

# **Politics of Arms Control in West Asia: A Study of Nuclear Weapon Free Zone**

*Thesis submitted to Jawaharlal Nehru University  
For award of the degree of*

**Doctor of Philosophy**

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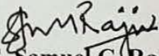


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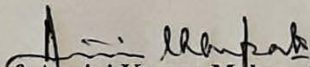
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I declare that the thesis entitled, '**Politics of Arms Control in West Asia: A Study of Nuclear Weapon Free Zone**', submitted by me for the award of the degree of **Doctor of Philosophy of Jawaharlal Nehru University** is my own work. The thesis has not been submitted for any other degree of this University of any other university.

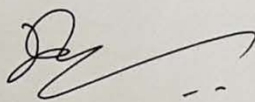
  
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### Certificate

We recommend that this thesis be placed before examiners for evaluation.

  
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## CONTENTS

	<b>Acknowledgment</b>	<b>v</b>
	<b>Abbreviations</b>	<b>vi</b>
	<b>List of Tables</b>	<b>x</b>
<b>Chapter One</b>	<b>Historical Background</b>	<b>1-28</b>
	Literature Review	
	Definition, Scope, and Rationale of the Study	
	Research Questions, Hypotheses, Research Methodology	
	Chapterisation	
<b>Chapter Two</b>	<b>Nuclear Weapon Free Zones: Historical Overview</b>	<b>29-58</b>
	Latin American NWFZ	
	South Pacific NWFZ	
	Southeast Asian NWFZ	
	African NWFZ	
	Nuclear Weapon Free Zones: An Assessment	
	Conclusion	
<b>Chapter Three</b>	<b>Israel and Nuclear Weapons</b>	<b>59-99</b>
	Israel's Nuclear Journey	
	Israel and Nuclear Weapons: Doctrinal Positions	
	Israel's Nuclear Policy Positions at the UN	
	Working Group on Arms Control and Regional Security (ACRS)	
	Israel and the NPT	
	Israel and the IAEA	
	Israel and Other Nuclear/WMD CBMs	
	Regional Nuclear Programmes and Israel's Policy of Prevention	
	Israel and West Asia WMDFZ: An Assessment	
	Conclusion	
<b>Chapter Four</b>	<b>Regional Non-Conventional Capabilities</b>	<b>100-132</b>
	Iraq	
	Libya	
	Egypt	
	Regional Chemical and Biological Weapons Capabilities	
	Conclusion	

<b>Chapter Five</b>	<b>Regional Conventional Capabilities</b>	<b>133-168</b>
	Ballistic Missile Capabilities	
	Arms Transfers	
	External Military Presence	
	Conclusion	
<b>Chapter Six</b>	<b>Iranian Nuclear Issue</b>	<b>169-204</b>
	Introduction	
	Rising Concerns	
	UNSC Sanctions	
	US Sanctions	
	EU Sanctions	
	US Threat Assessments	
	Iran-IAEA Disagreements	
	JCPOA	
	President Trump and the JCPOA	
	Regional Reactions	
	Implications for West Asia NWFZ	
	Conclusion	
<b>Chapter Seven</b>	<b>Preconditions for a Successful NWFZ in West Asia</b>	<b>205-234</b>
	Regional Civil Nuclear Energy Pursuit	
	Possibility of Ballistic Missile CBMs	
	Regional Replication of JCPOA Restrictions	
	Israel's Nuclear Status and the Evolving Regional Situation	
	Status of Global WMD Arms Control and Impact on MEWMDFZ	
	Conclusion	
<b>Chapter Eight</b>	<b>Conclusions</b>	<b>235-243</b>
	<b>Bibliography</b>	<b>244-313</b>

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This effort is dedicated to Mom, in Loving Memory.

## Abbreviations

**ABM Treaty:** Anti-Ballistic Missile Treaty

**ABACC:** Argentine-Brazil Agency for Accounting and Control of Nuclear Materials

**ACU:** Asian Clearing Union

**ACRS:** Arms Control and Regional Security Working Group

**AEOI:** Atomic Energy Organisation of Iran

**AIPAC:** American Israel Public Affairs Committee

**AP:** Additional Protocol

**AWACS:** Air Borne Warning and Control Systems

**AEOI:** Atomic Energy Organisation of Iran

**BoG:** Board of Governors

**CALUTRON:** California University Magnetrons

**CANWFZ:** Central Asian Nuclear Weapon Free Zone

**CBW Programme:** Chemical and Biological Weapons programme

**CBI:** Central Bank of Iran

**CFE:** Conventional Forces in Europe

**CSA:** Comprehensive Safeguards Agreements

**CIRUS:** Canada India Utility Services Reactor

**CIA:** Central Intelligence Agency

**CISADA:** Comprehensive Iran Sanctions, Accountability and Divestment Act

**COPREDAL:** Preparatory Commission for the Denuclearisation of Latin America

**CTBT:** Comprehensive Test Ban Treaty

**CTBTO:** Comprehensive Test Ban Treaty Organisation

**DCA:** Defence Cooperation Agreement

**EMIS:** Electro-Magnetic Isotope Separation Systems

**ENR Technologies:** Enrichment and Re-processing Technologies

**ENEC:** Emirates Nuclear Energy Corporation

**ENDC:** Eighteen Nation Disarmament Committee

**FFI:** Foreign Financial Institution

**FMF:** Foreign Military Financing

**FMS:** Foreign Military Sales

**FEP:** Fuel Enrichment Plant

**GCC:** Gulf Cooperation Council

**GCD:** General and Complete Disarmament

**HCoC:** Hague Code of Conduct  
**HEU:** Highly Enriched Uranium  
**IAEA:** International Atomic Energy Agency  
**IAEA INFCIRC:** IAEA Information Circular  
**ICAN:** International Campaign against Nuclear Weapons  
**IPFM:** International Panel on Fissile Materials  
**ICBM:** Inter-Continental Ballistic Missiles  
**INARA:** Iran Nuclear Agreement Review Act  
**INA:** Iran Non-Proliferation Act  
**INF:** Intermediate-Range Nuclear Forces Treaty  
**INSTEX:** Instrument for Trade Exchanges  
**ITRSHRA:** Iran Threat Reduction and Syria Human Rights Act  
**IRGC:** Iranian Revolutionary Guard Corps  
**IAEC:** Israel Atomic Energy Commission  
**IAT:** Iraq Action Teams  
**IEEPA:** International Emergency Economic Powers Act  
**ILSA:** Iran and Libya Sanctions Act  
**INIR:** Integrated Nuclear Infrastructure Review  
**IRBM:** Intermediate Range Ballistic Missile  
**ISA:** Iran Sanctions Act  
**ISG:** Iraq Survey Group  
**IRISL:** Islamic Republic of Iran Shipping Lines  
**JAEC:** Jordan Atomic Energy Commission  
**JCPOA:** Joint Comprehensive Plan of Action  
**JPOA:** Joint Plan of Action  
**KEPCO:** Korea Electric Power Corporation  
**LTBT:** Limited Test Ban Treaty  
**LEU:** Low Enriched Uranium  
**MNNA:** Major Non-NATO Ally  
**MBT:** Main Battle Tanks  
**MEACI:** Middle East Arms Control Initiative  
**MENWFZ:** Middle East Nuclear Weapon Free Zone  
**MEWMDfZ:** Middle East Weapons of Mass Destruction Free Zone  
**MEPP:** Middle East Peace Process

**MEK:** Mojaheddin e Khalq  
**MTCR:** Missile Technology Control Regime  
**NAM:** Non-Aligned Movement  
**NCRI:** National Council of Resistance of Iran  
**NOTAM:** Notice to Airman  
**NSPD–23:** National Security Presidential Directive–23  
**New START:** New Strategic Arms Reduction Treaty  
**NDAA:** National Defence Authorisation Act  
**NFU:** No First Use  
**NMDA:** National Missile Defence Act  
**NPDI:** Non-Proliferation and Disarmament Initiative  
**NPT:** Nuclear Non-Proliferation Treaty  
**NNPA:** Nuclear Non-proliferation Act  
**NPR:** Nuclear Posture Review  
**NPT Rev Con:** NPT Review Conference  
**NIE:** National Intelligence Estimate  
**NRC:** Nuclear Regulatory Commission  
**NWS:** Nuclear Weapon States  
**NNWS:** Non-Nuclear Weapon States  
**NSG:** Nuclear Suppliers Group  
**NWFZ:** Nuclear Weapon Free Zone  
**OPANAL:** Agency for the Prohibition of Nuclear Weapons in Latin America  
**OPCW:** Organisation for the Prohibition of Chemical Weapons  
**OPEC:** Organisation of the Petroleum Exporting Countries  
**OIF:** Operation Iraqi Freedom  
**OP PLAN:** Operation Plan  
**OST:** Open Skies Treaty  
**PAA:** Phased Adaptive Approach  
**PIV:** Physical Inventory Verification  
**PFEP:** Pilot Fuel Enrichment Plant  
**PMD:** Possible Military Dimensions  
**PNE:** Peaceful Nuclear Explosion  
**PNE Treaty:** Treaty on Underground Nuclear Explosions for Peaceful Purposes  
**PIF:** Pacific Islands Forum



**PTBT:** Partial Test Ban Treaty

**SALT-I:** Strategic Arms Limitation Talks

**SASC:** Senate Armed Services Committee

**SMRs:** Small Modular Reactors

**SQP:** Small Quantities Protocol

**SS-NWFZ:** Single State Nuclear Weapon Free Zone

**START:** Strategic Arms Reduction Talks

**SPF:** South Pacific Forum

**TPNW:** Treaty on the Prohibition of Nuclear Weapons

**TRR:** Tehran Research Reactor

**TTBT:** Threshold Test Ban Treaty

**UAV:** Unmanned Aerials Vehicles

**UCF:** Uranium Conversion Facility

**UNGA:** United Nations General Assembly

**UNMOVIC:** UN Monitoring, Verification and Inspection Commission

**UNODA:** UN Office of Disarmament Affairs

**UNSC:** United Nations Security Council

**UNSCOM:** UN Special Commission

**UF<sub>6</sub>:** Uranium Hexa Fluoride

**US CENTCOM:** US Central Command

**WMD:** Weapons of Mass Destruction

**WMDFZ:** Weapons of Mass Destruction Free Zone

**ZOPFAN:** Declaration on the Zone of Peace, Freedom and Neutrality

## List of Tables

<b>S. No.</b>	<b>Table No.</b>	<b>Table Name</b>	<b>Page No.</b>
<b>1</b>	<b>Table 2.1</b>	Nuclear Weapon States and NWFZ Protocols Ratification	<b>56</b>
<b>2</b>	<b>Table 5.1</b>	West Asia and North Africa Ballistic Missile Inventories	<b>141</b>
<b>3</b>	<b>Table 5.2</b>	China's Arms Exports to West Asia and Egypt 2000-19	<b>152</b>
<b>4</b>	<b>Table 5.3</b>	France's Arms Exports to West Asia and Egypt 2000-19	<b>153</b>
<b>5</b>	<b>Table 5.4</b>	Russia's Arms Exports to West Asia and Egypt 2000-19	<b>155</b>
<b>6</b>	<b>Table 5.5</b>	United Kingdom's Arms Exports to West Asia and Egypt 2000-19	<b>157</b>
<b>7</b>	<b>Table 5.6</b>	United States' Arms Exports to West Asia and Egypt 2000-19	<b>158</b>
<b>8</b>	<b>Table 7.1</b>	Major disarmament and non-proliferation agreements: Membership status of West Asian and North African countries with WMD concerns/civilian nuclear programmes	<b>219</b>
<b>9</b>	<b>Table 7.2</b>	West Asian and North African States and IAEA Safeguards Agreements	<b>220</b>
<b>10</b>	<b>Table 7.3</b>	West Asian and North African states and Nuclear Safety and Security Instruments	<b>221</b>

