THESIS COMMITTEE: AMBASSADOR THOMAS GRAHAM, JR. AND DR. CHRISTOPHER JONES

Iranian Audacity & Israeli Opacity

Challenges to the Middle East Nuclear Weapons Free Zone

by

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Preface

My sincerest appreciation to those who have given much to this work

Ambassador Thomas Graham and Professor Christopher Jones

Professors Wolfram Latsch and Sarah Curran

Dedicated to:

My daughter Charlotte Joy, may she grow up in a world free from nuclear tyranny

&

My Parents Dan and Joyce Bovey who have supported my efforts through this journey

Abstract

A Nuclear Weapons Free Zone is a concept pre-dating the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), 1968. Five such zones exist today covering more than 50% of the earth's surface. However, one region of the world, the Middle East has no such agreement. This is in spite of the fact that none of the legitimate Nuclear Weapons States exist within this region and all but two nations are full adherents to the NPT – Israel, which never signed the NPT, and Iran, which has been sanctioned for violations of the safeguards agreement.

This work attempts to explain the significance of the dichotomy between these two countries that directly challenge to the establishment of such a zone, or restated, the Israel / Iran dynamic as a threat to establishment of a Middle East Nuclear Weapons Free Zone.

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"So long as nuclear weapons remain a security strategy for a limited few possessor countries, with umbrella arrangements that extend that security to a secondary circle of "allied" countries; so long as others are left out in the cold, the proliferation risk will be with us" - Mohamed ElBaradei (pg. 315)

"Whatever direction Middle Eastern leaders decide to follow on the nuclear question will be similarly based or regime survival calculations. . . It is unlikely. In other words, that questions and tensions around nuclear issues in the Middle East will diminish any time soon." – Mehran Kamrava (pg. 19)

1. Introduction

When taken alone, these two statements epitomize the challenge to the international community in the creation and development of a nuclear weapons free zone in the Middle East. However, these statements may also well contain some of the answers to that very question. It is the aim of this thesis to examine the obstacles to the creation of a nuclear weapons free zone in the Middle East and postulate possible avenues that could lead to the creation of such a zone.

Nuclear weapons have long been about the possessors and the power that possession brings. This power manifests itself in the freedom to act without the fear of war with another nation within the Nuclear Weapons State's domestic confines. Indeed, since the first atomic weapon was dropped in 1945, no atomic (or nuclear) weapons State has been engaged within the confines of its borders by another nation[1].

Proliferation; however, does not equal peace, but an imbalance of power and the fear that the imbalance implies, either implicitly or explicitly, to the non-possessor nations. Virtually all

[1] This does not account for border skirmishes such as those between Pakistan and India, proxy wars supported by nuclear powers, nor internal discord due to the dissolution of nuclear states such as occurred in the U.S.S.R. and the re-establishment of the Russian Federation.

nuclear weapons programs were born in secret under the guise of military necessity, medical research, energy production, or a combination thereof. These programs were then *introduced* with the completion of a nuclear explosive device and the subsequent testing of that device [2].

The United States, along with Great Britain and Canada, embarked on the Manhattan Project. The Soviet Union developed its program through covert action and testing in the far region of Kazakhstan, away from the prying eyes of Europe. France, which had been an initial pioneer in nuclear research during World War II, in turn developed its nuclear weapons program in the former French Sahara as an effort to distance itself from the North Atlantic Treaty Organization (NATO) and provide for its own nuclear defense. China's program developed as a means of deterrence under Mao Zedong with Soviet assistance and continues to shroud its program in secrecy. Virtually all other programs were similarly born[3].

The Treaty on the non-Proliferation of Nuclear Weapons (commonly referred to as the non-Proliferation Treaty or NPT) came into existence in 1968. The primary focus of this treaty is a globalized effort to curb the proliferation of nuclear weapons; define the pre-existing Nuclear Weapons States; establish a means for nuclear weapons reductions - with a desire towards complete disarmament; and further the development of nuclear research and use for peaceful purposes. This landmark treaty is the keystone document towards the permanent reduction and eradication of nuclear weapons and is currently signed by 190 countries worldwide[4] (only four countries have never signed the treaty, India, Pakistan, Israel , and the newly formed South

[2] For the purpose of this paper, *introduction* is defined as the manufacture and explosion of a nuclear device, not merely the possession of a device. This allows the author to be consistent with the Israeli position as well.
[3] Other states who secretly developed, or considered developing, nuclear weapons include: India, Pakistan, the DPRK, South Africa, Argentina, Brazil, Taiwan , Egypt, Libya, and Iran.
[4] A complete list of the countries, signing dates and ratifications is available from the United Nations Office of Disarmament Affairs webpage: http://disarmament.un.org/treaties/t/npt?OpenView

Sudan; the Democratic People's Republic of Korea withdrew from the treaty on 10 January 2003).

Today, in addition to the five permanent members of the United Nations Security Council, all of whom possess nuclear weapons and are known as the P5 nations, Pakistan, India, and Israel are all considered to be nuclear weapons states (although Israel has never declared itself as such). On February 12, 2013, the Democratic People's Republic of Korea (DPRK) conducted its third nuclear underground test and possesses extensive surface to surface missile technology. The explosion of a nuclear device, and the estimate that the DPRK may possess enough enriched uranium to produce between 4-8 additional nuclear devices, places the DPRK as a de facto Nuclear Weapons State. Iran may be seeking a nuclear weapons capability either through its ongoing nuclear research program or interaction with other nuclear proliferators such as the DPRK. The challenges presented by Israel and Iran make the creation of a Middle East Nuclear Weapons Free Zone complex as neither admits to possessing nuclear weapons.

Israel is one of four countries that never signed the NPT. Its basis for doing so is the fact that it would have to move away from its policy of "nuclear opacity"[5] thereby having to declare its nuclear capabilities. This ability to deny its possession of nuclear weapons while still wielding the deterrent effect of a nation that possesses nuclear weapons is a key component of Israel's defense strategy. Despite these facts, significant intelligence exists that Israel does possess nuclear weapons.

[5] Nuclear Opacity is a term coined by Dr. Avner Cohen from the Hebrew word "Amimut" meaning ambiguous or opaque. As such, Israel will neither confirm nor deny its nuclear weapon's capabilities preferring instead to refer back to the statement in 1964 by then Prime Minister Levi Eshkol that, "Israel will not be the first nation to introduce nuclear weapons to the Middle East," (Cohen, Israel and the Bomb, pg. 435)

Iran continues its development of nuclear capabilities in defiance of international pressure for full disclosure, stating that its research is for peaceful purposes and medical research. However, as Iran is not in compliance with the IAEA safeguards agreement of 1974 and the additional protocol of 1997[6], their claims of a peaceful program are in question. Were Iran to be considered a potential Nuclear Weapons State, this would bring the current total to ten Nuclear Weapons States worldwide.

While Iran is a signatory state to the NPT and claims to be conducting nuclear research for peaceful purposes, its actions signal a potentially different position. The acquisition of large numbers of centrifuge devices through the A.Q. Khan organization; continued development of surface-to-surface missile technology capable of not only ranging its sworn enemy, Israel, but able to carry a nuclear payload; ongoing trade and technological advancement through participation with the DPRK; and military supports to Syria in the form of missile technology, which is reported to have received nuclear assistance from the DPRK, raise significant questions to the actual intentions of Iran and its commitment to the NPT.

The concept of a Middle East Nuclear Weapons Free Zone is not new. Originally called for at the United Nations (resolution 3236 in 1974), the call for a ME NWFZ was further discussed at the 1995 NPT Review sponsored by United States, Great Britain and Russia[7]. Subsequent NPT reviews have also called for a ME NWFZ; however, these efforts have largely been denounced by Israel as one-sided and not taking the entire security situation in the Middle East into

[6] The complete text of the IAEA / Iran Safeguards Agreement of 1974 (INFCIRC/214) can be located at: http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc214.pdf, the Additional Protocol of 1997 (INFCIRC 540) signed on 18 December 2003 is available at: http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc540c.pdf

[7] http://www.fas.org/programs/ssp/nukes/ArmsControl_NEW/nonproliferation/NFZ/NP-NFZ-ME.html.

account. The 2012 conference was cancelled due to the unrest in Syria and in Gaza, with many States placing blame on Israel for the lack of attendance as a primary cause of the cancellation[8].

While this raises questions on the eventuality of a Middle East Nuclear Weapons Free Zone, there are several alternatives: A traditional NWFZ could be established based on a timeline with a long-term event horizon, an exclusionary provision might be provided to provide for a regional NWFZ without Israel and Iran (similar to the Central Asia Nuclear Weapons Free Zone which ignores the nuclear weapons states of India, Pakistan, China, and Russia, focusing only on those states that are non-nuclear weapons states and which are regionally aligned). A third possibility exists that Middle East States could unilaterally declare their status (as in the example of Mongolia).

[8] For a discussion on the cancellation of the 2012 ME NWFZ Conference see: http://foreignaffairsreview.co.uk/2012/12/israelnuclear/

2. Background

Early History of Nuclear Weapons

The conclusion of World War II brought about the emergence of the world's first atomic nation, the United States of America. It also brought about an absence of power in many parts of the world and a need to re-shape and re-secure the political fabric of the newly formed lands. What emerged was a new world with diverging political ideologies and a technology so devastating that an invigorated race to possess this technology and to control its proliferation began almost immediately – atomic (nuclear) energy.

Most of the scientific research to this point was contained in the western countries. In 1945, The United States tested the first atomic bomb as a part of the secret "Manhattan Project" along with its allies Canada and Great Britain; becoming the first nation to possess, and later that same year use, an atomic bomb (1945). The Union of Soviet Socialist Republic would soon follow with a secret program of its own; testing an atomic device in 1949, eventually spreading its nuclear arsenal among four of its republics (Russia, Belarus, Ukraine, and Kazakhstan). The possession of a nuclear weapon by a second nation led to the "Cold War" proliferation of nuclear weapons. Other nations would follow with their own secret programs: Great Britain (1952) would soon be joined by France (1960) and China (1964). The international desire to obtain nuclear power and nuclear arms had begun.

Proliferation

The Cold War period extending from the end of World War II until the collapse of the USSR on December 25, 1991, was largely focused on two nations and their alliances – The United States of America and the Union of Soviet Socialist Republics. The nuclear umbrellas extended through the Warsaw Pact nations and the North Atlantic Treaty Organization (NATO) allowed for a predominately bilateral discussion on nuclear arms control, extending those discussions primarily with the other three Nuclear Weapons States, referred to collectively as the P5 nations: The United States, Russia, China, Great Britain, and France. However, these nations were not the only nations developing a nuclear weapons capability.

