sverre (Ed.): *Naval Arms Control*, Sage, London 1990, pp. 240 - 257.
97. Including primarily the Presidential Nuclear Initiative (PNI) simultaneously declared by US and Soviet Presidents George Bush (Sr) and Michael Gorbachev in the fall of 1991, and confirmed by the Russian President Boris Yeltsin in January 1992. For text of the Bush, Gorbachev, and Yeltsin-statements, see e.g. *SIPRI Yearbook 1992*, Oxford University Press, 1992, pp. 85-92.
98. UN Document S/RES/984 (1995).
99. India, Israel, and Pakistan are usually referred to as states on the "threshold" of becoming nuclear weapons states. After the nuclear test explosions of India and Pakistan in May 1998, India in particular has tried to be formally recognized as a nuclear weapons state; in vain, however. The 2000 NPT Review Conference of the parties to the NPT stated in its Final Document: "The Conference deplores the nuclear test explosions carried out by India and then by Pakistan in 1998. The Conference declares that such actions do not in any way confer a nuclearweapon State status or any special status whatsoever." (Document NPT/CONF.2000/28 Part I, chapter on Article I and II and Preambular Paragraphs 1 to 3, para 9). Similar language was expressed in the following resolution (New Agenda) adopted by the 55th UN General Assembly (UN Document A/RES/55/33 C, Pp 5). Such statements were repeatedly expressed since.
100. Interestingly, the Tlatelolco Treaty as the only zone treaty includes a provision (Art.29:4) that if a new power possessing nuclear weapons arises after the full entry into force of the treaty, that fact "shall have the effect of suspending the execution" of the treaty for parties which request such suspension and that the treaty shall remain suspended for those parties until the new power adheres to the treaty's guarantee protocol (Additional Protocol II).
101. Compare recommendation 22 of the Blix Commission report: "Every state that possesses nuclear weapons should make a commitment not to deploy any nuclear weapon, of any type, on foreign soil".
102. The "thinning out" idea was first suggested by Anders Thunborg in 1975 in relation to the proposed nuclear-weapon-free zone in the Nordic area, in "Nuclear Weapons and the Nordic Countries Today - A Swedish Commentary", A Special Issue of *Ulkopolitiikka* 1975, Helsinki, pp. 34-38.
103. Document CD/989, 20 April 1990.
104. Kibaroglu, Mustafa: "EURATOM & ABACC: Safeguard Models for the Middle East?" in Prawitz, Jan and Leonard, James F.: *A Zone Free of Weapons of Mass Destruction in the Middle East* (Annex), Document UNIDIR/96/24 (UN Sales No. G.V.E.96.0.19), pp. 93-123.
105. UNCLOS, Art. 87.
106. UNCLOS, Art. 88.
107. UNCLOS, Art. 301.
108. In particular, use of military force in compliance with the Charter's Arts. 2:4 and 5:1 would not be prohibited by UNCLOS.
109. The legal concepts of "innocent passage" and "transit passage" are defined in UNCLOS, Articles 17 - 33, 45, and 52, and Articles 38 - 44 respectively.
110. Griffiths, David N.: *Maritime Aspects of Arms Control and Regional Security in the Middle East*, Policy Paper No. 56, San Diego: Institute on Global Conflict and Cooperation, University of California, June 2000.

111. *Maritime Security in the Gulf*, a special issue of the Research Bulletin Security & Terrorism of the Gulf Research Center in Dubai, Issue No. 8, May 2008.
112. For an account of Israel's nuclear industry and its history, see Cohen, Avner: *Israel and the Bomb*, Columbia University Press, New York 1998, and his article "Crossing the Threshold: The Untold Nuclear Dimension of the 1967 Arab-Israeli War and the Contemporary Lesson", *Arms Control Today*, June 2007, pp. 12-16; Albright, David; Berkhout, Frans and Walker, William: *Plutonium and Highly Enriched Uranium: World Inventories, Capabilities, and Policies*, Part IV "Material Inventories and Production Capabilities in Threshold States", pp. 257-264; SIPRI, Oxford University Press, 1997, and Shalom, Zaki: *Israel's Nuclear Option*, Jaffe Centre for Strategic Studies, Sussex Academic Press, 2005.
113. On 22 September 1979, a US observation satellite recorded a "suspicious event" in the South Atlantic with a signal signature similar to those produced by nuclear explosions. It was widely suspected at the time that the event might have been an Israeli or a South African test explosion, possibly in cooperation. The case was never hundred percent clarified, despite several thorough investigations including a UN expert study (UN Document A/34/674). This author is convinced that the most probable explanation is that the recorded signal was produced by internal equipment malfunction or anomaly and not by an external source. This judgement was supported by interviews with senior officials in both the Israeli and the South African atomic energy authorities and with the Chairman of the US President's Investigation Panel on the matter. Recently, a somewhat different opinion was published indicating that the 22 September 1979 event could have been an Israeli nuclear test explosion. Weiss, Leonard: *The 1979 South Atlantic Flash: The Case for an Israeli Nuclear Test*, Centre for International Security and Cooperation paper, 30 July 2011.
114. This policy of deliberate ambiguity has been said to serve Israel's security interests in three ways: firstly, in times of gloom, it gives hope to the Israelis; secondly, it may caution the enemies of Israel; and thirdly, it relieves other states from the delicate burden of taking an explicit position on the matter. As reported by Dr Shalheveth Freier – a former Director General of the Israeli Atomic Energy Commission – in Atterling Wedar, Carin; Hellman, Sven and Söder, Karin (Eds.): *Towards a Nuclear-Weapon-Free World*, Swedish Initiatives. (ISBN 91-972128-0-6) Stockholm 1993. P. 181.
115. For a long time, Israel has been reluctant to discuss formal foreign security guarantees. Considering the historical experiences of the Jewish people, Israelis have been inclined to trust only themselves. In recent years, however, some interest in a NATO-membership or other external guarantees has been expressed. An outside analytical view is an OpEd article by Ramberg, Bennet: "An Israeli-NATO pact", *The Washington Times*, July 5th, 2008.
116. This idea may seem too fantastic at a first glance, but perhaps not at a second. The changing focus of the US Sixth Fleet was described by its commander Vice Admiral (USN) Winnefeld, Sandy: "Maritime Strategy in an Age of Blood and Belief", *Proceedings U.S. Naval Institute*, Vol. 134 July 2008, pp. 20-27.
117. Asculai, Ephraim: *International Reactions to Iran's Nuclear Pronouncements*, TAU Notes No. 168, Tel Aviv, 21 April 2006.
118. Albright, David; Brannan, Paul and Walrond, Christina: *ISIS Analysis of IAEA Iran safeguards report*, ISIS Report 24 February 2012 (IAEA Document GOV/2012/9).
119. Chubin, Sharam: *Iran's Nuclear Ambitions*, Carnegie, 2006.
120. IAEA Fact sheets, available at http://www.iaea.org/Publications/Factsheets/English/npt-status_overview.html.
121. Compare e. g. UN Documents S/RES/1747 (2007), S/RES/1803 (2008), S/RES/1835 (2008) and S/RES/1929 (2010) and IAEA Documents INFCIRC/730, 1 July (12 June) 2008 and GOV/2013/40 (28 August) 2013.