# **CHAPTER ONE**

## **Historical Background**

Nuclear weapons came into existence on 16 July 1945, when the United States (US) exploded a nuclear device in New Mexico. The world witnessed a massive scale of death and destruction when the US dropped atomic bombs on Hiroshima and Nagasaki on 6 and 9 August 1945 respectively, destroying both cities completely. Since then, countless efforts have been made to reduce the destructive effects of these weapons of mass destruction (WMD). These efforts have been championed by not only the states possessing these formidable weapons but also by the majority of countries living under the nuclear threat. Civil society activism against nuclear weapons possession has also achieved significant results.<sup>1</sup>

Towards retaining its monopoly, the US enacted measures to stop the spread of nuclear weapons technology, even to close allies. The 1946 McMahon Act, for instance, terminated US cooperation with Britain in the field of atomic weapons (Wheeler, 1985-86, 71). Britain was actively involved in the US nuclear weapons effort at Los Alamos since 1943 (Newhouse, 1989, 36). This forced Britain to embark on its own independent nuclear weapons quest— as it judged an independent nuclear weapons capability to be essential to safeguarding its security, and successfully tested its first nuclear explosive device off the Australian coast in 1952 (Comprehensive Test Ban Treaty Organisation, 2020a).

Even as it took steps to prevent its closest allies from getting the technology, the Truman administration submitted the Baruch Plan to the United Nations in 1946. As part of the plan, the US pledged to stop manufacturing new nuclear bombs while its existing arsenal (made up of nine bombs in June 1946) would be eliminated, after a system of penalties/sanctions was established to punish states which embarked on a nuclear weapons quest (Blacker and Duffy, 1984, 97). An international body created by the United Nations (UN) would then be responsible for monitoring peaceful nuclear energy uses.

The Soviet Union rejected the plan as it would have meant that the US will retain its modest nuclear arsenal until the system of sanctions were agreed upon and the UN body was established. As the Cold War began to gain momentum, Moscow did not want US nuclear monopoly to continue, when it did not have similar capabilities (Ibid, 1984, 98). The first Soviet nuclear device was tested in August 1949. The first US thermo-nuclear bomb test was

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<sup>1</sup> The 2017 Nobel Prize, for instance, was awarded to the International Campaign to Abolish Nuclear Weapons (ICAN), whose campaign resulted in the Treaty for the Prohibition of Nuclear Weapons (TPNW).

conducted in November 1952, followed quickly by the Soviet Union's first thermonuclear test in August 1953.

In a short time period, therefore, the atomic race between the two super powers escalated rather quickly and the US scientists informed President Harry Truman that both sides possessed sufficient capacities to inflict "great damage" on the other (Sokolski, 2001, 26). Truman's successor, Dwight D. Eisenhower, who saw first-hand the horrors of death and destruction during World War Two, on 8 December 1953 at the United Nations General Assembly (UNGA), proposed the establishment of an international agency to promote peaceful nuclear use, including in agriculture and medicine (International Atomic Energy Agency, 1953).

Eisenhower highlighted the fact that US monopoly on nuclear weapons had ended, and that this knowledge could potentially be shared by several nations eventually. The US President evocatively stated that these weapons must be taken out of the "hands of soldiers" and placed in the "hands of those who will know how to strip its military casing and adapt it to the arts of peace" (Ibid). This speech became famous as the 'Atoms for Peace' speech. The Chairperson of the UNGA when Eisenhower made the speech was Indian Ambassador to the UN, Vijayalakshmi Pandit.

As part of the Atoms for Peace projects subsequently run by the US, many countries received assistance in the nuclear field. These included monetary, technical and material help to establish nuclear power reactors for civilian purposes. Thousands of civilians were trained in US higher education institutions. Innumerable documents, until then classified as secret, were made available to visiting scientists and engineers. Before the end of the decade, the US sold at least 25 nuclear research reactors abroad, while the Soviet Union also followed suit and indulged in friendly nuclear commerce, primarily to countries in Africa and Eastern Europe (Hall, 1965, 609).

India received nearly US\$100 million of Atoms for Peace grants and loans during 1954-1974, most of it to finance the construction of the country's first nuclear power plant at Tarapur (Lavoy, 2003). India also received heavy water from the US for the Canada India Utility Services Reactor (CIRUS) reactor, built with assistance from Canada. Lavoy notes that if the US had not launched Atoms for Peace, countries like India or Pakistan would have found it much more difficult to achieve their nuclear weapons capability. Mohammed Reza Pahlavi, the Shah of Iran, utilised the US programme to establish the Tehran Nuclear Research Centre in 1959. Iran received a 5-megawatt electric (MWe) research reactor in 1967 (Rowberry, 2013).

Bilateral and multi-lateral efforts to minimise the environmental impact of nuclear tests included the 1961 Antarctic Treaty, prohibiting nuclear weapons tests in the Antarctic. Article V of the treaty prohibited radio-active waste disposal (UN Treaties, 1959). Other treaties in this direction were the 1967 Outer Space Treaty (which banned the deployment of nuclear weapons in outer space), and the 1972 Seabed Arms Control Treaty (which prohibited nuclear weapons tests in the ocean).

The Soviet Union announced a moratorium on nuclear tests conducted in the atmosphere in 1958 (Smoke, 1993, 136). After the 1962 Cuban Missile Crisis, President John F. Kennedy, on 10 June 1963, stated that the US would also not conduct an atmospheric nuclear test, if other states continued to stick to their promise of not conducting such tests (JFK Library, 1963). In August 1963, the Limited Test Ban treaty (LTBT) was signed by the US, the Soviet Union and the United Kingdom (UK), with the three states pledging not to conduct nuclear weapon tests in the atmosphere, outer space and under water. France, which had conducted its first nuclear test three years earlier in 1960, did not join the treaty. China conducted its initial nuclear test a year later in October 1964 (Smoke, 1993, 138).

The LTBT was a crucial step that paved the way for additional arms control agreements between the US and the Soviet Union, as the American scepticism about dealing with the Soviet Union in the nuclear sphere was reduced to an extent (Mandelbaum, 185-186). The 1972 Anti-Ballistic Missile (ABM) treaty was the next significant development, which flowed out of the Strategic Arms Limitation Talks (SALT) I. This treaty placed significant restrictions on ABM sites, limiting them to two each for the US and the Soviet Union (UN Treaties, 1972).

Another significant agreement that followed from these SALT I talks was the restrictions on the construction of offensive strategic missile systems (Blacker and Duffy, 1984, 113). The successor to the SALT I talks, a SALT II agreement, was finalised in 1979 dealing with limitations on the nuclear arsenals of both sides. The Soviet invasion of Afghanistan later that year however ensured no further progress was made on that agreement.

The SALT process was renamed as Strategic Arms Reduction Talks (START), which resulted in the START 1 agreement of July 1991. START I, valid till 2009, prescribed limits on the numbers of delivery systems (1,600) and warheads (6,000), which was one-third of their existing arsenals (Arms Control Association, 2019). START II, signed in January 1993, dealt with ICBMs having multiple warheads (US State Department, 1993). This agreement was

ratified by both the US (in 1996) and the Russian Federation (in 2000) (US State Department Archived Content, 2020a).

Russia, however, withdrew from START II in June 2002, after the US withdrew from the ABM Treaty, formally in the same month. The New Strategic Arms Reduction Treaty (New START) came into being in February 2011, prescribing further limitations on the US and Russia in terms of deployed delivery systems (700) and warheads (1550) (US State Department, 2020). New START expires in February 2021, while negotiations to have a follow-up agreement started in mid-2020.

As Lawrence Freedman pertinently notes, during the Cold War, arms control measures dealt with managing the enormous nuclear arsenals of the two Super Powers. Arms control efforts focus shifted from managing the numbers in their arsenals to try to gradually reducing the importance of nuclear weapons in their arsenals, after the demise of the Soviet Union. These efforts resulted in bilateral arms control treaties like the START II Treaty as well as multi-lateral measures like the 1996 Comprehensive Test Ban Treaty (CTBT) (Freedman, 1997, 184).

The Eighteen Nation Disarmament Committee (ENDC) was an important multi-lateral undertaking established in 1961 through a UNGA resolution. The ENDC later in 1969 transformed into the Conference on the Committee on Disarmament. The ENDC played an important role in the negotiations that led to the creation of the Nuclear Non-Proliferation Treaty (NPT), which opened for signature on 1 July 1968 and entered into force on 5 March 1970. The NPT defined Nuclear Weapon States (NWS) as those countries which exploded a nuclear explosive device prior to 1 January 1967. These states pledged not to transfer nuclear weapons while non-nuclear weapon states (NNWS) pledged not to receive such explosives or devices, in Articles I and II (United Nations, 2020). Prior to this multilateral undertaking, West Germany in 1954 had unilaterally pledged not to manufacture nuclear explosives on its soil. The NPT was in essence built upon the West German example, as indeed, on creative arms control proposals from small countries like Ireland (Willrich, 1969, 53; Blacker and Duffy, 1984, 153). In Article III, State Parties pledged to accept safeguards on their civilian nuclear infrastructure, to be concluded in negotiations with the IAEA.

Peaceful nuclear use was encouraged (in Articles IV and V) even as state parties committed to enter into “negotiations in good faith” to achieve nuclear disarmament (Article VI). Article VII states that the State parties can conclude agreements to establish regional nuclear weapon free zones (NWFZ), while Article VIII deals with possible amendments to the treaty. Article IX

relates to the ratification of the treaty while Article X allows for withdrawal from the treaty (United Nations, 2020). Article X also provides for the extension of the treaty, twenty five years after its adoption, either indefinitely or for fixed additional periods (Ibid). As of December 2020, 191 countries are state parties to the NPT. While India, Israel and Pakistan have not signed the treaty, the Democratic People’s Republic of Korea (DPRK) joined the treaty in 1985 but quit in 2003. The DPRK exploded its first nuclear device in 2006.

As against arms control efforts — which seek to regulate existing arsenals, disarmament measures seek to eliminate nuclear weapons. Such measures were championed by NNWS like India. Prime Minister Jawaharlal Nehru called for a “standstill agreement” on nuclear testing, in an address to the Lok Sabha on 2 April 1954. Nehru’s proposal was in response to the US ‘Castle Bravo’ hydrogen bomb test of 1 March 1954 at Bikini Atoll — the biggest ever nuclear explosive test conducted by the US with a yield of 15 metric tonnes (Ghose, 1997, 241).