Advances in nuclear weapons technologies allowed for ever smaller devices to be built while the delivery vehicles, such as bombers, missiles, and submarines, became more sophisticated. All the while, scientific understanding of nuclear related issues continued to broaden, spreading the ability for other nations to develop their own nuclear weapons capability. Today, 48 countries possess some level of nuclear expertise.

Eight states possess nuclear warheads: the United States, Russia, Great Britain, France, China, India, Pakistan, and Israel[9]. Ten others nations have either possessed nuclear weapons or maintained programs aimed at the acquisition of a nuclear weapons program: Belarus, Ukraine, Kazakhstan (returned their nuclear weapons to Russia following the dissolution of the U.S.S.R. and the signing of the Lisbon Protocols with NATO); Brazil and Argentina concluded their aspirations following their treaty commitments to a South American Nuclear Weapons

[9] See Avner Cohen's works *Israel and the Bomb* and *The Worst Kept Secret.* Although there has been no official confirmation of Israel's nuclear weapons stockpile, sufficient evidence exists to assume the presence of nuclear weapons in Israel. See also the armscontrol.org factsheet for estimate of nuclear warheads.

Free Zone; South Africa (dismantled its program after possessing nuclear weapons); Egypt (cancelled its program); Libya (cancelled program); Syria (facilities destroyed), and the People's Democratic Republic of Korea, which had signed the NPT and has since withdrawn from it, conducted its third nuclear explosion in February, 2013 and continues to develop surface to surface missile technologies. Iran, which began an early nuclear program, signed the NPT, and issued a statement that nuclear weapons were incongruent with Islam, is also considered a potential nuclear weapons proliferator with extensive reprocessing and missile capabilities.

Nuclear energy production also enhances capability bringing those nations to a near nuclear weapons capability. Today, 30 countries currently possess nuclear reactors for the purpose of power production while an additional 18 countries are planning future development with assistance from the International Atomic Energy Agency (IAEA). There are 437 current operational commercial reactors, 66 commercial reactors under construction, and plans for 158 additional commercial nuclear reactors on file with the IAEA. This figure does not take into account research reactors[10].

The World Nuclear Association reports similar results, reporting that currently 56 countries operate nuclear research reactors and a total of 48 countries will possess nuclear power reactors by the year 2030[11]. Of these countries, seven are located in or near the Middle East (Egypt, Iran, Israel, Jordan, Saudi Arabia, Turkey, and the United Arab Emirates). Additionally, three countries in the Middle East have previously been suspected of having nuclear weapons

[10] These statistics are based on the IAEA Power Reactor World Statistics Database located at, http://www.iaea.org/PRIS/WorldStatistics/OperationalReactorsByCountry.aspx, accessed February 21, 2013. A more detailed description is available from the IAEA in its report *Nuclear Power Reactors in the World, 2012 Edition* ISBN 978-92-0-13210-1. These statistics do not account for research reactors such as those in Israel, Iran or the DPRK and therefore does not provide a complete picture of total reactors worldwide.
[11] http://www.world-nuclear.org/info/reactors.html

programs: Syria, which had its reactor destroyed by Israel in 2007; Iraq, whose breeder reactor was destroyed in 1981 by Israel and the remainder of the program dismantled following the 1991 Gulf War with the United States; and Libya, which renounced its program in 2003 under heavy pressure from the United States. Currently, Israel has no commercial power reactors, but continues to operate the Dimona and Soreq research reactors. Iran meanwhile is operating the Bushehr commercial power reactor. The United Arab Emirates is currently constructing a nuclear power reactor in Abu Dhabi. Eleven nuclear power reactors have been planned, (Egypt – 1, Jordan – 1, Iran – 2, Turkey – 4, United Arab Emirates – 3) with an additional 33 commercial reactors proposed (Egypt - 1, Iran - 1, Israel - 1, Saudi Arabia - 16, Turkey - 4, and the United Arab Emirates - 10)[12]. The Middle East can no longer be considered an observer to the nuclear world, but that of an active, engaged participant.

[12] http://www.world-nuclear.org/info/reactors.html

3. The Nuclear non-Proliferation Treaty[13]

The Nuclear non-Proliferation Treaty of 1968 is a landmark treaty to establishing the means to accomplish three significant tasks[14]:

Prevent the spread of nuclear weapons and weapons technology

Foster the peaceful uses of nuclear energy

Nuclear Weapons Disarmament

This treaty set out to establish the norms by which the non-nuclear weapons states and the five declared nuclear weapons states could operate, the expectations of each with regards to nuclear capabilities, and a framework through which to achieve these goals.

To the goal of preventing the spread of nuclear weapons and weapons technology, the treaty stipulated that nuclear weapons technology could not be shared or transferred by any of the nuclear weapons states (Article I). Non-nuclear weapons States are neither receive nor produce such technology (Article II). These non-nuclear weapons States are to accept safeguards through the International Atomic Energy Agency for the verification of the peaceful use of nuclear activities (Article III). Additionally, Article III stipulates that the safeguards are to "avoid hampering the economic or technological development of the Parties or international co-operation in the field of peaceful nuclear activities. . ."

[13] The complete text of the Treaty on the non-Proliferation of Nuclear Weapons is available from the IAEA, INFCIRC/140, 22 April 1970: http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc140.pdf
[14] IAEA Background on the Treaty on the non-Proliferation of Nuclear Weapons: http://www.iaea.org/Publications/Documents/Treaties/npt.html

The right to peaceful research and to the exchange of nuclear knowledge and technology in accordance with the safeguards is granted under Articles VI and V. This includes information on the peaceful application of nuclear explosions (Article V).

Disarmament is directed under Article VI. This is perhaps the broadest article in the treaty as there are no specified levels or timelines except to state that nuclear weapons states must, "negotiate in good faith on effective measures relating to cessation of the nuclear arms race . . . and to nuclear disarmament . . . under strict and effective international control." (Article VI).

Article VII allows for a furtherance of cooperation by states enabling them to conduct regional treaties resulting in the creation of Nuclear Weapons Free Zones. Today there are five such treaties on record and a call by the United Nations to establish a Nuclear Weapons Free Zone in the Middle East.

There are 190 States that are party to the Treaty on the non-Proliferation of Nuclear Weapons, including all five of the Nuclear Weapons States. Four countries have not signed the treaty (Israel, India, Pakistan, and South Sudan). Three of the countries have emerged, either explicitly or implicitly, as a nuclear weapons state. South Sudan became a country on July 9, 2012 and has neither signed the NPT nor has it become a signatory state to the Treaty of Pelindaba (Africa NWFZ). The People's Republic of Korea withdrew from the treaty on January

10, 2003 citing U.S. failure to comply with the NPT and manipulation by the IAEA[15]. Iran is currently sanctioned for violations of the NPT and IAEA Safeguards Agreement (UNSCR 1737)[16].

With regards to the NPT Comprehensive Safeguards Agreements, as of December 31, 2012, only 13 non-nuclear weapons states party to the NPT have not fully complied with this requirement (five have signed agreements that are on file but are not yet in force, three agreements have been approved but not yet signed, and five have not filed agreements with the IAEA)[17]. Of note, all but two of these countries are located within nuclear weapons free zones and have either signed or acceded to its respective NWFZ treaty (ten are located in the African NWFZ, one in the South Pacific NWFZ, and East Timor and Micronesia are not parties to any NWFZ treaty). On May 11, 1995, in keeping with Article X, paragraph 2, a consensus vote was approved extending indefinitely the Treaty on the non-Proliferation of Nuclear Weapons.

Prior to the creation of the NPT, then U.S. President John F. Kennedy speaking before the UN General Assembly on September 25, 1961 stated that the "The weapons of war must be abolished before they abolish us." President Kennedy called for, ". . . a general and complete disarmament . . . [this] disarmament must be a part of any permanent solution." He further declared, ". . . this is no longer a Soviet problem nor an American problem, it is a human problem . . . peace is primarily a problem of politics and people."[18] His statement laid the

[15] A full text of the statement to withdraw is available from the KNCA detailed report, January 22, 2003 at: http://www.fas.org/nuke/guide/dprk/nuke/dprk012203.html
[16] A complete text of UNSCR 1737 is available on the UN Security Council web page located at: http://www.un.org/sc/committees/1737/
[17] A complete country by name list is available from IAEA fact sheet NPT Safeguards Agreements Overview of Status available at: http://www.iaea.org/Publications/Factsheets/English/nptstatus_overview.html
[18] A complete audio file of his speech calling for the international verification, continuation of the U.N. under one executive, and the abolishment of the weapons of war (8:17) and disarmament is available at: http://www.jfklibrary.org/Asset-Viewer/Archives/JFKWHA-050.aspx

foundation for international cooperation and authority through the International Atomic Energy Agency (IAEA), the Conventional Test Ban Treaty (CTBT), the Outer Space Treaty, and the Nuclear non-Proliferation Treaty. Without these controls and international cooperation he feared that proliferation would result in as many as 15-20 nuclear weapons states by 1975[19].

Nearly 43 years after the initial signing of the NPT there are only 10 countries known or suspected to possess nuclear weapons, 30 countries considered capable but not in possession of nuclear arms, and nuclear stockpiles have decreased to approximately 17,300 nuclear warheads worldwide with approximately 4,100 of those being operational strategic warheads[20]. This is a reduction of nearly 73.5% from the all-time high number of 65,056 nuclear warheads reportedly in existence in 1986[21]. Approximately 16,200 of these nuclear warheads are in the possession of the Russia and the United States (~8,500 and ~7,700 respectively) leaving approximately 1,100 nuclear warheads in existence between the other seven nuclear weapons states (France ~300, China ~240, Great Britain ~225, Pakistan ~90-100, India ~80-100, Israel ~60-80, and DPRK < 10). While the United States, Russia, France, and Great Britain continue to reduce their arsenals, with further reductions anticipated, increases are expected in the arsenals of China, Pakistan, India, and Israel[22].