India did not sign the NPT as it argued the treaty did not do enough to address its core concerns on nuclear disarmament but instead divided the world into those who possessed nuclear weapons and those who did not, through an arbitrary cut-off date (Weiss, 2010, 255-271). Even as India became an overt nuclear weapon state in May 1998, it has not joined the NPT as the treaty does not recognise India’s nuclear status. The India-US Joint Statement on civil nuclear cooperation of 18 July 2005, though, recognises India as a “responsible state with advanced nuclear technology” (Ministry of External Affairs, 2005). Following the India-US nuclear deal, India separated its civilian and military nuclear reactors in March 2006 and subsequently secured the Nuclear Suppliers Group (NSG) waiver in September 2008 (International Atomic Energy Agency, 2008a). India thus became the only state outside the NPT allowed to engage in nuclear commerce with NSG member states.

NWFZs are regional, geographically-defined arms control measures. The UNGA in Resolution 3472 B (XXX) of 11 December 1975 states that a NWFZ is:

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 (United Nations General Assembly, 1975a).

NWS are required to:

- (a) To respect in all its parts the statute of total absence of nuclear weapons defined in the treaty or convention which serves as the constitutive instrument of the zone;
- (b) To refrain from contributing in any way to the performance in the territories forming part of the zone of acts which involve a violation of the aforesaid treaty or convention;
- (c) To refrain from using or threatening to use nuclear weapons against the States included in the zone (Ibid).

Ever since the Latin American NWFZ came into being in February 1967 through the Treaty of Tlatelolco, three other prominent NWFZs have been negotiated. These are the South Pacific NWFZ (1985); the Southeast Asian NWFZ (1995), and the African NWFZ (1996). The Central Asian NWFZ was created in 2006, having membership of five central Asian countries. While all the other NWFZs are geographically limited to the southern hemisphere, the Central Asian zone is the only one that pertains to the northern hemisphere. Peaceful nuclear use is allowed in NWFZs under IAEA safeguards.

The Soviet Union at the UNGA in 1956 sought restrictions on the stationing of nuclear weapons within countries of central Europe. However, the proposal was rejected by the US. The very first proposal for the denuclearisation of a region was by Poland's Foreign Minister Adam Rapacki at the UNGA on 2 October 1957 — hence termed the 'Rapacki Plan'. The proposal sought to ban nuclear weapons in the area covering central Europe — Czechoslovakia, East and West Germany and Poland (Albrecht and Vale, 1983, 117-133). While the Rapacki Plan got the backing of Czechoslovakia, East Germany and even the Soviet Union, it became a victim of Cold War politics, as it was primarily seen as an effort to prevent the possible nuclear weaponisation of West Germany (Thakur, 1998, 4; Zoltan, 2010, 2).

The Rapacki proposal was supported by the Warsaw Pact countries but the Western powers considered such plans 'unbalanced' as they involved the withdrawal of Western nuclear bases (Robles, 1967: xiii). The German government specifically informed the Polish government that no negotiations were possible on the Rapacki Plan and insisted that security for central Europe was not feasible in the absence of the re-unification of Germany (NATO, 1958). Finland



proposed the establishment of a NWFZ to cover Denmark, Finland, Iceland, Norway and Sweden in 1963.

Efforts towards creating a NWFZ in West Asia, namely, the Middle East NWFZ (MENWFZ), have not been successful so far. The League of Arab States in their 64<sup>th</sup> session held in Rabat, Morocco in September 1974, as well as Shah Reza Pahlavi of Iran in the same month, urged steps to be taken to establish a NWFZ in West Asia. A draft resolution was submitted to the UNGA by Iran and Egypt. It is pertinent to note that these proposals were in the aftermath of the October 1973 Arab-Israeli war. Resolution 3263 (XXIX) of 9 December 1974 supported the calls by Egypt and Iran to create a regional NWFZ (United Nations General Assembly, 1974a). Since 1974, the UNGA has been regularly passing resolutions (sponsored by Egypt primarily) urging for the establishment of a MENWFZ. These resolutions have been adopted unanimously without a vote since 1980.

While Israel welcomed the above resolutions, it put forth its own resolution at the UNGA in 1980. The Israeli resolution urged for the convening of a conference of regional countries to come to an understanding on a treaty akin to the Tlatelolco Treaty (United Nations General Assembly, 1981a, 3). It held that a regional approach to negotiate NWFZ “in good faith” was advisable, instead of the UN mandating the formation of such zones (United Nations General Assembly, 1980, 19-25). On 26 October 1981, Israel’s Representative to the UN brought to the attention of the UN Secretary-General the Final Document of the Tenth Special Session of the UNGA in 1978 (which examined issues relating to disarmament and arms control) which noted that while establishing such zones, “characteristics of each region should be taken into account” (United Nations General Assembly, 1978; United Nations General Assembly, 1981b, 2). Israeli Foreign Minister Yitzhak Shamir, addressing the UNGA a few months after Israel destroyed the Osiraq nuclear reactor stated that his country will not allow the issue of the NWFZ to be used as a “tool of anti-Israel political warfare” (United Nations General Assembly, 1981c, 448).

A 1989 IAEA study and a 1991 study by the UN Office of Disarmament Affairs (UNODA) defined the territorial limits of a MENWFZ to include the countries of the League of Arab States, Iran and Israel (International Atomic Energy Agency, 1989a; UN Office of Disarmament Affairs, 1991). The proposal for the Middle East Weapons of Mass Destruction Free Zone (MEWMDZFZ) was put forward by Egypt at the NPT Review Conference (Rev Con) in 1990. However, “political conditions particular to the region” as noted in Resolution 3263

(XXIX) of 9 December 1974, stymied efforts to establish the zone (United Nations General Assembly, 1974a).

The Arms Control and Regional Security (ACRS) Working Group talks were held in the 1990s. These negotiations did not yield any substantive progress, with Israel's NPT non-membership cited as a key stumbling block by important regional countries like Egypt. The NPT was extended indefinitely in 1995 at the NPT Review Conference (Rev Con), after receiving support from Arab states who were promised that renewed efforts will be made to establish the MEWMDFZ (Acronymn, 1995). The Final Document of the Rev Con urged the regional states to "take practical steps" to realise a WMD free zone. A perusal of the above document indicates that it clearly acknowledged the inherently political link between progress on the West Asian peace process and efforts that contribute to a NWFZ in the region (Ibid).

The subsequent history is reflective of the continuing difficulty in disentangling the two aspects. Despite the 1995 Final Document urging regional countries to refrain from pursuing WMD or their delivery systems, efforts of NPT member-states like Iraq, Libya, Syria and Iran in these spheres generated regional and international concerns. Since the 1995 NPT Rev Con, there has been some positive movement no doubt. The United Arab Emirates (UAE) in 1995, Oman in 1997 and Palestine in February 2015 from the West Asia and North Africa region signed and ratified the NPT. Israel on its part insisted that the real problem for WMD in West Asia emanates from countries which have signed and ratified the NPT.

The 2003 US-led invasion of Iraq and its consequences, dominated world attention in the first half of the decade. After the war however, those weapons were not found, despite the robust advocacy of the costly military operation and the subsequent occupation, which resulted in significant loss of US and Iraqi citizens and material. The Iranian nuclear contentions subsequently occupied world attention, especially after the issue came under the purview of the United Nations Security Council (UNSC) in February 2006. Iran's engagement with the IAEA subsequently gained a hard edge, with IAEA Director-General Yukiyo Amano charged with acting under pressure from the US (International Atomic Energy Agency, 2013a, 11). Negotiations between Iran and its interlocutors did not produce results until July 2015, when the Joint Comprehensive Plan of Action (JCPOA) was agreed upon.

The geo-political turmoil — the Arab Spring, that the region underwent beginning in 2011 led to greater importance accorded to regime security and state survival. The 2010 NPT Rev Con called for a regional conference to discuss issues relating to the MEWMDFZ. The US State

Department spokesperson Victoria Nuland in a statement on 23 November 2012 stated that the proposed December 2012 Helsinki conference (which was an essential part of the commitments agreed upon at the NPT Rev Con 2010) could not be convened “because of present conditions in the Middle East ...” She further noted the “deep conceptual gap” as it pertained to achieving regional security through arms control (VOA News, 2012).

Echoing similar sentiments, Israel’s representative to the IAEA in September 2012, pointed out that the “geo-political realities” in West Asia were changing and specifically highlighted “adverse developments” pertaining to Iran and Syria, who he stated were “known for their clandestine pursuit of nuclear weapons and other weapons of mass destruction” (Chorev, 2012). He insisted that successful geographically-defined NWFZs are only possible when peaceful relations exist between the countries of the region for a reasonable period of time, and when such zones are not imposed from outside but emanate from within the region. Therefore, both Israeli and American officials began to highlight the geo-political disturbances in the region post 2011 as a major hindrance to achieving any progress on a WMD free zone.

Israel has been robust in its opposition to the JCPOA, insisting that the agreement in fact paved the way to a nuclear Iran (Ministry of Foreign Affairs, 2015a). While Israel continues to be wary of Iran’s intentions, the JCPOA does have stringent oversight mechanisms granted to the IAEA to ensure its smooth implementation. The JCPOA has limits on the percentage up to which Iran can enrich uranium (limited to 3.67 per cent), prohibitions on the number and quality of centrifuges that are used to enrich uranium, among other requirements. It has created special mechanisms to give access to IAEA inspectors to visit sites of concern, even if Iran has declared that no nuclear-related activity was taking place in that particular site (United Nations Security Council, 2015). The JCPOA also explicitly prohibits Iran from carrying out nuclear weapons-related experimentation.

Such provisions are not part of the NPT requirements, nor are they part of NPT member states agreements pertaining to their interactions with the IAEA. In the light of the fact that Israel has been insisting that there was a need to first establish stringent arms control verification measures in a region which has serious security deficits, it remains to be seen how far multi-lateral efforts for a NWFZ in the region going forward can potentially build on the unique, Iran-specific provisions of the JCPOA. At the 2015 NPT Rev Con, there was no consensus on a proposed plan to convene a conference on the West Asia NWFZ. The conference, therefore, could not adopt a ‘Final Document’, which contains the main understandings of the

deliberations. The US withdrawal from the JCPOA in May 2018 meanwhile has placed the multi-lateral agreement on a tricky foundation.

## **Literature Review**

The following section reviews literature relating to four broad themes – nuclear arms control; nuclear weapon free zones; WMD proliferation in West Asia; and the debate about NWFZs as it pertains to the West Asian region.

### ***Nuclear Arms Control***

Arms control is defined as a “process involving specific, declared steps by a state to enhance security through cooperation with other states” (Rattray, 1996, 8). Arms control measures can relate to quantitative limitations on weapons systems, or even their prohibition in certain cases, and can also include measures to promote transparency on military issues (Goldblat, 2002, 3). Arms control not only reduces the risks of war but also the damage that could occur, if war does break out (Kartchner, 1996, 24-27). Nuclear arms control, specifically, as a strategy to prevent nuclear war and to ensure damage limitation in case war broke out, gained prominence during the Cold War and stabilized the then strategic environment (Poulose, 1987, 2; Rattray, 1996, 2; Levi and O’Hanlon, 2005, 45).

Nuclear arms control, therefore, implied mechanisms to limit nuclear arms competition, rather than reversing such competition (Goldblat, 2002, 3). Disarmament, on the other hand, relates to the complete elimination of weapons systems in a verifiable manner. Non-aligned nations pursued measures like the NWFZ and negative security assurances<sup>2</sup> like no first use (NFU) pledges, due to the NPT NWS failing in their commitments to carry out their disarmament obligations (Wunderlich et al, 2013, 247). Arms control measures, can be unilateral (announced by a single nation state), bilateral (between two nation states), or multi-lateral (negotiated between more than two nation-states) (Goldblat, 2002, 11-12).

Bilateral nuclear arms control measures between the US and the Soviet Union gained importance as an essential instrument of ensuring strategic stability, during the Cold War (Rosert, Becker-Jakob, Franceschini, Schaper, 2013, 111). The NPT, negotiated in 1968 and which entered into force in 1970, was a very important nuclear arms control treaty as it not only prevented ‘nuclear anarchy’ but it was also the ‘most important formal accomplishment

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<sup>2</sup> Negative security assurances are given by NWS not to use such weapons against states which did not possess them. Positive security assurances, on the other hand, involve commitments by a nuclear weapon state to come to the aid of states that are threatened with such weapons.

of arms control' (Goldblat, 2002, 108; Levi and O'Hanlon, 2005, 131). The 1972 Anti-Ballistic Missile (ABM) treaty placed significant restrictions on super power ABM sites.

The end of the Cold War, it was felt, would render arms control as less relevant to ensuring strategic stability, especially as the US had emerged as the primary hegemon, with reduced incentives to engage in bilateral arms control (Muller, Fey and Rauch, 2013, 148). However, as part of the Strategic Arms Reduction Treaty-I (START-I) agreement of 1991, the two erstwhile superpowers committed to reducing by one-third the numbers of delivery vehicles and warheads (Arms Control Association, 2019).

During the Cold War, the focus of arms control, therefore, was on managing the enormous nuclear arsenals the two Super Powers built up over the years. After the end of the Cold War, the attention shifted to working towards downgrading the utility of nuclear weapons. These efforts resulted in bilateral arms control treaties like the START II Treaty of January 1993 — which dealt with reducing the numbers of warheads on long-range ballistic missiles, as well as multi-lateral measures like the 1996 CTBT (Freedman, 1997, 184). Apart from multi-lateral efforts like the CTBT, the world also witnessed unprecedented US-Russian cooperation on the issue of the Iraqi WMD under the aegis of the United Nations Special Commission (UNSCOM), after the 1990-91 Kuwait War (Goldblat, 2002, 149; Waller, 1996, 99-118; Muller, Fey and Rauch, 2013, 148-149).

After the September 11, 2001 terror strikes, the main focus of non-proliferation efforts shifted to preventing states of concern from developing WMD. These states, in the US' worldview, included Iran, Libya and North Korea. Preventing the proliferation of WMD to these states took precedence to great power nuclear rivalry (Levi and O'Hanlon, 2005, 17). The US championed measures like the Proliferation Security Initiative (PSI). These have been termed as 'coercive export controls'<sup>3</sup> (Levi and O'Hanlon, 2005, 70).

The verification of the commitments of State Parties is an essential element that determines the strength and long term viability of an arms control measure. Cooperative measures like mutual on-site inspections and national technical means (NTM) with regards to bilateral agreements, or multi-lateral organisations like the IAEA, are used to verify compliance. A minimum level of trust and good faith between the negotiating partners in the first place is therefore required to come to an agreement on the modalities and terms of the arms control measure being agreed

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<sup>3</sup> Export controls are national and multi-lateral restrictions, like the Nuclear Suppliers Group (NSG), on the transfer of sensitive materials and technology that have 'dual-use' (civilian/military) applications.

upon. Mutually agreed mechanisms to respond to instances of non-compliance, if any, are also essential (Pilat, 1996, 77-95). Verification provisions of a NWFZ are carried out by the individual member states of that zone. It is, therefore, pointed out that such provisions are stricter than even IAEA safeguards provisions (Foran, 1996, 187).

The experience with the Iraqi and the North Korean nuclear and WMD programmes during the 1990s demonstrated that states can carry out covert activities outside the glare of multi-lateral agencies like the IAEA (Pilat, 1996, 87). The Additional Protocol (AP), introduced in 1997, which enhanced the verification and monitoring strength of the IAEA, was in direct response to the Iraqi and North Korean experiences (Foran, 1996, 185-186; Cserveny, 2004, 81).

States adhering to the AP are required to provide access to IAEA inspectors at facilities which were not declared to the agency, even at short notices, and gives right to the IAEA to carry out environmental sampling to confirm the absence of undeclared activities (Levi and O'Hanlon, 2005, 64). Former IAEA Director-General, Mohammed El-Baradei, calls for bringing into force CSAs and AP for all states in the West Asian region, to ensure better oversight of their civilian nuclear programmes (El-Baradei, 2011, 316).

El-Baradei, does flag that the IAEA has no authority to search for nuclear material or facilities, which were not declared. In that sense, he admits that the IAEA was a 'beat cop with a blindfold' (Ibid, 10). Nation states also do not want international agencies like the IAEA a free hand to search for suspicious activities on their territories. When Iraq accepted 'anytime, anywhere' UNSCOM inspections<sup>4</sup>, it was only because it was a defeated country (El-Baradei, 2011, 16).

Efforts to ban other WMD like chemical and biological weapons resulted in the 1972 Biological and Toxins Weapons Convention (BWC) and the 1993 Chemical Weapons Convention (CWC). Unlike the NPT, which allows states possessing nuclear weapons prior to 1967 to continue to possess those weapons, CWC State Parties have to destroy their chemical weapons stockpiles (Smithson, 1996, 203). The BWC was for many decades, until the CWC entered into force in 1997, the only instrument that banned the possession of an entire class of weapons (Chevrier, 1996, 211).

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<sup>4</sup> As part of these inspections, Iraq was obliged to provide UNSCOM access to both civilian and military sites, to carry out unannounced as well as short-notice inspections, including by ground teams and by aerial surveillance.

## *Nuclear Weapon Free Zones*

NWFZs are important arms control measures in that they seek to prevent the stationing of nuclear weapons, within specified geographies. Regional efforts like NWFZ can strengthen efforts to reduce the incentives as well as impact of proliferation within that region (Greenwood, Feiveson and Taylor, 1977, 21). The NWFZs regulate competition between existing nuclear weapon states, within specific geographical zones (Goldblat, 2002, 196).

The first such zone, relating to Latin America, came into being in 1967. Efforts to establish the zone got a boost after the Cuban Missile Crisis of 1962, which came about after the Soviet Union stationed nuclear-tipped ballistic missiles on the island nation (Goldblat, 2002, 198; Watson, 1996, 265). The Tlatelolco treaty, though, does not clearly enunciate an embargo on the movement of nuclear weapons. The Preparatory Commission of the treaty in 1967 had stated that it was the prerogative of the territorial state to deny or allow such transit. The exercise of such a right was purely hypothetical as nuclear weapon states do not normally disclose that their ships or aircraft have nuclear weapons on board (Goldblat, 2002, 200).

Former Brazilian diplomat Sergio Duarte, who was the UN High Representative for Disarmament Affairs from 2007-2012, notes that the absence of significant regional political or territorial disputes, definitely helped in the countries agreeing to the Tlatelolco treaty (Duarte, 2017). The Argentina-Brazil nuclear rivalry, however, subsequently played a part in the evolution of the treaty, given that both countries were sceptical of each other's nuclear intentions; they did not ratify the treaty until the 1990s (Watson, 1996, 266).

During the 1982 Falklands/Malvinas islands conflict, Argentina accused the United Kingdom (UK) of not only deploying nuclear powered submarines but also nuclear weapons on board British ships in order to put Argentina under pressure (Musto, 2017). Britain, however, insisted that no nuclear weapons were on board its naval assets deployed in the conflict (Freedman, 1989).

The South Pacific NWFZ, came into being due to the Treaty of Rarotonga, which was signed on 6 August 1985. It came about as a result of the nuclear test explosions of NWS, primarily the US, the UK and France, in the region (Goldblat, 2002, 202). France only signed and ratified the treaty a decade later, in 1996. The provisions of the treaty are stricter than the Latin American NWFZ treaty, in that they prohibit the testing of nuclear explosives even for peaceful purposes. The Tlatelolco treaty, allows for so-called peaceful nuclear explosions (Adeniji, 2002, 20; Goldblat, 2002, 203).

The efforts to establish the Southeast Asian NWFZ, which had its origins in the early 1970s, gained momentum only after the US withdrawal from its military bases in the Philippines in 1992. The Southeast Asian NWFZ came into being by the Bangkok treaty in December 1995. While deploying stockpiling of nuclear weapons is prohibited, it allows for state parties to decide to allow for transit of nuclear weapons, if they are ‘notified’ of the presence of such weapons under transit (Goldblat, 2002, 206). The NWS have not signed the protocol to this treaty committing them not to threaten to use nuclear weapons against state parties. The US in 1996 informed the Association of Southeast Asian Nations (ASEAN) that it will not sign the Protocol as it cannot extend such negative security assurances to those countries (like DPRK for instance) which are not bound by the same treaty obligations (Abad, 2005, 185).

The 1996 Treaty of Pelindaba, which established the African NWFZ, had its genesis in the French nuclear tests in the 1960s, conducted in the Sahara Desert (Adeniji, 2002, 35-37). South Africa’s activities relating to the pursuit of nuclear weapons, and Cold War dynamics, delayed the coming to fruition of the African NWFZ. South Africa, for instance, was accused of preparing to test nuclear explosives by the Soviet Union during the 1970s (Moore, 1987, 111-115). The country also had robust strategic cooperation with Israel, pertaining to the exchange of nuclear raw materials and missile technology. The 1979 incident in which a US Vela satellite captured a ‘double flash’ light characteristic of a nuclear explosion off the South African coast, is widely speculated to be an Israeli nuclear weapon test, with South African support (Melman, 2009; Hones et al, 1981; Purkitt, Burgess and Lieberman, 2002, 188).

When South Africa joined the NPT in 1991 after disclosing that it had in its possession a few assembled nuclear weapons, the dream of an African NWFZ was finally realised. The reasons underpinning the nuclear roll-back decision of the South African government included the need to re-join the international community after the Cold War (Ihonvbere, 1998, 106-107). The Pelindaba Treaty, unlike the Tlatelolco or the Bangkok or South Pacific treaties, has prohibitions against mounting armed attacks on nuclear establishments, the discarding of radioactive waste in the zone and research on nuclear explosive devices (Goldblat, 2002, 209; 218).

The five Central Asian states — Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, in February 1997 declared a NWFZ. Proposals to establish a NWFZ in South Asia have not succeeded as India objects to the concept, proposed by Pakistan. India specifically notes that the concept ignores the regional security dynamics, given that it borders nuclear-



armed China (Goldblat, 2002, 215). Some of the issues that constrain durable nuclear arms control between India and Pakistan include differing focus on nuclear disarmament – with India preferring global disarmament while Pakistan prefers regional disarmament, and lack of focus by both of them on mutual nuclear restraint measures (Lavoy, 1996, 272-282).