[19] Full text of his news statement is available at: http://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-059-003.aspx

[20] As of December 18, 2012. All numbers are approximate as actual numbers are not disclosed by the Nuclear Weapons States. A detailed listing can be found at: http://www.fas.org/programs/ssp/nukes/nuclearweapons/nukestatus.html

[21] This is the high point of the cold war. Reductions began as part of the SALT I and SALT II treaties. A complete list of nuclear warheads by year for the years 1945 to 2002 is available at: http://www.nrdc.org/nuclear/nudb/datab19.asp

[22] Data based on Robert S. Norris and Hans M. Kristensen, "Global nuclear weapons inventories, 1945–2010", *Bulletin of the Atomic Scientists*, vol. 66, no. 4, 2010, pp. 77–83 located at: http://bos.sagepub.com/content/66/4/77.full.pdf.

The NPT's successes in all three of its significant tasks are impressive, but there are challenges to that success as well. First, the continued existence of the five nuclear weapons states more than 40 years after the initial signing of the treaty demonstrates the difficulty in achieving the aims set out in Article VI. Second, the emergence of the three additional nuclear weapons states, albeit none of these states have ever been bound to adhere to the NPT having refused to sign the treaty. Third, the NPT fails to provide an enforcement mechanism in the NPT for those states which choose to cheat. Fourth, and perhaps most significantly, the spread of nuclear capabilities through the peaceful means provision (Article IV), as well as the inequity that is perceived in the execution of this article by the Nuclear Weapons States in providing nuclear technical assistance to those nations desiring nuclear programs for peaceful means[23].

The NPT is not perfect, but it serves well as a baseline to begin other nuclear weapons disarmament conversations and treaties. It does not on its own stop the proliferation of nuclear weapons, but it allows for an international agreement through which to build consensus. With regards to the Middle East and neighboring countries, the NPT allows for the future development of nuclear energy while having reduced the regional threat through either treaty or identification. Egypt, Libya, Syria and Iraq are all examples.

The Israeli policy of nuclear opacity was born out of a necessity to maintain a nuclear weapon's program without directly introducing a nuclear device in the Middle East. Iran's

[23] For a more in-depth discussion on the success and failures of the Treaty on the non-Proliferation of Nuclear Weapons see The Weapons of Mass Destruction Commission report number 41 on *Learning from Past Success: The NPT and the Future of non-Proliferation*, authored by Jim Walsh, 2006. The report is available at: http://www.un.org/disarmament/education/wmdcommission/files/no41.pdf

nuclear ambitions have largely been in check by a concerned international community as a result of its participation as a member of the NPT and the involvement of the IAEA.

4. Nuclear Weapons Free Zones

On December 11, 1975, the United Nations in keeping with Article VII of the Nuclear non-Proliferation Treaty, which specifically allows countries to enter into regional alliances to mutually ban nuclear weapons in their respective territories, adopted resolution 3472 containing the definition of a Nuclear Weapons Free Zone as:

> *. . . any zone recognized as such by the General Assembly of the United Nations, which any group of States, in the free exercises of their sovereignty, has established by virtue of a treaty or convention whereby:*
>
> *(a) The statute of total absence of nuclear weapons to which the zone shall be subject, including the procedure for the delimitation of the zone, is defined;*
>
> *(b) An international system of verification and control is established to guarantee compliance with the obligations deriving from that statute.*[24]

This resolution led to the creation of the first defined Nuclear Weapons Free Zone (NWFZ) which had been created by the Treaty of Tlatelolco (1967) and ratified by all 33 affected nations prohibiting nuclear weapons in Latin America and the Caribbean. Additional guidelines were provided by the UN Disarmament Commission in 1999 outlining significant considerations of

[24] A complete text of the resolution can be found at: http://www.opanal.org/Docs/UN/UNAG30res3472i.pdf

the NWFZs as well as demonstrating the universality of the concept with over 107 countries and 50% of the earth's land mass covered by a Nuclear Weapons Free Zone[25].

Today, there are five recognized NWFZs:

The Treaty of Tlatelolco (1967) – Latin America and the Caribbean (33 Signatory States / 33 Parties)

The Treaty of Rarotonga (1985) – South Pacific (13 Signatory States / 13 Parties)

The Treaty of Bangkok (1995) – Southeast Asia (10 Signatory States / 10 Parties)

The Treaty of Pelindaba (1996) – Africa (50 Signatory States / 36 Parties)

The Treaty on a Nuclear-Weapon-Free Zone in Central Asia **(2006)** –

Central Asia (5 Signatory States / 5 Parties)

Additionally, Mongolia, which is bordered by two P5 nations, China and Russia, and possesses vast quantities of high quality uranium, self-declared as a nuclear weapons free state, a declaration that has further been internationally recognized by the U.N. under resolution 55/33S. Four other treaties that deal with denuclearization are:

The Antarctic Treaty (1959)

The Outer Space Treaty (1967)

The Moon Agreement (1979)

The Seabed Treaty (1971)[26]

[25] For a complete text see annex I of the Report of the Disarmament Commission, General Assembly Official Records, 54th Session, Supplement #42 (A/54/42) which can be found at: http://www.opanal.org/Docs/Desarme/NWFZ/A54_42iAnnexI.pdf

These NWFZ treaties and agreements cover most, but not all of the non-nuclear weapons states, leaving the non-nuclear states in Europe, the Middle East, and South Central Asia outside of any declared Nuclear Weapons Free Zone.

The existence NATO and the former Warsaw Pact pose a challenge in Europe to the creation of a EU NWFZ with the existence of three P5 members belonging to NATO and a fourth P5 member, Russia, located in the east of Europe. Likewise, former Soviet States in Central Asia could potentially accede to the Central Asia NWFZ or establish a new NWFZ of their own.

Pakistan, India, and the DPRK would have to renounce their nuclear weapons programs in order to join a NWFZ; however, precedence for doing so has been established with Brazil, Argentina, and South Africa renouncing their nuclear weapons ambitions. The remaining land mass belongs to the P5 states, all of which have stated goals in the reduction of their respective nuclear arsenals. This leaves the question on the establishment of a NWFZ in the Middle East.

[26] Complete texts, dates and countries involved can be found at http://www.un.org/disarmament/WMD/Nuclear/NWFZ.shtml

5. A Middle East Nuclear Weapons Free Zone

On December 2, 2011, the United Nations adopted resolution 66/25 calling for the, "Establishment of a nuclear weapons free zone in the region of the Middle East"[27]. However, two significant players stand in the way to the creation of such a zone – Israel, which has not signed the NPT; and Iran, which has signed and ratified the NPT but was found to be in non-compliance in 2003[28] of the Safeguards Agreement by the International Atomic Energy Agency and further reported to the UN Security Council for sanctions in 2006[29]. The IAEA report by the Director General to the Board of Governors concludes that many questions continue to remain unanswered with regards to Iran's nuclear weapons capabilities and military aspirations[30].

As there are various definitions of the region known as the Middle East for the purpose of this discussion on a ME NWFZ, I have chosen to focus on the land mass known as the Arabian Peninsula inclusive of the country of Turkey and stretching as far east as to include the country of Iran. It can be argued to include the region of the Caucuses in the north and as far east as to include Afghanistan. Many North African States are often included in the discussion of Middle Eastern States. However, these nations are already covered as members of the African Nuclear Weapons Free Zone and are therefore not included in this discussion. Similarly, while not discounting the region of the Caucuses and Afghanistan, another option may be their inclusion

[27] The complete UN resolution is available at http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/25
[28] Full text of the IAEA Director Generals 2003 report to the IAEA Board of Governors with regards to the implementation of the NPT Safeguards in the Islamic Republic of Iran can be found at http://www.iaea.org/Publications/Documents/Board/2003/gov2003-75.pdf
[29] Full text of the resolution on February 4, 2006 by the IAEA Board of Governors regarding the implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran can be found at http://www.iaea.org/Publications/Documents/Board/2006/gov2006-14.pdf The UNSCR full text can be located at http://www.un.org/sc/committees/1737/
[30] Full text of the IAEA Director Generals 2013 report to the IAEA Board of Governors with regards to the implementation of the NPT Safeguards in the Islamic Republic of Iran can be found at http://www.isis-online.org/uploads/isis-reports/documents/IAEA_Iran_Safeguards_report_--_21_Feb_2013.pdf

as part of the Central Asian Nuclear Weapons Free Zone as they bear greater similarities in history and culture with the Turkic peoples of Central Asia. Iran is included in this discussion due to its tremendous influence in the region and potentially destabilizing effect on a Middle East Nuclear Weapons Free Zone.

6. Israel

Israel's relationship with nuclear weapons began near simultaneously with its modern existence, May 14, 1948. Emerging from the holocaust of World War II, the Zionist movement to create, "Eretz Yisrael," or the Land of Israel, met head on with a serious security dilemma. The newly declared State of Israel existed with the Mediterranean Sea to its west and hostile Arab States on each of its borders. A coalition of five Arab States (Egypt, Syria, Trans-Jordan, Iraq, and Lebanon) attacked Israel on May 15, 1948, in a conflict that lasted for ten months, from which Israel emerged victorious[31]. While Israel survived the war, the resolve of the Arabs demonstrated to the new Israeli Prime Minister, Ben Gurion that a strong, compelling deterrent would be required to prevent future such conflicts. He also believed that Israel had the scientific knowledge and ability to embark in such an endeavor[32].

Keeping such a program secret would require the utmost in statesmanship, but in PM Ben Gurion's words, "We have only 'Our Father in Heaven"- [and] the Jewish People"[33]. This belief was reinforced by the horrors suffered by the Jewish peoples from the holocaust, and further fed by a mistrust of the international community's willingness to support and defend the newly formed State of Israel[34].

[31] The 1948 Arab-Israeli War was fought between May 15, 1948 to March 10, 1949 resulting in an armistice between Israel and the countries of Egypt, Syria, Trans-Jordan, Saudi Arabia, Iraq, and Lebanon with additional support from Saudi Arabia. Information taken from the US Department of State, Office of the Historian website located at: http://history.state.gov/milestones/1945-1952/ArabIsraeliWar
[32] Ben Gurion believed that a nuclear deterrence would be required as a conventional arms race with Israel's Arab neighbors who vastly outnumber the Israeli population would eventually result in an overwhelming force to Israel. This is further evidenced in Avner Cohen's book, "Israel and the Bomb", pgs. 12-13.
[33] Ben Gurion's diary as reported in the work by Allon Gal, "David Ben-Gurion and the American Alignment for a Jewish State", pg. 18.
[34] Ibid, pg. 10.

1956 was a pivotal year for Israel. The Second Arab-Israeli War over the Suez Canal created further tension in the region[35]. At the same time, a small, pool-type reactor was agreed to as part of the Eisenhower administrations "Atoms for Peace" program. The Soreq reactor was developed near Palmachim, Israel, and came with no constraints on unassociated nuclear related activities. Israel was free to negotiate with other countries for nuclear related activities and to conduct its own research. To this end, the Israeli government secured an agreement with France for an additional small EL-3 type nuclear research reactor.

Ben Gurion's key decisions on Israel's position regarding development of a nuclear weapons option came about in 1957/58 and were only shared with a select group of close advisors (Golda Meir, Levi Eshkol, Pinhas Sapir, Isser Harrel, et al.)[36]. Israel had already pursued nuclear means through both France and the U.S. for smaller research reactors. However, the decision for a secret nuclear weapons program would require a much larger facility.

A key player in this group is Simon Peres who, along with Golda Meir, acquired many of the nuclear capabilities for Israel. His participation spans the creation of the State of Israel, and became the youngest Director-General of the Ministry of Defense in 1953[37]. He currently serves as the President of Israel. Because of this select group's allegiance to the defense of Israel and the policy of opacity, Israel has shown a determined consistency in its nuclear weapons ambitions.

Israel approached France about building this new, larger facility in the Negev desert to conduct large scale nuclear research in lieu of the previously agreed upon smaller EL-3 type

[35] A discussion on the Suez Canal Crisis can be located at: http://www.globalsecurity.org/military/ops/suez.htm
[36] As discussed in Avner Cohen's work, "Israel and the Bomb", the discussion and dissent was kept internal to the group in order to protect the secrecy of the Dimona Project and the vital interest of Israel.
[37] A biography on Simon Peres is available at: http://www.achievement.org/autodoc/page/per0bio-1

reactor. This secret reactor became known as the Dimona reactor, and was the subject of discourse between the U.S. and Israel once the existence of the project was revealed. Although the U.S. sent periodic inspections teams to the site, these teams were often placed on tight timelines by the Israelis which did not allow for the completion of full inspections[38]. As a result, the existence of an even more secret, underground reprocessing facility at Dimona, which was later disclosed by Mordachai Vanunu to the London Times in 1986, went undiscovered[39].

In 1967, Israel found itself once again at war with a coalition of Arab States (Egypt, Syria, and Jordan). The Six-Day war demonstrated a key weakness of the Israeli nuclear weapons program[40]. While largely assumed today that Israel had either a completed weapon or the possessed the ability to assemble one prior to the Six-Day War, the lack of acknowledgement by the Israeli government of such a weapon, or weapons program, gave no deterrent effect[41]. Short of deploying a nuclear device, the possession of a nuclear explosive device served no purpose.

Talks revolving around the Treaty on the non-Proliferation of Nuclear Weapons posed a second challenge to Israel. Considerable resources had been invested in Israel's nuclear weapons program and the possession of a nuclear device was deemed essential to the balance of power. Israel could not match the combined strength of the Arab armies, nor was Israel able to arrive at an acceptable security agreement with a nation that possessed such strength. Even with a security agreement between the U.S., France, or Great Britain, it was highly unlikely that

[38] Ibid. A discussion on the difficulties faced by the U.S. inspection teams can be found on pages 187-190.
[39] Today it is believed, in spite of PM Eshkol's statement to the Knesset that Israel did not possess a nuclear weapon (primarily to lessen tension with Egypt), that Israel had the technical expertise and ability to conduct a nuclear explosion but chose for other strategic reasons not to do so. Derived from Avner Cohen's work, "The Worst Kept Secret, Israel's Bargain with the Bomb". pgs. 131,233, 240 and 334.
[40] Ibid. See Avner Cohen's discussion on deterrence effect, pgs 78-79.
[41] See discussion in Michael Karpin's work,"The Bomb in the Basement". Pg 285.

these nations would be able to deploy their forces in sufficient time to halt an overwhelming aggression by the Arab armies. This still holds true even today, in spite of stronger ties with the U.S.

Israel's dilemma therefore was this:

1) Signing the NPT would force Israel to declare its nuclear status.
    a. The NPT defines, "a nuclear weapons State as one which had manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January, 1967"[42].
    b. Israel would have to explode a device or enter the treaty as a non-nuclear weapons state.
2) Acknowledging that Israel had a nuclear device would start an arms race in the Middle East which could also lead to greater interference in the region by the USSR.
3) Entering the treaty as a non-nuclear weapons state would force Israel to declare and dismantle its nuclear weapons program.

Israel's solution was to go from a secret, ambiguous program which had limited deterrent effect, to its new position of "opacity"[43] – a national doctrine of nuclear restraint whereby the nation neither confirms nor denies the existence of a nuclear weapon's program while acknowledging that the scientific, technological, and physical means may exist as resident

[42] Article IX of the Treaty for the non-Proliferation of Nuclear Weapons
[43] Avner Cohen best defines opacity in his book, "The Worst Kept Secret, Israel's Bargain with the Bomb". Preface pgs x-xii.

within that country. This policy was consistent with Prime Minister Eshkol's 1966 statement to the Knesset that Israel would not be the first to ***introduce*** nuclear weapons to the region[44].

Not signing the NPT allowed Israel to send a strong signal that it could still become a nuclear power, if it wasn't already so. This further strengthened the policy of opacity forcing other countries to determine for themselves Israel's actual state of development. Added to the fact that Israel procured advanced fighter aircraft from both the United States and France and developed extensive missile and naval capabilities, the policy of opacity played a key role in Israel's defense strategy. The restraint exercised by Israel with the regards to the prosecution of war through nuclear means demonstrates the clear commitment by both Israel's military and its political leadership to this policy as a means of deterrence and last resort, not aggression[45].

The Nixon / Meir Accord in September, 1969, solidified between the two leaders the understanding that Israel would not sign the NPT[46]. By this time the CIA had upgraded Israel to possessing nuclear weapons, Israel had procured French missiles which could deliver a nuclear device, and the Israeli's were very close to testing their own Jericho missile. Dr. Henry Kissinger's memo to President Nixon alludes to the difficulty for Israel's entry into the NPT stating it would be:

Impossible politically for an Israeli Prime Minister to give up completely an advantage deemed vital and achieved at considerable cost. . . We have no way of forcing Israel to destroy

[44] Ibid 233.
[45] This is not to say that Israel has not indirectly threatened the use nuclear weapons. Militarily, Israel has been able to accomplish its tactical and operational objectives through conventional means (e.g. the bombing of the Syrian and Iranian nuclear facilities). This policy has also enabled Israel to negotiate from a position of strength to procure agreement with its neighbors (e.g. Egypt, 1978 and Jordan, 1994).
[46] As described in Avner Cohen's work, "The Worst Kept Secret, Israel's Bargain with the Bomb", pgs. 23-28.

any nuclear devices or components it may now have – much less the design data or technical knowledge in people's minds[47].

The above statement is true for any country that would work towards the possession of a nuclear device. Once the technical expertise is created and shared, or worse, a device present, the power to eliminate such a program becomes problematic. By 1969, Israel had passed that threshold.

In 1979, a United States satellite detected a possible nuclear explosion on a remote Island in the Indian Ocean[48]. This explosion has been rumored to have been a joint Israeli-South African test of one or more nuclear devices. While South Africa received most of the attention surrounding the incident there is ample evidence supporting the involvement of Israel[49].

In spite of Israel's long history with nuclear technology, Israel has not developed a nuclear power capability and has denied that capability to its neighbors (Iraq, 1981; Syria, 2007)[50]. There are semi-annual inspections by the IAEA with regards to the Soreq reactor which is rumored to close in 2018 due to unsustainable Highly Enriched Uranium fuel stockages[51]. This would eliminate the need for international inspectors as Israel's only other reactor at Dimona remains outside of the IAEA protocols.

Additionally, Israeli / Jordanian cooperation for the development of nuclear energy has suffered setbacks as a result of the Fukushima accident in Japan and accusations that the Israeli

[47] Ibid pg. 17.
[48] A discussion on the Indian Ocean explosion and detection by the Vela Satellite can be found at http://www.globalsecurity.org/wmd/world/israel/nuke-test.htm
[49] See Reed and Stillman, "The Nuclear Express, a Political History of the Bomb and its Proliferation", pgs. 177-181.
[50] The destruction of the Iraqi reactor was condemned by the United Nations under resolution 487. However, the destruction of the Syrian reactor resulted in little international discussion whatsoever. A copy of UNSC 487 may be located at: http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/487(1981)
[51] http://www.israelhayom.com/site/newsletter_article.php?id=3600

government is working to thwart the Jordanian acquisition of a nuclear power reactor[52]. The Jordanian project is receiving support from Canada, the United States, Russia, France, and China. However, contradicting reports indicate that while cooperation by Israel on such a project may indeed be in Israel's interest, as this reactor will produce much needed energy and de-salinized water for the region, there may be dissent for this cooperation within the Israeli government[53].

Should Israel and Jordan work together on the creation of this facility it would be the first time Israel assisted in such development and could bring in a new dimension to Israel's participation in Middle East nuclear matters. To date, there are no operable nuclear power reactors in the Middle East other than the Iranian facility at Bushehr; however, as noted earlier, the UAE has a nuclear power reactor under construction in Abu Dhabi and 43 others nuclear reactors are either planned or proposed in the Middle East[54].

Militarily, Israel possesses all three components of a total nuclear triad with the ability to deploy a nuclear weapon from land, sea, or air. Its land based capabilities include the Jericho III Intermediate Range Ballistic Missile (IRBM), having the capability of traveling 4,800kms with a payload of 1000-1300kgs[55]. Israel's air force has F-15I and F-16I aircraft and advanced aerial refueling capabilities. With the possession of *Dolphin* class submarines purchased from Germany, Israel's navy possesses both a surface and sub-surface nuclear weapons capability.

[52] http://www.afp.com/en/news/topstories/king-tells-afp-israel-disrupting-jordans-nuclear-plans
[53] http://www.nuclearpowerdaily.com/reports/Jordan_king_says_Israel_disrupted_nuclear_plans_999.html
[54] IAEA Power Reactor World Statistics Database located at, http://www.iaea.org/PRIS/WorldStatistics/OperationalReactorsByCountry.aspx,
[55] The range of the Jericho III IRBM allows Israel to range all of Iran. For discussion on the Jericho III missile see: http://globalmilitaryreview.blogspot.com/2011/11/israel-tests-jericho-series-ballistic.html

The inclusion of these platforms gives Israel both an offensive capability, as part of a first strike or pre-emptive operation, and a defensive capability in the form of deterrent.