### ***WMD Proliferation in West Asia***

Israel's political leaders have viewed nuclear weapons as critical instruments safe-guarding its security, in the face of threats to its existence from Arab states (Hersh, 1991, 22-23). While the Dimona reactor became operational in 1960, Israel has long held that it would not be the first country to introduce nuclear weapons into the region, while insisting that it could not afford to be the second either to do so (Dowty, 1978, 83). Israel has also insisted that it would prevent attempts by inimical states to acquire such weapons (Jones et al., 1998, 206). Its preventive attacks against regional nuclear infrastructure, be it Iraq in 1981, Syria in 2007 and various covert measures against Iran since at least 2010 — including computer viruses that targeted Iran's centrifuges and the killing of key nuclear scientists, is testimony to this policy. Analysts note that the above nuclear policy positions of Israel make it the "ideal type" of opaque proliferator, especially so since Israel has not conducted any acknowledged nuclear tests (Cohen and Frankel, 1991).

The Arab and North African countries also pursued nuclear programmes in order to counter Israel's nuclear monopoly (Ehteshami, 1989, 34). While Egypt established its atomic energy commission (AEC) in 1955, Iraq established its AEC in 1958, almost at the same time as Iran. Iraq in 1976 signed a contract with France for the 70 MWe Tammuz 1 reactor located at Osiraq, which was subsequently destroyed in the Israeli raid in 1981 (Spector, 1984, 166). For Saddam Hussein, Iran was as much a threat in the WMD domain as were Israeli capabilities in this regard (Feldman, 1997, 135).

After Iraq's August 1990 invasion of Kuwait, Iraq's WMD infrastructure was the subject of international attention. Given that Hussein had used ballistic missiles during the Kuwait war against targets in Israel and Saudi Arabia, the UNSC established the UN Special Commission (UNSCOM) in April 1991 to examine and destroy Iraq's capabilities in this regard. UNSCOM inspections revealed that Iraq was pursuing covert nuclear activities in undeclared facilities (Pilat, 1992, 1225). UNSCOM inspections strengthened the belief, among regional countries, that a self-reliant deterrent posture was a better security guarantee than a global or a regional disarmament regime (Zanders, 1995, 105). The 2003 US-led invasion of Iraq, mounted to

neutralise its alleged WMD capabilities, did not result in any significant find of Iraqi WMD activities.

While Iraq had become a lesser nuclear non-proliferation problem after the UNSCOM inspections in the 1990s, Iran was seen as still committed to regional hegemony. Its pursuit of ballistic missiles and nuclear ambitions were seen as extremely destabilizing to regional stability (Cohen, 1995, 51-52; Levi and O'Hanlon, 2005, 105-108). Iran re-starting its Natanz enrichment activities in February 2003 coincided with the withdrawal of North Korea from the NPT and the imminent invasion of Iraq by the US (El-Baradei, 2011, 113).

Libya's AEC was established in 1973, and the country sought nuclear technology from the Soviet Union and China (Ehteshami, 1989, 131). Libya also approached India for help in acquiring nuclear expertise (Ibid, 132; Spector, 1984, 155). The Libyan leader, Muammar Qadhafi, famously stated that the Arabs must possess nuclear weapons in order to "liberate Palestine" (Ehteshami, 1989, 133). Libya secured at least 20 complete centrifuges from the A.Q. Khan network, which former head of the IAEA, Mohammed El-Baradei, termed a 'nuclear walmart' (El-Baradei, 2011, 168). El-Baradei states that Khan had made it his life's mission to establish nuclear parity with Israel for the Muslim states of West Asia (El-Baradei, 2011, 178). Libya, though, dramatically announced in December 2003 that it was dismantling its WMD programmes.

As for Egypt, even if it established its AEC in 1955, it did not make strong national efforts in its nuclear pursuits. It instead became a strong proponent of regional arms control, participated in the NPT negotiations, and ratified it in 1981 (Wunderlich et al, 2013, 249). For Egypt, over and above the Israeli nuclear arsenal, the proliferation of WMD in the region was seen as a greater security threat (Feldman, 1997, 125-126). President Hosni Mubarak in 1993 was cited as stating that a nuclear weapons-capable Iran was a "great danger" to the world (Wunderlich et al, 2013, 251). Cairo, meanwhile, has not signed the CWC. It has signed the BWC but has not yet ratified it. It made its cooperation in the BWC and CWC field contingent on Israel signing the NPT (Foran, 1996, 188; Wunderlich et al, 2013, 249).

Iran's nuclear motivations, meanwhile, have ranged from security concerns to securing regional status and prestige to providing domestic legitimacy to the clerical government (Wunderlich et al, 2013, 265; Chubin, 2006, 12). Iran's nuclear activities since 2002 have led to strong international concerns and increased IAEA and UNSC scrutiny. Iran has been under UNSC sanctions as well as US and European Union (EU) sanctions over its nuclear policies,

specifically its uranium enrichment activities, during 2006-2015. These sanctions primarily targeted the country's energy sector, a key revenue earner, to force it to change its nuclear policies.

Negotiations since 2006 between Iran and its interlocutors (made up of the UNSC permanent members and Germany, termed the P5+1) resulted in the Joint Comprehensive Plan of Action (JCPOA), in July 2015. Iran agreed to stringent restrictions on its nuclear programme, while the multi-lateral UNSC sanctions were removed and unilateral sanctions targeting its key economic sectors were waived. The Trump administration in May 2018 decided to unilaterally withdraw from the multi-laterally negotiated agreement, leading to rise in regional tensions and Iran renegeing on some of its JCPOA restrictions.

Iran on its part has consistently criticized what it terms as 'double standards' in the treatment of its nuclear programme, in terms of the enhanced international scrutiny, vis-à-vis regional states like Israel (Wunderlich et al, 2013, 269). Saudi Arabia, meanwhile, has viewed the growth in Iranian nuclear capabilities, with concern. When Iran began to renege on some of its commitments after the US withdrawal from the JCPOA in May 2018, Saudi officials insisted that they would have no hesitation in pursuing a military nuclear capability if Iran continued its nuclear march (Wintour, 2018; Reif, 2018).

The pursuit of WMD capabilities (including biological and chemical weapons) has also been a significant feature of West Asian strategic history. Chemical weapons were used by Egypt in the 1960s in the Yemen conflict, while Iraq used chemical weapons during the Iran-Iraq War. Such capabilities to varying degrees were also pursued by Libya and Syria. Syria's pursuit of chemical weapons capabilities since the 1970s was linked to the need to develop a strategic parity with Israel, and to contain it within the 1967 borders (Jouejati, 2006, 66). By 1985, Syria had significant capabilities relating to chemical weapons, including ballistic missiles tipped with chemical warheads (Hashim, 2006, 75). While regional security dilemmas drove such pursuits, they negatively impacted regional strategic stability. While most states in West Asia are members of the BWC and CWC, some key states like Egypt, for instance, have insisted on the linkage between Israel acceding to the NPT to their signing regimes like the CWC (Littlewood, 2004, 31-33).

### ***West Asia and Nuclear Arms Control***

A regional NWFZ agreement strengthens the norm against acquiring such weapons and contains a legal prohibition on the possession or testing of such weapons. Analysts point out

that such an agreement does require states, which might be regional political competitors, to agree on fundamental security matters, which may not be possible in volatile states of the West Asian or South Asian region (Greenwood, Feiveson and Taylor, 1977, 64). Regional conflicts have played a crucial role in fostering security deficit in West Asia and vice versa. During 1947-88, for instance, the West Asian region witnessed over 20 inter-state conflicts (Ehteshami, 1989, 57).

Prime Minister David Ben-Gurion told the Knesset in December 1960 that Israel had proposed regional disarmament to Arab states, with mutual inspections and guarantees (Jabber, 1971, 122). This was after the presence of the Dimona nuclear reactor was acknowledged. Ben-Gurion rejected the idea of a regional NWFZ until conventional disarmament was achieved, given quantitative Arab conventional superiority (Spector, 1984, 122; Pajak, 1982, 33). Israel also supported the process adopted by the Latin American region to create a NWFZ, and preferred the convening of a conference of regional states in West Asia to discuss the issue (Becker, 1986, 127). Domestically, an Israel Committee for a Nuclear Free Zone was established in 1960, which functioned till 1963 (Inbar, 1986, 62).

Establishing a NWFZ in West Asia, which includes Israel as part of that zone, was, however, essentially about Israel agreeing to abolish its un-acknowledged nuclear deterrent. Analysts note that, no Israeli government will ever agree to a dismantling of this capability, given that Israel's nuclear arsenal was a "sacred matter of national survival" (Cohen 1995, 58-60). Other analysts, however, point out that the Arab acceptance of a NWFZ proposal which includes Israel, would have amounted to an explicit diplomatic recognition of Israel, which the Arab countries were not willing to do unless the Palestinian issue got resolved (Ehteshami, 1989, 147). The Arab states, on their part, insist that comprehensive peace and stability can only be achieved if Israel signs the NPT and applies IAEA safeguards on its nuclear facilities (Hoppe, 2004, 18).

The 1990 UN study on effective and verifiable measures to establish a West Asian NWFZ suggested that NWFZ efforts must be preceded by regional confidence-building measures. The efforts to establish a NWFZ in West Asia, therefore, for some analysts, could not take place prior to the conclusion of the Arab-Israeli peace process (Goldblat, 2002, 215). The Iraqi and the North Korean examples during the 1990s - when they were found to be pursuing covert nuclear activities despite being under IAEA safeguards, confirmed to Israel its belief in the inadequacy of the safeguards system of the IAEA, given that as long as states declared their

nuclear activities, the IAEA allowed them to acquire nuclear technologies (Cohen, 1995, 52; Steinberg, 1995, 71).

During the 1990s, trends towards reconciliation and moderation, like the Madrid peace talks and the defeat of Arab radicalism in the Gulf — after Saddam Hussein's comprehensive defeat in the Kuwait War, led to optimism about regional arms control success. Concern over nuclear proliferation was one of the biggest motivating factors for Israel's political leadership, especially Prime Minister Yitzhak Rabin, to engage in regional peace talks, in Madrid and in the ACRS process (Cohen, 1995, 54). The Working Group on ACRS talks were an important intervention in the field of regional arms control. Failure to agree on the modalities of discussions regarding the West Asian NWFZ derailed the ACRS Group. Disagreements were especially sharp between Israel and Egypt on Israel's NPT non-accession as well the Israeli insistence on the linkage between establishment of a NWFZ and realisation of a comprehensive peace in the region. Egypt has long argued that Israel's NPT non-membership provided justification for other regional countries to pursue nuclear or other WMD programmes (Steinberg, 1996, 18; Landau, 2006, 133-134; Solingen, 2006, 236-237).

While Syria did not participate in the ACRS talks, the other two critical West Asian states with WMD aspirations/concerns, Iran and Iraq, were not invited (Cohen 1995, 58). Apart from such multi-lateral arms control initiatives, analysts have also called for bilateral agreements between countries like Iran and Iraq, modelled on the agreements between Argentina and Brazil, as a step towards regional nuclear confidence-building (Ibid, 53). The coming to fruition of such mechanisms, however, in the West Asian context, has not materialized.