With regards to Anti-Ballistic Missile (ABM) defense, Israel's recent struggle with Hamas demonstrated to the world the capabilities of its Iron-Dome weapons system for intercepting rockets, with some reports indicating a near 90% success rate[56]. The development of the Arrow II missile system and its complementing Arrow III which was recently tested and is scheduled for fielding by 2016 is designed to provide an expanded capability with the ability to intercept long range ballistic missiles in mid-course flight. Advanced radar capabilities, to include Advanced Warning and Control System aircraft, designed to provide Israel the ability to identify, track, and engage any missile launched towards Israel, further enhance these capabilities. While these systems are not perfect, they provide a modicum of defense and the perception domestically that there are defenses in place to protect the citizenry of Israel in the event of an aerial attack.

The revelations by Mordechai Vanunu in 1986 and the unintended disclosure by Israeli Prime Minister Ehud Olmert in 2006 of Israel's nuclear status demonstrate the nuclear resolve / restraint by Israel and the complexity of bringing Israel into the NPT[57].

In light of these facts, Iran is equally wary of Israel's intentions. As stated by former U.S. Secretary of Defense, Robert Gates in December, 2006, "They [Iran] are surrounded by powers with nuclear weapons: Pakistan to their east, the Russians to the north, the *Israelis* [sic] to the west and us in the Persian Gulf."[58]

[56] http://www.bloomberg.com/news/2012-11-17/israel-s-iron-dome-defense-system-battles-hamas-rockets.html
[57] http://www.nytimes.com/2006/12/12/world/middleeast/12olmert.html?_r=0
[58] Ibid.

7. The Islamic Republic of Iran

Iran's early forays into the nuclear world were largely assisted by the west beginning in the 1950's under the Shah of Iran, Mohammad Rezā Shāh Pahlavī, in connection with the Eisenhower Administration's "Atoms for Peace" program. These advancements were further embraced by the world nuclear community and supported by countries from around the world. In the 1970's, Argentina, Germany, France, and Sweden all pledged support towards the development of Iran's nuclear program[59].

The government of Iran entered into several agreements on the peaceful use of nuclear energy in return for assistances to meet its 20 year goal of producing 23,000 megawatts (MWe) of energy produced by nuclear means by 1994[60]. Unlike Israel, the Islamic Republic of Iran is an original signatory State to the Treaty on the non-Proliferation of Nuclear Weapons having deposited its ratification with all three depositories prior to the NPT entering into force on March 5, 1970[61]. However, this support eroded with the Iranian Revolution in 1979, which saw the exile of the Shaw and sacking of the U.S. Embassy in Tehran, resulting in a 444 day hostage crisis involving U.S. embassy personnel.

As support eroded due to the revolution, Iran was forced to look elsewhere to meet its nuclear ambitions, courting Russia and China for assistance. At the insistence of the United

[59] Information derived from Kayhan Barzegar's article, *Iran's Nuclear Program,* as presented in the collaborative work edited by Mehran Kamrava, "The Nuclear Question in the Middle East", pgs. 225-230.
[60] ibid
[61] A complete list of countries, dates of signatures and ratifications can be found on the United Nations Office for Disarmament Affairs NPT webpage located at: http://disarmament.un.org/treaties/t/npt?OpenView

States, China initially refused cooperation in the building of an Iranian nuclear complex. Russia, however, viewed this as a regional opportunity.

In 1995, Russia entered into an agreement with Iran to build two VVER-1000 light water reactors at Bushehr capable of producing between 900 to 1050 MWe (electrical), the potential for two additional 465 megawatt VVER-440 reactor units, a centrifuge plant to enrich uranium (cancelled under pressure by the U.S.), a 30-50 megawatt research reactor, 2000 tons of natural uranium, and technical training. In return, Russia would receive payments between $780-million to $1-billion, with as many as 3000 Russian workers involved in the project. Due to the larger steam generators required in the VVER-1000, the re-design required a new facility be built in place of the original construction built previously with the assistance of Siemens of Germany in 1974[62]. This original facility was halted following the Iranian Revolution as Ayatollah Khomeini declared nuclear power as "un-Islamic"[63].

The assistance of the Russians brought about both a new nuclear capability and scientific advancement to the Iranians. This agreement benefited both parties as regional partners in energy. The agreement also calls on Iran to remove its spent fuel rods to Russia for removal of the plutonium, enabling this reactor to be considered for peaceful uses as specified in Articles III - V of the NPT. Reactor 1 officially came on-line September 12, 2011 providing an initial load of 60 MWe to the Iranian power grid[64]. This assistance resulted not only in the completion of

[62] ibid
[63] http://www.fas.org/nuke/guide/iran/facility/bushehr.htm
[64] http://www.globalsecurity.org/wmd/world/iran/bushehr.htm

the Bushehr Reactor in 2010, but also in the training of Iranian nuclear scientists and technicians[65].

Many in Iran see a continuation in the development of Iranian scientific and energy development as essential to Iran's return to its rightful place among the powerful nations of the world, seeing its position having faded over the last several centuries[66]. The opening of the Bushehr reactor and its associated facilities greatly expands Iran's scientific and technological stance in the international community. Additionally, a peaceful nuclear power program allows the Iranian government options with regards to its domestic power needs which multiplied over six-fold between 1970 and 2002[67]. According to the IAEA's own report in 2003, nuclear energy is the most logical, non-fossil fuel alternative for Iran.

According to all the surveys performed in power sector of Iran, nuclear option is the most competitive to fossil alternatives if the existing low domestic fuel prices are gradually increased to its opportunity costs at the level of international prices[68].

Today, counting the existence of the Bushehr reactor, there are over 30 sites that are, or have been, involved in Iran's nuclear program[69]. These facilities include administration, scientific research, mining, enrichment, conversion, heavy water production, power reactors, defense, and nuclear waste disposal. In 2013, Iran announced the identification of 16 potential

[65] Barzegar, pg 230.
[66] ibid, pg. 232.
[67] http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2004/CNPP_Webpage/countryprofiles/Iran/Iran2003.htm
[68] Ibid.
[69] http://www.isisnucleariran.org/sites/alpha/

sites for nuclear reactors to be constructed over the next 15 year[70]. However, international concerns as to the peaceful intentions of the Iranian nuclear power program have resulted in a continuation of strict sanctions which may forestall these activities.

In 2003, the IAEA issued a significant resolution against Iran with the following comments:

> *(f) Noting with deep concern that Iran has failed in a number of instances over an extended period of time to meet its obligations under its Safeguards Agreement with respect to the reporting of nuclear material, and its processing and use, as well as the declaration of facilities where such material has been processed and stored, as set out in paragraph 48 of the Director General's report,*
>
> *(g) Noting in particular, with the gravest concern, that Iran enriched uranium and separated plutonium in undeclared facilities, in the absence of IAEA safeguards,*
>
> *(h) Noting also, with equal concern, that there has been in the past a pattern of concealment resulting in breaches of safeguard obligations and that the new information disclosed by Iran and reported by the Director General includes much more that is contradictory to information previously provided by Iran*

This resolution, and subsequent resolutions, has resulted in a total of six United Nations Security Council Resolutions, each with increasing levels of pressure (the most comprehensive of which is UNSCR 1747)[71]:

UNSCR 1696, adopted July 31, 2006

UNSCR 1737, adopted December 23, 2006

UNSCR 1747, adopted March 24, 2007

UNSCR 1803, adopted March 3, 2008

UNSCR 1835, September 27, 2008

UNSCR 1929, June 9, 2010

[70] http://www.bbc.co.uk/news/world-middle-east-21559861
[71] A complete list with links to the UNSCRs as well as links to the IAEA resolutions / reports may be found at http://www.iaea.org/newscenter/focus/iaeairan/sc_resolutions.shtml

Eleven other resolutions have been issued by the IAEA in its response to actions taken by Iran, the most recent resolution issued September 13, 2012[72]. Subsequent discussions and inspections resulted in the latest report by the IAEA Director General, Yukiya Amano, to the IAEA Board of Governors stating that, in spite of increased talks with Iran, many questions remain with regards to the possible military dimension of Iran's nuclear program and unresolved issues surrounding the Parchin facility[73].

While talks continue between the IAEA and the government of Iran, nearly a decade has expired since the initial resolution. In view of the facts presented in these resolutions, it is not inconceivable that Iran may be pursuing a nuclear weapons program in spite of its assertions that it has no such ambition, and there may even be justifiable grounds, albeit illegitimate as an NPT signatory State, for doing so.

[72] http://www.iaea.org/newscenter/focus/iaeairan/iaea_resolutions.shtml
[73] A complete text of the Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran Report by the Director General to the Board of Governors can be found at: http://www.globalsecurity.org/jhtml/jframe.html#http://www.globalsecurity.org/wmd/library/report/2013/iran_iaea_gov-2013-6_130221.pdf

8. The Emergence of New Nuclear Powers

Iran's strategic concerns go beyond those of conventional forces. Indeed, Iran exists in a region that is the most prolific corner of the world containing not only the P5 nations of Russia and China, the ever present regional influence by the United States, but also the emergence of nearby Pakistan and India. Add to that the regional conflicts which have surrounded Iran over the last 30+ years, the collapse of the Soviet Union, and the struggle in Central Asia, Iran has reason for concern. A brief list of major conflicts demonstrates the volatility in the region[74].

1970s - Iranian Revolution

1980s – Iran / Iraq War, Russian / Afghan War

1990s – U.S. Persian Gulf War

2000 – U.S. / Iraq War, U.S. / Afghan War)

2010 – Ongoing conflict in Afghanistan / Pakistan by the U.S.

Of significant note are the non-NPT countries of India and Pakistan which emerged as nuclear weapons states and have the ability to range Iran. As these states have not signed the NPT, they are not bound by Article I, which prohibits the proliferation of nuclear weapons; nor Article III which protects against the economic or technological development of another nation[75].

[74] This list is not all inclusive, showing only the major conflicts in the region.
[75] IAEA INFCIRC/140 – Treaty on the non-Proliferation of Nuclear Weapons, April, 22, 1970.

India

At the inaugural meeting between incoming President John Fitzgerald Kennedy and President Eisenhower, President Kennedy's concern about nuclear weapons was evident. When President Kennedy posed the question arose as to who was the most likely to become the next possessor of nuclear weapons, then Secretary of State Christian A. Herter's response was clear - Israel and India would be next[76].