The indefinite extension of the NPT in 1995 at the Rev Con, which also passed a resolution on the desirability of the West Asian NWFZ, was seen as being in tune with Israel's national security goals, given that it was the main framework of the global and regional non-proliferation regime (Steinberg, 1995, 73). The UN Disarmament Commission in 1999 recommended that a NWFZ should be established on the basis of negotiations among the states of a particular region and include effective verification measures. The Commission admitted that there could no uniform pattern of denuclearised zones, given the unique strategic considerations of each geographical zone (Goldblat, 2002, 197-198).

After the 2003 US-led invasion of Iraq, when no WMD were found, Israel's strategic situation improved considerably, as it was always worried about Saddam Hussein's pursuit of WMD (Cohen, 2006, 41). Hussein, for instance, had targeted Israeli territory with Scud ballistic

missiles during the Kuwait War. Cohen notes that Libya's decision to give up its WMD programmes in 2003 was also a "net gain" for Israel as the Libyan programme was always considered a threat (Ibid, 43).

At the 2010 NPT Rev Con, the Final Document reiterated the 1995 West Asia resolution on the NWFZ and called for an international conference to discuss the issue. Egypt, as the chair of NAM and the New Agenda Coalition group of countries at the 2010 Rev Con, played an important role at this Rev Con (Wunderlich et al, 2013, 251). While regional NWFZ proposals have not seen much success, Saudi analysts like Prince Turki Al Faisal have even called for the establishment of "sub-regional zones with mutual verification arrangements" (Al Faisal, 2013).

While the Saudi Prince does highlight the Israeli nuclear arsenal, it is significant to note that his main concern stems from the dangers associated with Iranian intentions. Even so, analysts note that Israel's nuclear status was a 'staggering double standard' in the way the international community treated regional WMD programmes and that Israel not pursuing NWFZ negotiations with the Arab states, in a regional or multi-lateral framework, led to their own WMD programs (El-Baradei, 2011, 222-224). The geo-political turmoil that the region underwent beginning in 2011 further pushed non-proliferation CBM's like NWFZ to the background, with regime security and state survival gaining prominence. The 2015 NPT Rev Con and the 2017 Treaty on the Prohibition of Nuclear Weapons (TPNW), meanwhile, reaffirmed the importance of NWFZs for building regional peace and security.

### ***Missile Proliferation in West Asia***

Israel confronted a missile threat from the 1960s, primarily from Egypt. Cairo's pursuit of missile capabilities did not succeed due to mismanagement and the targeting of key scientists by Israel. The Condor missile project that Egypt was pursuing with Argentina in the 1980s meanwhile was abandoned due to opposition from the US (Karp, 1995, 116). Israel sabotaged collaboration between Germany and Egypt in the missile field but went on to collaborate with France for its own missile programme, beginning 1966. Israel is believed to have paid more than US\$100 million to the privately-owned French company Dassault for help on the Jericho missiles (Hersh, 1991, 120).

The Iran-Iraq War brought to stark attention the death and destruction that can be caused by these delivery systems. Iran started developing its missile capabilities in the face of the missile onslaught it had to endure at the end of its eight year war with Iraq (Chubin, 1994, 21-22).

Missile strikes by Saddam Hussein on Israel and Saudi Arabia during the Kuwait War pushed ballistic missile proliferation firmly onto the regional security agenda (Karp, 1995, 111).

Iran, Libya and Syria depended on Soviet-sourced conventional equipment and lacked resources to modernise their forces. Ballistic missiles, therefore, was one of the options pursued to acquire useful military power. Missile capability was seen as a more economical way to buttress the strength of the ruling regimes, in the face of a strong US force presence in the region and huge spending on defence by their regional competitors. One study noted that after the end of the Iran-Iraq War, the Gulf Cooperation Council (GCC) member countries spent over US\$400 billion on defence, over the next two decades. In comparison, Iran could only spend about US\$50 billion (Cordesman and Seitz, 2009, 38).

Ballistic missiles were dangerous precisely because there was not an effective defence against them, and the psychological impact of their use far exceeded their military value. During the Kuwait War, for instance, while Saddam's Scuds caused a loss of about 30 lives cumulatively, their use against targets in Israel and Saudi Arabia led to a huge impact regionally (Husbands, 1996, 239). The pursuit of missile technologies also had a critical domestic component, as they were seen as symbols of state power, and hence, provide legitimacy to the ruling elites (Karp, 1995, 115-116).

Iran was dependent on countries like North Korea, China and the Soviet Union for technical assistance for its missile programmes. Tehran purchased around 200-300 Scud-Bs as well as longer range Scud-Cs, from North Korea (Karp, 1995, 117). Russia provided Iran with guidance technology for its missiles while China built facilities for production of liquid and solid fuels to power its missiles (Katzman, 2003, 81; Venter, 2005, 210). Libya collaborated with West Germany in developing missiles in the 1980s and acquired Scud-Bs from the Soviet Union as well (Karp, 1995, 119). Karp, writing in the mid-1990s, terms Saudi Arabia the region's 'most contended missile power' (Ibid). Pointing out that the Scud-family of missiles were well suited to the semi-industrial capabilities of most of the countries of the region, Karp notes that export controls will remain essential to limit proliferation of ballistic missile technology, in the absence of any comprehensive peace agreements or arms control initiatives (Ibid, 121).

Mistry, in *Containing missile proliferation* (2003) brings attention to the missile programmes of major regional powers in West Asia, including Egypt, Syria, Iraq, Israel and Iran. He notes that the 1987 Missile Technology Control Regime (MTCR), has had a mixed record. It did help

in thwarting the missile programmes of countries like Egypt and Syria but Iran and Israel (apart from Pakistan, India and North Korea globally), were not constrained. Technological embargoes like the MTCR did not prevent ‘technologically weak’ states like Iran to make gains in their missile programmes while it did prevent missile progress in ‘technologically very weak’ states like Libya (Mistry, 2003, 4-5).

The MTCR is seen as a classic example of arms control, based on denial of technology to others. In that sense, it is seen as discriminatory and limited in scope (Husbands, 1996, 241). The MTCR, however, had a unidimensional, technology-specific orientation, while other regimes like the NPT or the chemical and biological weapons non-proliferation regimes had both legal and political components, apart from technological dimensions (Mistry, 2003, 182).

### **Definition, Scope, and Rationale of the Study**

As the review of literature indicates, the West Asian region has significant territorial, political and historical disputes and resultant security deficit. Israel’s conflict with the Palestinians is categorised as a “protracted social conflict” (Azar et al, 1978). Israel, the sole nuclear weapon country of the region, is not recognized by the majority of the states of the West Asian region, apart from Egypt, Jordan and the UAE and Bahrain in 2020. The schism between Iran and Saudi Arabia has only grown wider since 1979. Both the countries are at the opposite end of the divide in regional hot spots ranging from Syria to Yemen. The US-Iran as well as Israel-Iran contentions have intensified since the 1979 Islamic Revolution. Israel highlights the lack of trust implicit in the unresolved conflicts of the region as a major stumbling block as regards regional nuclear arms control.

External powers have significant interests in the region, including military bases, which more often than not exacerbates rather than addresses the strategic divide. These external great powers also continue to supply sophisticated conventional armaments, including fighter aircraft, main battle tanks, and anti-ballistic missile systems, among others. Military interventions — like the 2003 US-led invasion of Iraq, have led to enormous loss of lives and material, not only for the countries of the region but also for those who engaged in such interventions.

The issues highlighted in the literature review clearly indicate the difficulties that have thwarted the effort pertaining to the creation of a West Asian NWFZ. Israel’s nuclear capabilities were the prime motivating factor for its regional rivals — primarily Egypt and Iran, beginning from 1974, to pursue multi-lateral efforts to establish the NWFZ. This was one method pursued by



them to constrain the perceived danger flowing from Israel's nuclear efforts. Israel's regional rivals also pursued conventional (ballistic missiles) and non-conventional capabilities (chemical and biological weapons) in order to offset their perceived security deficit.

Apart from the focus on the Israeli nuclear arsenal, the negative impact of conventional as well as non-conventional pursuits by regional countries on region-wide CBM's like the NWFZ, it is contended, needs to be sufficiently explored. This is especially because such pursuits, like that of Iraq or Libya, had nothing to do with the Israeli nuclear capability but more to do with issues of legitimacy, prestige or to counter more immediate regional rivals like Iran.

The study places in a historical perspective the key hurdles that have thwarted multi-lateral efforts to establish a NWFZ in West Asia. For purposes of the study, 'regional security deficit' is defined primarily as a function of multiple protracted conflicts stemming from regional rivalries. The study examines the manner in which this security deficit gets reinforced and exacerbated by the conventional and non-conventional pursuits of the countries of the region, and their impact on the pursuit of region nuclear arms control measures like the NWFZ.

The key hurdles which militated against the NWFZ in West Asia are identified as the Israeli nuclear arsenal, pursuit of conventional and non-conventional capabilities by key regional countries (primarily Egypt, Iraq, Syria and Libya) and the ascendance of concerns regarding the Iranian nuclear programme since 2002. Concerns over Iranian nuclear programme led to two mutually reinforcing developments. Diplomatic efforts advocating the NWFZ at forums like the NPT Rev Con got accentuated. At the same time, regional non-proliferation concerns regarding WMD possession, focused solely on Israel's nuclear status till then, shifted to Iran's nuclear intentions. Geo-political dynamics associated with the Iran-GCC conflictual interactions amplified such concerns, even as Israel-GCC interactions took a positive turn at the same time.

The impact of this significant shift in regional concerns as well as the possible implications of the 2015 Iranian nuclear deal on region-wide nuclear arms control measures like the West Asian NWFZ, is not sufficiently explored in the existing literature. The JCPOA represented a multi-lateral solution pertaining to a decade-long non-proliferation problem. As noted in the literature review, Israel, a NPT non-signatory, insists on the need for a robust verification mechanism for the success of any such efforts in a region with serious security deficits. Israel specifically cites the historical examples of Iraq, Iran and Syria, as nations which are NPT signatories but which carried out covert activities. The JCPOA contained significant provisions

to ensure Iran's compliance with its nuclear commitments. Some of these provisions, as will be explored in the relevant chapter in detail, were even stricter than those required for NPT signatories. This research explores the applicability of the provisions of the JCPOA for region-wide confidence-building measures like the NWFZ.

Apart from the promise of such multi-lateral solutions which pertains to a more than a decade-long non-proliferation problem, February 2017 marked the 50<sup>th</sup> anniversary of the establishment of the Latin American NWFZ, the world's very first such zone. The TPNW was signed in July 2017. As of December 2020, 86 states have signed the treaty and over 50 of those states have also ratified it. None of the NWS though have signed the treaty. The UN also declared the decade 2010-2020 as the "UN Decade for Disarmament".

Nuclear arms control between the US and Russia, meanwhile, is crumbling. The US formally withdrew from the 1987 Intermediate-Range Nuclear Forces (INF) Treaty in August 2019. A month prior to the American withdrawal, Russia had suspended its compliance with the treaty. The only nuclear arms control mechanism between the two nuclear superpowers currently is the 2010 New START, which will expire in February 2021. The Peoples Republic of China has not shown an inclination to engage in arms control negotiations with the US and Russia, either bilaterally or trilaterally, insisting that these two countries bear the primary responsibility to reduce their nuclear arsenals, given that they control close to 90 per cent of the world's total nuclear weapons.