In 1968, in spite of India's calls for non-proliferation and its commitment to peaceful nuclear programs which it had been developing since the early 1950s, India declined to enter into the NPT. Indeed, on May 18, 1974, India conducted its first "peaceful" explosion of a nuclear device demonstrating its capability to effectively pursue a nuclear weapons program[77]. With the emergence of China's extended range missile program and the numerous regional conflicts both with Pakistan and China, India made the decision to become a nuclear weapons state. India conducted five additional nuclear, underground explosions, May 11-13, 1998, announcing one of these explosions as a thermonuclear device, effectively entering the community of Nuclear Weapons States[78]. These tests would be soon answered by Pakistan with a weapons test of their own.

India's reason for these tests: deterrence and prestige. Much of India's early nuclear ambition was in the form of "peaceful means" and India had openly called for universal disarmament; although so had many other countries – proliferators and non-proliferators alike.

[76] As reported in Avner Cohen's book, "Israel and the Bomb", page 101.
[77] An in-depth discussion and associated timeline on India's development is available from the Nuclear Age Peace Foundation entitled India's Nuclear Program by Volha Charnysh and can be located at http://nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/proliferation/india/charnysh_india_analysis.pdf
[78] ibid

Much of the Indian training, research, and facilities had been provided by the United States, Great Britain, and Canada both in India and training abroad. The establishment of facilities in India created a self-sustaining nuclear training program, furthering India's nuclear future. These efforts were intended to bring about the "peaceful means" of nuclear technology; however, the continued unrest with China and Pakistan, including a 1965 war from which the nation of Bangladesh emerged from the Pakistan territory of East Pakistan, created instability on two fronts.

The continued border unrest and dispute with regards to the Kashmir region between Pakistan and India resulted in an arms race both in the conventional sense and along nuclear lines. The possibility that nuclear technology exchanges were occurring between Myanmar and the DPRK added to the pressure to develop a nuclear deterrent. Already a nuclear weapons state, China's continued nuclear weapons development and testing, largely in response to Soviet pressure, resulted in an improved long-range nuclear missile capability by China able to range all of India and Pakistan. This action further strengthened India's resolve to develop a nuclear deterrent[79].

India's ambition did not stop at a nuclear capability, opting to develop an extensive space and missile program as well. The Agni missile program currently consists of four missiles which are capable of striking Pakistan, China, and Iran (the Agni III has a range of 3,500kms with a nuclear payload capacity of 1.5 tons)[80]. France, Germany, Russia, the United States, and Israel have all provided technical assistance in the development of India's missile technology[81].

[79] ibid
[80] An in depth discussion on the development and deployment of India's Space and Missile program can be found at: http://weapons.technology.youngester.com/2009/05/capacity-and-capability-of-indian.html

With Pakistan emerging simultaneously with India, the United States opened the door, beginning in 2000, for India to procure U.S. surface to air technologies (Patriot PAC-3 missiles), Phased Array Radars, F-16 and F-35 fighter jets. Additional cooperation between India and Israel resulted in the transfer and sale of Israeli AWACS (Airborne Warning and Control System)[82]. With the U.S. and Israel's support, India developed one of the most advanced early warning, detection, and intercept capabilities in the world.

India's current capabilities span all aspects of the nuclear triad. These weapons are capable of being delivered by air (bomber and cruise missile), land (stationary and mobile platforms), and sea (surface and sub-surface)[83]. With an extensive defensive array and key allies of the United States, Russia (who is India's primary military weapons supplier)[84], and Israel, India is a formidable force in the region. With a range of 5,500kms for its largest missile and a sea-based launch capability, India is postured to counter any threat Iran or others may be able to raise. It is estimated that India currently possesses between 80 – 100 nuclear devices and continues to proliferate with expectations that this number will increase in the future[85].

As demonstrated through its interactions with the United States and Russia, India is no longer seen as a rogue, nuclear weapon state and therefore must be considered as a mainstream nuclear power. While the bi-annual release of information on nuclear facilities

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[81] ibid
[82] ibid
[83] ibid
[84] ibid
[85] Data based on Robert S. Norris and Hans M. Kristensen, "Global nuclear weapons inventories, 1945–2010", *Bulletin of the Atomic Scientists*, vol. 66, no. 4, 2010, pp. 77–83.

locations with Pakistan[86] demonstrates India's commitment to regional security and transparency, the lack of inclusion in the NPT and total disclosure to the IAEA of sites and capabilities is disconcerting with regards to the future for disarmament and denuclearization. India's inclusion as a nuclear weapon's states assures it a balance with the other regional powers in both prestige and deterrent, but it adds pressure on those nations, such as Iran, who do not possess nuclear weapons but are now well within range of India's nuclear reach (New Delhi, India to Tehran, Iran ~2,500kms).

[86] Voice of America, *India, Pakistan Exchange Nuclear Facilities List*, January 1, 2013 located at: http://www.voanews.com/content/india_pakistan_exchange_nuclear_facilities_list/1575767.html

Pakistan

Even closer to Iran is the country of Pakistan. While not a primary threat to Iran, Pakistan's relationship with its neighbor, India, has been strained resulting in an arms race that poses an imbalance of power regional. The loss of East India, now Bangladesh, ongoing dispute over the territory of Kashmir, and frequent border clashes with Indian forces throughout the late 20th century, punctuate this strained relationship. With added strife on its western border between Russia and Afghanistan in the 1980s and the ongoing U.S. / Afghanistan war has created many safe havens in the Federally Administered Tribal Areas (FATA) of Pakistan on the western border, resulting in regional instability.

The Pakistani decision to become a nuclear weapons state could be viewed as a strategic decision for self-determination and preservation. However, Pakistan has long stated that it would sign the NPT as a non-nuclear weapons state should India also do so. Recent support to India by four of the five nuclear weapons states (U.S., Britain, Russia, France), and support to India by the Nuclear Suppliers Group make this highly unlikely[87]. Indeed, Pakistan has attempted to match the nuclear ambitions of India, exploding five nuclear devices within weeks of India's nuclear test in 1998.

Pakistan's early forays into nuclear energy came in the 1950s thru the assistance of the United States "Atoms for Peace" initiative. The 1965 conflict with India demonstrated weaknesses in Pakistan's strategic defense and strengthened the resolve to develop a nuclear deterrent. Then Pakistani Defense Minister, and soon to be Prime Minister, Ali Bhutto stated, "If India builds the bomb, we will eat grass and leaves for a thousand years, even go hungry, but

[87] A discussion on why Pakistan desires Nuclear Weapons State status can be found at: http://www.idsa.in/idsacomments/PakistanagainstsigningtheNPTasanon-nuclearweaponsstate_cvsastry_080310

we will get one of our own. The Christians have the bomb, the Jews have the bomb and now the Hindus have the bomb. Why [should] not the Muslims too have the bomb?."

In 1971, India - Pakistan War resulted in the loss of the entire territory of East Pakistan, now Bangladesh[88]. With the election of PM Bhutto following the defeat and failed support to Pakistan by its allies, the United States and China, Pakistan moved from its pursuit of nuclear energy to advancing its aims to secure nuclear weapons. India's 1974 "peaceful nuclear explosions" gave further stimulus to build this nuclear weapon's capability. The unexpected assistance provided by Abdul Qadeer Khan in 1976, who would later serve as Pakistan's Chief Science Advisor, guided Pakistan into becoming a nuclear weapons state.

A.Q. Khan drew upon his extensive knowledge gained while working in Europe. Accused of stealing sensitive nuclear secrets, he was convicted in abstentia and then acquitted on a technicality in Amsterdam. Pakistan's nuclear program received extensive support from the Saudi Government and A.Q Khan sought the assistance of China as well. His black market work linking the DPRK, Libya, and Iran added to his notoriety but brought with it additional technologies that would assist in perpetuating Pakistan's nuclear weapons program.

Today, Pakistan no longer appears willing to join the NPT as a non-nuclear weapons state, preferring to be considered as a full-fledged nuclear weapons state[89]. Pakistan is undeterred in its nuclear ambitions and is expected to increase its arsenal of nuclear weapons bringing the prestige and deterrent to its strategic defense. While Pakistan is unable to match India's missile and delivery capability, its ability to deliver nuclear weapons by land, sea, or air is of grave

[88] http://www.defence.pk/forums/military-history-strategy/189602-1971-india-pakistan-war-role-russia-china-america-britain.html
[89] http://www.idsa.in/idsacomments/PakistanagainstsigningtheNPTasanon-nuclearweaponsstate_cvsastry_080310

concern to its neighbors. Pakistan is also the safe haven of numerous jihadist groups such as the Haqqani network and Al-Qaeda alluding to the possibility of a terrorist network obtaining, or even receiving state support, of a nuclear explosive device.

Pakistan's missiles can range all of India and Iran, most of China and Central Asia[90]. Pakistan's Air Force is capable of ranging Israel and fought against Israel in the 1973 Arab – Israeli conflict. Its development of a nuclear capable cruise missile and naval capability make Pakistan's nuclear arsenal an ever greater threat to regional security. Due to technological advances in missile technology through China, Iran, and the DPRK, Pakistan's posture as a nuclear weapons state is secure.

Outside of maintaining nuclear weapons parity with India, Pakistan's nuclear industry pales in comparison. India currently possesses 20 operational nuclear energy generating plants with plans for 55 additional plants (seven are currently under construction). Pakistan possesses three operational plants with plans for four additional plants (two are under construction)[91]. This is a significant disparity in nuclear capability and demonstrates how Pakistan's nuclear ambitions are more deterrent and prestige than an offensive capability[92]. As with India, it is assumed that Pakistan currently possesses 80-100 nuclear weapons and continues to increase its nuclear weapons stockpile[93].

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[90] The Haft-6 Shaheen-II Intermediate Range Ballistic Missile (IRBM) is capable of delivering a 1,000kg payload approx. 2,500kms. For a listing of other Pakistani Missiles see: http://www.defence.pk/forums/pakistan-strategic-forces/187831-pakistans-missile-tests-dates-chronology.html

[91] These statistics are based on the IAEA Power Reactor World Statistics Database located at, http://www.iaea.org/PRIS/WorldStatistics/OperationalReactorsByCountry.aspx, accessed February 21, 2013

[92] This in no way assumes away that these weapons could not be used in an offensive scenario, only that with regards to Pakistan's primary challenger, India, Pakistan is maintaining a like number of nuclear weapons in spite of Pakistan's obvious deficiency in nuclear reactors.

[93] Data based on Robert S. Norris and Hans M. Kristensen, "Global nuclear weapons inventories, 1945–2010", *Bulletin of the Atomic Scientists*, vol. 66, no. 4, 2010, pp. 77–83 located at: http://bos.sagepub.com/content/66/4/77.full.pdf.

The Democratic People's Republic of Korea (DPRK)

While not physically a factor in the Middle East, The DPRK's influence to the region is significant. Included as one of the three countries mentioned in U.S. President George H.W. Bush's 2002 State of the Union Address, North Korea became labeled as a member of the "Axis of Evil", with Iran and Iraq being the other nations cited in the speech[94]. This speech had international implications putting all three nations firmly on the outside of the international community, while inadvertently linking these nations as proliferators of weapons of mass destruction.

The DPRK's numerous interactions with countries of the Middle East / North African region (Libya, Syria, Egypt, and Iran) with regards to missile technologies and nuclear capabilities, the withdrawal by the DPRK from the NPT, the only country to have done so, and the overt interactions with Iran in both missile and nuclear technologies, the DPRK is a significant factor in the nuclear equation of the Middle East.

Military might is the one area that the DPRK does understand. While concrete economic data is not available for the DPRK, estimates derived from 2012 CIA World Fact Book for annual GDP vary from $28 billion – $40 billion (US) and an estimated population of 24.5 million people[95]. This is an extremely low GDP/population of approx. $1000/person[96]. When

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[94] A complete text of President George H.W. Bush's 2002 State of the Union Address is available at: http://edition.cnn.com/2002/ALLPOLITICS/01/29/bush.speech.txt/
[95] A complete CIA World Fact Book listing for North Korea is available at: https://www.cia.gov/library/publications/the-world-factbook/geos/kn.html
[96] In contrast, the State of Texas has 25 million people and a GDP of $1.1 trillion or $44,000 / person. http://www.census.gov/2010census/popmap/ipmtext.php?fl=48 http://www.bea.gov/newsreleases/regional/gdp_state/2012/pdf/gsp0612.pdf

contrasted with the historical estimates on military spending varied from 19% to 44% with most placing the average annual military expenditure by the DPRK around 25% or $10 billion (US)[97]. This is a significant investment of national capital by an extremely poor country.

The withdrawal from NPT by the DPRK in 2003 resulted in the six-party talks between the DPRK, The United States, South Korea, China, Japan, and Russia. However, since these talks, the DPRK has conducted three nuclear tests and continues its development of its missile program. The latest test on February 12, 2013, has been referred to as a possible joint Iranian/DPRK test which may have involved either miniaturization of a nuclear device or the use of Highly Enriched Uranium (HEU) instead of plutonium[98]. This potentiality may allow for the use of a nuclear device as a part of a Nodong or Shahab missile.

Iranian / DPRK cooperation is not a new development. Iranian's have received military assistance in missile technology since the 1980s and the Shahab series of missiles is based on the technology of the Nodong missile developed by the DPRK[99]. Both countries acknowledge that they have scientists working with the other government and that Iranian Scientists have been present in North Korean at the time of their nuclear tests.

Speculation as to the presence of Iran's leading nuclear scientist, Dr. Mohsen Fakhrizadeh, at the February 11, 2013, test may indicate another potentiality – The DPRK may be working in

[97] A good discussion on military expenditures and statistical data of the DPRK is available at: http://www.globalsecurity.org/military/world/dprk/budget.htm
[98] See Lee Smith's article, *Why Iran Already has the Bomb,* February 14, 2013 located at: http://www.tabletmag.com/jewish-news-and-politics/124222/why-iran-already-has-the-bomb?utm_source=tabletmagazinelist&utm_campaign=eb58697c1a-2_14_2013&utm_medium=email
[99] ibid

concert with, and on behalf of, the Iranian nuclear weapons program[100]. If this is true, as pointed by Ambassador Thomas Graham, the Iranian nuclear program could, in fact, be seen as a "peaceful" use of their nuclear energy and technology[101], as is their right under Article IV of the NPT[102]. The DPRK would gain from its scientific and technological advances in nuclear weapons capabilities, increase aid in the form of fuel and financing from Iran, and increase its negotiating position with the other regional powers due to its new, or perceived, nuclear capabilities.

In the article with Fox News on 28 February 2013, Ambassador Graham also points out a second possibility; Iran may be developing an alternative, or secondary, plan to the full implementation of its nuclear weapons ambitions[103]. As with the U.S. Manhattan Project where Canada and the U.K. benefited in their nuclear research (and the U.K. eventually developing its own nuclear weapons program), the relationship between Iran and the DPRK could give Iran deniability, while in fact having a de facto nuclear weapons program run outside of its borders.

The linkage is not difficult to imagine. Both Iran and the DPRK have given military support to Libya and to Syria; as has Pakistan through the A.Q. Khan network. Iran and the DPRK have

[100] Taken from a Fox News report by Pamela Browne, *Is Iran outsourcing its nuclear program to North Korea?* Published February 28, 2013, FoxNews.com available at: http://www.foxnews.com/world/2013/02/28/is-iran-outsourcing-nuclear-program-to-north-korea/#ixzz2Mgk91Ft5

[101] Ibid

[102] This would in fact be a violation of Article II of the NPT which states that, "Each non-nuclear weapon State Party to the Treaty undertakes not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices." (NPT, Article II)

[103] Ibid

shared technologies in the past and have significant trade relations (10% of all fuel is supplied by Iran; the remainder comes from the DPRK's northern neighbor, China). Both have been sanctioned by the United Nations and resolutions passed against them by the IAEA and the U.N. Security Council. Neither is in strict compliance with the IAEA Safeguards and the DPRK withdrew from the NPT in 2003.

9. Reasons *for* A Nuclear Weapons Program

For Israel, the nuclear weapons option is not about membership in the nuclear weapon club. Rather, Israel's continued policy of "opacity", which carries forward even to this day, forces other nations to think twice about attacking Israel. Sufficient evidence exists to demonstrate with a high degree of probability that Israel possesses nuclear weapons as a means of deterrent and final option, Israel has maintained an unstable peace.

The nuclear deterrent therefore is clear – direct attack could result in nuclear destruction. So how could a nation cause harm to Israel without amassing a conventional attack against it? The first and most destructive method would be a nuclear weapons attack rendering Israel unable to respond in kind. As Israel has denied the Arab nations of this technology, this is highly unlikely. A second means is through harassing attacks such as was seen recently when Hamas conducted large scale rocket attacks against Israel in the hope that these attacks would apply significant domestic and international pressure on Israel to agree to a peace accord with some hope for concessions. The third method is through the use of terrorism, the most devastating of which could come in the form of a Nuclear, Biological, or Chemical attack on a civilian population center. A nuclear attack in this manner would be in the form of a "Dirty Bomb" where nuclear material would have to be smuggled into Israel and exploded locally using conventional explosives to disperse the radioactive material. The nuclear concern is that a "dirty" bomb consisting of nuclear material could potentially be detonated in a highly urbanized area of Israel, spreading terror and panic in the streets of Tel Aviv or Jerusalem. These attacks would be difficult to trace back to a specific government. This is the weak point

in Israel's nuclear weapons policy – "opacity" is a deterrent against another State government, and poses neither threat nor deterrent effect on acts of terrorism.

Much speculation has been given to the perspective that should Israel declare that it possesses nuclear weapons that this fact alone would start a Middle East nuclear arms race. However, more conventional thought may prevail that this is not the case. More than 40 years have passed since Israel chose not to sign the NPT and the assumption of the Israeli possession of nuclear weapons is considered a fact by all governments today. Still, Israel is determined not to divulge its possession or stand on nuclear weapons until there is, "peace" in the Middle East, broadly defined as no threat to Israel's existentialism.

From a proliferation standpoint, Iran may have a domestic justification for its desire to possess nuclear weapons, albeit in violation of the NPT. While prohibited by the NPT, Iran's neighbors India and Pakistan, neither of which a signatory to the NPT, developed and currently possess nuclear weapons capable of striking Iran. At the same time, both countries possess robust defenses and significant conventional forces to defend against a conventional attack. China and Russia also have the ability to strike Iran should they so desire, but their position as a P5 Nuclear Weapons State obligates them to imply a negative security assurance to Iran while party to the NPT. However, just because a nation agrees that it will not attack does not mean that it could not do so, or use this capability as a strategic advantage. This *oblique threat* does not end there.

I have defined the *oblique threat* in the context of nuclear security as: any threat which is neither explicit nor direct but may pose such a threat due to proximity or capability. An oblique threat may be regional or global in scope.

Iran's continued animosity towards Israel is not without political and strategic utility to the Iranian leadership. Iran supports the Palestinian movement and the nation of Syria as a strategic ally and economic partner. Israel possesses a highly advanced conventional force and portends a nuclear triple threat – missiles, aircraft, and naval capabilities all capable of not only threatening Syria, but able to reach Iranian cities as well. Add to this is the decades long U.S.-Iranian dialogue and the ever present U.S. military in the Persian Gulf, the political leadership of Iran must consider itself in a strategically vulnerable position.

Regionally, Turkey, while not a Nuclear Weapons State, has been a forward staging location for U.S. nuclear arms under NATO. Strategically, it is conceivable to the Iranian perspective, that a strike could commence from this location were the Turkish government willing to support such an attack by NATO forces. However, past history demonstrates Turkey's reluctance to allow such attacks against Arab States, such as Iraq in 2003, and Turkey's government appears much more concerned with regional ethnic issues such as the Kurdish influence in Turkey, Iraq, Iran, and Syria.

With a robust air and missile defense, Turkey is a potential adversary with a rising presence in the region both economically and militarily. Turkey's increasing participation with NATO may cause pause, especially noting Turkey's efforts to attaining membership in the European Union, lessening the influence of Iran's leadership on Turkey. While Turkey's position towards

Israel has been strained, Iran's influence and support of the Syrian government in the destabilizing civil war is not in Turkey's national interest either.

The perception that Israel possesses nuclear weapons and is supported by the United States, France, Britain and others NATO members, is additional cause for concern. The fact that India and Israel have extensive military and economic ties leaves Iran potentially vulnerable from two directions [104].