In the light of the above developments in the non-proliferation/disarmament field, this study places in a historical perspective the reasons that have thwarted the efforts to establish a West Asian NWFZ— one of the earliest nuclear arms control proposals pertaining to India's 'proximate neighbourhood'.

### **Research Questions**

1. What factors contributed to the establishment of the existing multi-lateral NWFZ's in Latin America, Southeast Asia, Africa and South Pacific?
2. What have been the efforts to establish the long-pursued goal of the NWFZ in West Asia?
3. What factors have impeded the establishment of the NWFZ in West Asia?
4. What is the potential of the JCPOA to contribute to region-wide non-proliferation and disarmament CBM's?

## **Hypotheses**

1. Regional security deficit, stemming from multiple protracted conflicts on account of unresolved political issues, has thwarted efforts to establish a West Asian NWFZ.
2. The pursuit of sophisticated conventional as well as non-conventional capabilities by regional countries has reinforced as well as exacerbated the prevailing security deficit.

## **Research Methodology**

The study integrates the above indicated dependent (NWFZ), independent (regional security deficit stemming from multiple protracted conflicts) and intervening variables (pursuit of conventional and non-conventional capabilities) to put forward a multi-causal explanation that seeks to account for the lack of success as regards the efforts to establish regional non-proliferation CBM's like the NWFZ. It is the contention of this study that while the framework put forward would provide a 'rich' explanation for the subject, it can be equally useful to explain the lack of success of similar such CBM's in other conflict hot-spots as well.

The study is analytical in nature and is empirically grounded, based on both primary and secondary sources. Primary sources that have been consulted include UN, IAEA and NPT documents as well as official statements of officials of the countries of the region, while the rich literature pertaining to the subject in the form of books, monographs and peer-reviewed articles has also been consulted.

## **Chapterisation**

The first chapter, 'Historical Background', places in perspective the failure of efforts, dating back to 1974, to establish a West Asian NWFZ. UNGA resolutions on the issue have been regularly passed, even without a vote, since the 1980s. Regional efforts like the ACRS Group, also wound down rather quickly. At the 1995 NPT Rev Con, the treaty was extended indefinitely primarily on the back of support from West Asian states who were promised renewed efforts to establish the NWFZ in the region. While these efforts did not fructify, the 2003 US invasion of Iraq was undertaken solely to neutralise alleged Iraqi WMD capabilities. The Iranian nuclear issue, since 2002, became the dominant regional WMD issues of concern. The chapter reviews relevant literature, to bring to attention key aspects of the above issues. Based on the review of literature, the chapter puts forth the proposition that regional security deficit, stemming from protracted conflicts, and aided and abetted by the pursuit of conventional as well as non-conventional responses by antagonists, has stymied nuclear arms

control efforts in West Asia. The literature review specifically highlights the fact that the impact of the ascendance of Iranian nuclear concerns on regional nuclear arms control has not been sufficiently explored. The chapter states the rationale and justification for the study, in the light of the 50<sup>th</sup> anniversary (in February 2017) of the Tlatelolco treaty and the 2017 TPNW.

The second chapter on ‘Nuclear Weapon Free Zones: Historical Overview’ examines the successful multi-lateral efforts that led to the establishment of such zones in Latin America, the South Pacific, Southeast Asia and Africa. It points out the Cold War dynamics that impinged on the efforts of regional countries to establish such zones, primarily relating to the nuclear testing activities of France, the US and UK, in places as varied as the South Pacific and Africa. Even if there was initial support for the formation of NWFZ in respective geographical zones, the delay in entry into force of most of these zones point to the difficulties in overcoming mutual suspicions and contentions. The chapter highlights the interactions of the nuclear weapon states with these treaties and brings to attention the fact that the US has still not signed or ratified three out of the four major NWFZs. The chapter briefly highlights other successful efforts like the Central Asian NWFZ, the Mongolian move to unilaterally declare its territory as a NWFZ and notes the lack of success in efforts relating to a South Asian NWFZ.

The third chapter on ‘Israel and Nuclear Weapons’ traces Israel’s nuclear journey and the varied responses it generated regionally. It places in perspective Israel’s doctrinal positions on nuclear issues. These relate to its nuclear policy positions at regional and/or multi-lateral fora like the UNGA, ACRS, the IAEA, Israel’s positions vis-à-vis the NPT, as well as Israel’s positions on the BWC and the CWC. The chapter brings attention to Israel’s policy of prevention, as exemplified by its military attacks on the Iraqi reactor at Osiraq in 1981 and the Syrian reactor at Al Kibar in 2007. The chapter then examines the Israeli responses to the concerns associated with the Iranian nuclear programme.

The fourth chapter on ‘Regional Non-Conventional Capabilities’ examines regional WMD capabilities and concerns. These include primarily Iraq’s pursuit of WMD capabilities, as well as their use in conflict situations. The chapter highlights the 2003 US-led invasion whose primary aim was to set back alleged Iraqi WMD capabilities. Libya’s WMD aspirations did not quite materialise, and culminated in Qadhafi’s radical decision to denuclearise in 2003. The pursuit of chemical and biological weapons capabilities have been an essential part of the regional strategic story. These non-conventional pursuits and the responses they generated by

extra-territorial super powers were additional hurdles that have posed challenges to the efforts to realize the NWFZ in West Asia.

The fifth chapter on 'Regional Conventional Capabilities' notes that asymmetries in conventional capabilities have been a prime motivator in spurring non-conventional efforts of the countries of West Asia. The chapter places in perspective some of the significant efforts undertaken to overcome perceived conventional deficiencies, including the significant pursuits of ballistic missile capabilities by countries as varied as Iran, Israel, Saudi Arabia, Egypt, Syria. These pursuits generated responses from the US, primarily to establish a regional missile defence shield. The chapter highlights pertinent aspects relating to these US efforts. Apart from the development of ballistic missile capabilities, regional countries have historically been significant recipients of massive arms transfers from countries like the US, Russia and China. The chapter brings attention to the fact that the extra-territorial military presence of these countries has also exacerbated regional security deficit.

The sixth chapter on 'Iranian Nuclear Issue' examines the responses and ramifications posed by concerns emanating from Iranian nuclear efforts, most prominently since August 2002. Iran came under unilateral (US, EU) and multi-lateral (UNSC) sanctions, as it failed to adequately address the queries raised by the IAEA. Multi-lateral negotiations to find solutions began from 2003 onwards but could only eventually succeed in 2015. This was after the coming to power of President Hassan Rouhani in Iran and the policy of engagement and pressure followed by the Barack Obama administration. The 2015 JCPOA however came under threat after the Donald Trump administration came to power in 2017, with clearly stated its intentions to roll back the signature foreign policy achievement of the Obama administration. The chapter examines the impact and implications of the Trump administration's subsequent withdrawal in May 2018, which has added to the regional strategic uncertainties. As the Iran nuclear issue dominated regional strategic discourse, it impacted the pursuit of regional CBM's like the NWFZ. The chapter brings to attention regional reactions to the Iranian nuclear concerns.

The seventh chapter on 'Pre-Conditions for a Successful NWFZ in West Asia' highlights the essential need of West Asian countries (as well as those in the extended neighbourhood like Turkey), to bridge their trust deficit on issues relating to civil nuclear energy pursuit, the possibility of CBMs relating to ballistic missiles, and of replicating the restrictions imposed on Iran as part of the JCPOA by other regional countries as a CBM. It examines the impact of the evolving regional geo-political situation on Israel's security choices, including on its nuclear

status. The chapter brings to attention that positive movement on any of these issues can assist in the creation of conditions that could ensure forward movement on the West Asia WMDFZ. The chapter ends by examining the current nature of global WMD arms control and its likely impact on the West Asian WMDFZ.

The eight chapter, 'Conclusions', summarises the main findings of the research and tests the hypotheses.

## CHAPTER TWO

### **Nuclear Weapon Free Zones: Historical Overview**

The chapter places in perspective the successful efforts that culminated in the establishment of the four major geographically delineated nuclear weapon free zones (NWFZ). The chapter traces the historical context and the drivers behind the Latin American NWFZ treaty, established in 1967. It then brings to attention the key drivers behind the South Pacific NWFZ treaty, which was established in 1985. These two NWFZs are significant in that they were established in spite of Cold War geo-political rivalry. The chapter then examines the processes that resulted in the African NWFZ treaty and the Southeast Asian NWFZ treaties, in June and December 1995 respectively. It ends by examining some of the key proposals for regional NWFZ that have not been successful, like the South Asian NWFZ proposal, mooted by Pakistan.

#### **Latin American NWFZ**

The Latin American NWFZ was the earliest successful effort to establish a region-wide zone free of nuclear weapons. Costa Rica first proposed a zone free of nuclear weapons, at a summit meeting of the Organisation for the American States (OAS) in 1958. The Joint Declaration on the Denuclearisation of Latin America was adopted by the Heads of State of five Latin American countries — Bolivia, Brazil, Chile, Ecuador, and Mexico, on 29 April 1963. This was just six months after the October 1962 Cuban missile crisis, which showcased to regional countries the dangers of nuclear war between the two super powers.<sup>1</sup>

Mexico and Brazil played a leading role in the issuing of this Joint Declaration. A key player driving Mexico's policy was Alfonso Garcia Robles, the country's Ambassador to Brazil. Robles was influenced by Brazil's support to the African NWFZ proposal, which was endorsed by the United Nations General Assembly (UNGA) in 1961 (Nuclear Threat Initiative, 2019).<sup>2</sup> Brazilian diplomat, Affonso Arinos De Mello Franco, at the UNGA in September 1962,

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<sup>1</sup> The Cuban missile crisis began as a result of the deployment of Soviet ballistic missiles inside Cuba, which triggered a naval blockade of the Communist country by the Kennedy administration. The Soviet missiles were deployed in order to prevent the repeat of the 1961 Bay of Pigs invasion involving US forces and Cuban exiles, which attempted to overthrow the Fidel Castro-led government, formed after the 1959 Cuban revolution. The blockade was removed by November 1962 after negotiations which involved the removal of Soviet IRBMs from Cuba and US IRBM's deployed in Turkey and Italy.

<sup>2</sup> The Nobel Peace Prize in 1982 was awarded to Robles for his pioneering efforts, along with Alva Myrdal, Sweden's leading disarmament activist.

expressed his country's principle support to the establishment of denuclearised zones in the world, including in Latin America (Correa, 2013, 221).

The UNGA adopted Resolution 1911 approving the idea on 27 November 1963, with 95 votes in favour and 15 countries abstained (United Nations General Assembly, 1963). There was no negative vote. Most of the abstentions were from the Eastern European countries, which were showing solidarity with the position of Cuba on the proposed zone.<sup>3</sup> Cuba insisted that the proposal for a denuclearised zone in Latin America should include denuclearisation of the US (UN Office for Disarmament Affairs, 1967, 538-539).<sup>4</sup>

Negotiations to achieve the aims of the 1963 Joint Declaration began in Mexico City in 1964, under the aegis of a committee termed the Preparatory Commission for the Denuclearisation of Latin America (COPREDAL) (Cobo, 1982, 56). The Tlatelolco Treaty, formally called The Treaty for the Prohibition of Nuclear Weapons in Latin America, opened for signature on 14 February 1967. The Agency for the Prohibition of Nuclear Weapons in Latin America (OPANAL), came into being in 1969, to oversee the implementation of the Treaty. Article 29 of the treaty required that such a mechanism will be set up as soon as at least eleven states signed the treaty.