The possession of nuclear weapons is also perceived to bring stability and peace to the possessor. With the instability that surrounds Iran, this not insignificant. The 1970s saw the unrest within Iran itself. In the 1980s, Iran found itself in a conventional war with Iraq while the Soviet Union was embroiled in conflict in Iran's neighbor – Afghanistan. The United States invaded Iraq in 1991 and again in 2003 along with operations ongoing today in Afghanistan. The 2010 Arab Spring brought additional unrest to the region with extensive challenges to the legitimacy, and even removal of governments in Tunisia, Libya, Egypt, and a civil war in Syria.

Internally, ethnic minorities play a potentially destabilizing role in Iran. Much of northern Iran is Azeri, northwestern Iran – Kurdish, and southeastern Iran – the Baluch. External support to any one of these groups could bring about challenges to the internal political system in Iran. The symbolic strength demonstrated through the possession of a nuclear weapon could dissuade dissent among such external groups.

[104] Israel has worked extensively with the Indian government on advanced Early Warning Radars, space and missile technology and advanced military equipment sales, second only to Russia as the primary supplier to India. The two countries share a counter-terrorism pact and have a mutual free trade agreement between their countries. For further background see: http://dover.idf.il/IDF/English/News/today/09/12/1001.htm and http://edition.cnn.com/2009/WORLD/asiapcf/03/21/india.satellite/index.html?iref=mpstoryview http://www.thefreelibrary.com/Israel's+Indian+alliance:+the+Jewish+state+has+become+one+of+Hindu...-a0206110007

Another threat is that of international sanctions. Possession of a nuclear weapon would end the discussion on the capability of Iran. India and Pakistan are examples of this dichotomy. Once scorned for their nuclear weapons ambitions, today their place among the Nuclear Weapons States is accepted outside of the context of the NPT and international assistance is extended as equals among nations in the international community[105].

Finally, possession would bring about a change in Iran's international prestige moving Iran to the "Haves" from the "Have-nots". As a State possessing a nuclear weapon, scientific advancement would be an understood. No longer would other nations be able to deny the technological and scientific credibility of Iran. Governmental legitimacy would be paramount, as it is internationally untenable that a nuclear weapons state might lose control over its nuclear resources and arsenal.

Iran leadership believes it has the right to nuclear technology under the NPT and, as stated by Saeed Jalili, the Secretary of Ira's Supreme National Security Council and chief negotiator on nuclear issues for Iran, "The Iranian nation will defend its rights including its nuclear rights ... Iranian people do not accept to be treated as an exception in the world"[106].

Prestige, power, position, and deterrent effect all play a major role in the desire by Iran's leadership to possess a nuclear weapon. In spite of Iran's early acknowledgement of the NPT, to attain these secret desires demonstrates the audacity with which it must struggle to become

[105] The United States cooperates with the Indian and the Pakistani governments in spite of their *de facto* status as nuclear weapons states. One example of this is the ABC agreement between the United States and India. See: http://www.time.com/time/world/article/0,8599,1846460,00.html
[106] http://uk.news.yahoo.com/iran-refuses-beyond-nuclear-obligations-121733565.html

a Nuclear Weapons State and the destabilizing effect that this causes to the possibility of a ME NWFZ.

13. Considerations for a Middle East Nuclear Free Zone

If we consider Israel's option for nuclear arms as the last line of defense either in the form of deterrence or as a final option, than we must consider that it is highly unlikely that Israel would abandon such a position. For this to occur, Israel would require a long standing peace with both positive and negative security assurances. Internationally, this would most likely entail the resolution of the Palestinian struggle for statehood.

Israel is unlike Russia or the United States where there are vast land masses separating the multitude of population centers. The Cold War concept of Mutually Assured Destruction (MAD) does not apply here. Indeed, where Israel to be attacked by a nuclear weapons state, the success of two devices could potentially remove the existence of Israel from the map[107]. In the words of former Iranian President Rafsanjani, ". . . application of an atomic bomb would not leave anything in Israel but the same thing would just produce damages in the Muslim world"[108].

Iran's existence in a region filled with nuclear weapons capable states relegates Iran to a regionally inferior power position. Iran would not consider attacking Pakistan or India. Iraq, Armenia, Azerbaijan, even Turkey *could* consider attacking Iran as the repercussions would be a conventional conflict.

[107] Taken from the Freeman Report as to why the U.S. and Israel need to collaborate on ABM and Air Defense for Israel against a possible Iranian nuclear attack. http://www.freeman.org/serendipity/index.php?/archives/141-IRAN-COULD-DESTROY-ISRAEL-WITH-2-NUKES-ISRAEL,-U.S.-COORDINATE-AGAINST-SHIHAB-3.html
[108] http://www.iran-press-service.com/articles_2001/dec_2001/rafsanjani_nuke_threats_141201.htm

When viewed from the Iranian perspective, the military, economic, and prestige benefits gained and extended to a Nuclear Weapons State makes this pursuit of a nuclear weapons capability a great reward for the Iranian leadership, albeit at a high initial cost from sanctions. Whether the oblique threat is real or assumed, it is sufficient justification for the Iranian leadership pursuit as well.

This leaves Israel and Iran at odds. Israel cannot continue to deny the peaceful acquisition of nuclear technologies in the Middle East, nor can Iran deny the changing face of the Middle East with the recent Arab Spring and the ensuing civil war in Syria. Israel is an internationally accepted State outside of the Middle East with more and more Middle Eastern countries acknowledging Israel's right to exist (Egypt, 1978; Jordan, 1994; Turkey, 1949) and supported internationally and the U.N. continues to work towards a peaceful resolution on the Palestinian Issue. While Iran is a supporter of the Palestinian issue, Iran is also not an Arab country.

Iran and Israel pose a challenge to a Middle East Nuclear Free Zone, but there are other options, or steps, that would not require Israel or Iran to be a part of the immediate solution:

Israel and Iran should be identified as <u>de facto</u> nuclear weapons states:

Identifying both Israel and Iran as a *de facto* nuclear weapons state could allow them to be treated due regard as the P5 States. This would allow the international community to view them as proliferators and possessors, no longer asking the question *<u>if</u>* but *<u>how many</u>* nuclear weapons or explosive devices and begin the conversation to reducing the nuclear stockpiles of both countries. A similar recognition could be extended to Pakistan and India.

The Arab States could collectively declare an Arab Middle East Nuclear Weapons Free Zone

As the Arab States are working toward the peaceful use of nuclear energy, a mutual declaration of Arab States would demonstrate their resolve to their peaceful acquisition and use of nuclear technologies. This agreement could be used to apply additional pressure on both Israel and Iran. Although Egypt is already a member of the African Nuclear Weapons Free Zone, the inclusion of Egypt in an Arab solution would give even greater leverage and validity to such an agreement.

In order for an Arab solution to effectively apply pressure to either Israel or Iran, the Arab States would need to grant security assurances in support of the zone and against aggression by either of Israel or Iran. Some of the defensive systems already exist in the form of early warning, anti-ballistic missile and air defense weapons. However, this does not preclude an attack through terrorist means, the so called "*dirty bomb".* For this to occur, the Arab States would have to be willing to share intelligence on any organization that may attempt to build or procure such a device. It is difficult to imagine that such a device could exist without the support of a State, but the cost of failure in this regard is too great to ignore.

A Unilateral One-State NWFZ

Finally, a solution may exist in the self-declaration by the Arab States as to their position on nuclear weapons. This concept would go beyond the agreed IAEA Safeguards and NPT provisions with legislative action directly defining the nuclear fuel cycle. While Mongolia existed in a unique circumstance between two nuclear weapons states leading to a self-declared, legislative action creating a one-state NWFZ, this model could be used as a building

block toward future membership in a ME NWFZ. Abu Dhabi, UAE is a good example of how a Middle Eastern State can declare itself and thereby establish the means for future international acceptance of nuclear technology for peaceful means. Should similar measure be taken by other Middle Eastern States seeking nuclear capabilities, these self-declarations could eventually be used to form agreement and acceptance of a ME NWFZ.

Not all nations need to be a part of such an agreement. The CA NWFZ is a good example as the Caucasus States are not included in the agreement, in spite of their former association with the USSR, adherence to the NPT, and their relative proximity to the five members of the CA NWFZ. The future may bring an expansion to this agreement or a new agreement altogether; however, this only goes to demonstrate that a complete agreement need not be completed in the initial stages.

14. Conclusion

Israel and Iran pose complex challenges to the creation of a Middle East Nuclear Weapons Free Zone. Israel's perception of its policy of nuclear opacity is intertwined with its existential strategic security concerns. Iran's leadership desire to be viewed as a significant player in a region filled with nuclear weapons states, places Iran's prestige and posture as a regional leader at the forefront of its nuclear decision.

The NPT did not consider this dilemma in its original framework. Israel could not sign nor accede to the NPT due to the definition of a nuclear weapons state. Iran was able to sign the NPT which required Iran to sit idly by while Pakistan and India developed nuclear weapons programs which are becoming more mainstream in today's discourse on nuclear weapons states. This destabilizing effect essentially leaves Iran in a difficult position – develop its own program in violation of the treaty, or be a second class nation a neighborhood full of nuclear weapons states.

For Israel or Iran to join a ME NWFZ will require significant steps leading to peace in the Middle East but this does not mean that those steps cannot lead to a rudimentary NWF excluding Israel and Iran while applying pressure to both states to join in the non-proliferation effort. The international acceptance on the nuclearization of the Middle East for peaceful means will be a driving force towards achieving this intermediary step. The resolution of the Palestinian Issue will remove Iran's obligation to support the Palestinians and further remove their internally perceived legitimacy to threaten Israel. Without a peaceful resolution, it is

unlikely that Israel would join any non-proliferation measures requiring Israel to reduce its capability to deter external aggression.

As a concept, a Middle East Nuclear Weapons Free Zone will have to be accomplished through small, irreversible steps with international agreement and oversight. The greater the involvement of the international community; a strident, peaceful resolve; and a movement towards democratic initiatives and reforms by the Middle East States, the more likely the dilemma posed by Israel and Iran will be able to be overcome.

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The following bibliography is a compilation of the books, articles, and websites which were consulted during the preparation of this thesis; however, it is not an exhaustive list of the expansive literature on Nuclear Weapons Free Zones. In particular, this bibliography does not provide a full list of the numerous editorial type articles from various international journals nor does it reference all of the international treaties and resolutions pertaining to the Middle East. Also not listed are the numerous Annual Reports of the International Atomic Energy Agency and the United Nations Resolutions that pertain to specific countries in the Middle East other than those specifically named in this work.

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