The UNGA endorsed the Tlatelolco Treaty through its resolution 2286 on 5 December 1967 (United Nations General Assembly, 1967). The Tlatelolco Treaty came into being nearly two years before the Nuclear Non-Proliferation Treaty (NPT) opened for signature. Former Brazilian diplomat Sergio Duarte, who was the UN High Representative for Disarmament Affairs from 2007-2012 notes that the prior history of the Latin American region favouring multi-lateral 'legalist' arrangements in the security sphere helped them come to a common understanding on the negative impact of nuclear weapons possession.. An example of such cooperative security arrangements included the regional security pact with the United States, the Treaty of Rio de Janeiro, dating back to 1947. The absence of significant regional disputes, for Duarte, also definitely helped in the countries agreeing to the Tlatelolco treaty (Duarte, 2017).

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<sup>3</sup> Cuba was demanding US withdrawal from Guantanamo Naval Base, Cuban territory occupied by the US, an end to the "occupation" of Puerto Rico and Panama and the stationing of military assets on these two territories by the US, prior enforcement of the agreement by all Latin American states, among other conditions.

<sup>4</sup> Cuba signed the Treaty 27 years later in March 1995. It took another seven years for Cuba to ratify the treaty in October 2002, making it the last of the 33 Latin American and Caribbean states that did so. Cuba also acceded to the NPT in September 2002. (*Arms Control Today*, 2002a).



Among the significant treaty provisions include the commitment not to manufacture nuclear weapons and the pledge not to threaten their use or explode a nuclear device — specifically so on the part of the nuclear weapon states (NWS) which are parties to the treaty (OPANAL, 2002). OPANAL, the successor to COPREDAL, was established to oversee the implementation of the Tlatelolco Treaty, as per Article VII, with headquarters in Mexico City.

OPANAL has a General Council (the main decision making organ of the organisation made up of all the Contracting Parties which will meet once every two years), a Council (consisting of five members elected for a period of four years) and a Secretariat, the administrative organ of OPANAL headed by a Secretary-General. The first Secretary-General of OPANAL was the Ecuadorean diplomat Leopoldo Vinuesa. The Treaty stipulates that the Secretary-General cannot be a citizen of a country where the headquarters of the organisation is located. This ensures that no Mexican can head the administrative organ of OPANAL, despite Mexico and its Foreign Service officers playing a crucial part in the coming to fruition of the Treaty. All 33 Latin American and Caribbean countries which are parties to the Treaty are represented in OPANAL.

Each of the Contracting Parties is required to enter into safeguards agreements with the IAEA (Article XIII) and forward periodic reports of the IAEA to OPANAL regarding the status of their safeguards activities. The Tlatelolco Treaty was the first international treaty that acknowledged the role of the IAEA in international nuclear governance. The Treaty allows for the use of nuclear energy for economic development and does not prohibit the detonation of nuclear explosive devices for peaceful purposes (Article 18). Contracting parties have to inform the IAEA and OPANAL about the rationale and expected radioactive fallout as a result of such explosions and these explosions should not contradict Article 1 or Article V of the Treaty.

Article V defines a nuclear weapon as an uncontrolled nuclear explosive, “which is appropriate for use for warlike purposes”. In Article I, Parties pledge to use nuclear material exclusively for peaceful purposes. The Soviet Union insisted that peaceful nuclear explosives and explosions by nuclear weapons was almost indistinguishable as a country with capability to produce peaceful nuclear explosions has in effect the capability to produce nuclear weapons (UN Office for Disarmament Affairs, 1967, 542). Disputes will be referred to the International Court of Justice (ICJ), as per Article 25. The Treaty shall remain in force indefinitely.

NWS have had an interesting history vis-à-vis the Tlatelolco Treaty. The Treaty in Article 4 specifically excluded the application of its provisions to the “continental part of the territory of

the US and its territorial waters”. This was intended to remove apprehensions on the part of the US about the applicability of the treaty provisions to its nuclear forces. The treaty provisions do not impose any restrictions on the movement of ships or submarines or aircraft, which may have nuclear weapons on board. It is significant to note that even though the Tlatelolco Treaty allowed for peaceful nuclear explosions under certain strict conditions (in Article 18 as noted above), it prohibited nuclear explosives testing for weapons purposes, almost three decades before the 1996 Comprehensive Test Ban Treaty (CTBT).

The first additional protocol to the treaty requires extra-continental states possessing territories within the geographical limits of the treaty to abide by the provisions not to deploy nuclear weapons on these territories. France (French Guiana), the Netherlands (Dutch Caribbean), the United States (Puerto Rico, US Virgin Islands, American Samoa) and United Kingdom (Falkland Islands, Cayman Islands) have territories within the geographical zone encompassing the Treaty. All of these countries have signed the Additional Protocol I pledging not to test or deploy nuclear weapons on these territories as well. The United Kingdom (UK) signed the Protocol in December 1967 (ratified in December 1969), the Netherlands in March 1968 (ratified in July 1971), United States in May 1977 (ratified in November 1981) and France in March 1979. Though France signed this Additional Protocol I in 1979, it only ratified this protocol in August 1992, co-terminus with its accession to the NPT.

Additional Protocol II of the Treaty requires the NWS not to threaten contracting parties to the Treaty with nuclear weapons. The NWS have signed this Protocol, beginning with the UK in December 1967 (ratified in December 1969), the United States in May 1968 (ratified in May 1971), France in July 1973 (ratified in March 1974), China in August 1973 (ratified in June 1974), and the Soviet Union in May 1978 (ratified in January 1979) (Nuclear Threat Initiative, 2019; OPANAL, 2019).

While ratifying Additional Protocol II, the Soviet Union noted that it was doing so as it was consistent with its policy of supporting the creation of such NWFZs (International Atomic Energy Agency, 1978, 1-2). Moscow, however, explicitly stated its opposition to the treaty interpretation (as adopted by COPREDAL — the Preparatory Commission which negotiated the treaty and which was superseded by OPANAL) which left it to each State Party to grant permission to the transit of nuclear weapons belonging to countries which were not parties to the treaty. Moscow insisted that such permissions violated the essential characteristic of the treaty (Ibid, 2; UN Office for Disarmament Affairs, 1979).

During discussions at the First Committee on Disarmament at the UNGA in New York in October 1967 in the aftermath of the Treaty being opened for signature (in February of that year), the Soviet delegate highlighted that it never had colonial territories in the Latin American region, unlike countries like the US, and also pointed out that the Soviet Union was allied with the Latin American nations against the Fascists during the Second World War (UN Office of Disarmament Affairs, 1967, 545). The US representative on his part welcomed the initiative to create a NWFZ as it had originated from within the region and the zone will not negatively impact the “security balance” within the region (Ibid, 537).

The most prominent difficulty that the treaty had to face involving an NWS and a country from the region was the 1982 war between Argentina and the United Kingdom over the islands of Falklands/Malvinas. The islands, occupied by the British in 1883, were claimed by the South American nation as its territory. Argentina launched a military attack against the British military force stationed on the islands in March 1982, triggering a British military response. Buenos Aires accused London of not only deploying nuclear powered submarines but also nuclear weapons on board British ships in order to put Argentina under pressure (Musto, 2017). During the course of the conflict, a British nuclear powered submarine sunk an Argentine naval ship, with considerable loss of life, on 2 May 1982 (Freedman, 1989).

While the action against the Argentine naval ship (or any other military action during the conflict) did not involve nuclear weapons or an explicit threat to use them, a nuclear powered submarine did sink the Argentinian naval ship, leading to the death of over 300 sailors, a third of all casualties of the war on both sides. At the time of the conflict, Argentina had signed the Tlatelolco Treaty (it did so in September 1967) but had not yet ratified it (It did so in January 1994). Britain had ratified both Additional Protocol I and II of the treaty in December 1969, pledging not to threaten nuclear weapons use against State Parties.

The Latin American NWFZ predated the establishment of the 1968 NPT. The two prime movers behind the Tlatelolco Treaty, Brazil and Mexico, have been active in the field of nuclear non-proliferation and disarmament initiatives, since then. Brazil and Mexico are members of the New Agenda Coalition, also made up of Egypt, Ireland, New Zealand and South Africa. The Latin American NWFZ treaty led to mutually beneficial cooperative behaviour in the nuclear arena between Argentina and Brazil. Both countries for instance on 17 May 1980 signed the “Cooperation Agreement for the Development and Application of Peaceful Uses of Nuclear Energy”. Later, in 29 November 1985, the “Declaration of Iguazu” was signed,

wherein both countries reiterated their belief in the usefulness of nuclear energy to foster scientific and economic development. A year later, a “Joint Declaration of Nuclear Policy” was signed.

Argentina and Brazil pledged to develop nuclear energy solely for peaceful purposes, on 18 July 1991. In order to effectively verify these commitments, the Argentine-Brazil Agency for Accounting and Control of Nuclear Materials (ABACC) was created. A Quadripartite agreement was entered into in December 1991 by Argentina, Brazil, the IAEA and the ABACC for effective implementation of safeguards. The Commission of the ABACC carries out the work of the organisation. It is made up of four members, two each from Brazil and Argentina.

The cooperative treaty mechanisms in the nuclear sphere as noted above helped in ameliorating budding nuclear tensions between the two most important countries of the region. Argentina for instance by 1974 had acquired heavy water reactors and Brazil entered into a deal with West Germany in 1975 to acquire not just nuclear reactors but also reprocessing and a uranium enrichment plant (Newhouse, 1989, 271). Brazil’s military rulers also approved a secret nuclear programme, during which research into uranium enrichment activities were carried out (Nuclear Threat Initiative, 2015a). At the far end of the military regime (which ruled from 1964-1985), Brazilian authorities dug a site on the grounds of an Air Force military training ground to test a device, even though they did not have the required nuclear material to undertake the test (Reiss, 1995, 51).

Brazil had signed the Tlatelolco Treaty in May 1967. At the time of signing the treaty, Brazil’s declaration specifically highlighted treaty provisions (like Article 18), which allowed for peaceful nuclear explosions (UN Office for Disarmament Affairs, 1968). Brazil ratified the treaty a year later in 1968 but it did not enter into force covering its national territories till May 1994 (US State Department, 2001a). Even so, the fact that Brazil pursued a military nuclear programme was significant.

While the Tlatelolco Treaty was opened for signature in 1967, the Argentinian Senate only ratified the Treaty on 24 March 1993, the 25<sup>th</sup> country to have joined the treaty. Argentina subsequently signed the NPT in February 1995. Brazil followed Argentina and signed the NPT in 1998. Brazil had earlier signed its IAEA safeguards agreement on 4 March 1994. As pointed earlier, this was nearly three years after the Quadripartite agreement.

Despite the history of such cooperative behaviour that the Latin American region has witnessed in the nuclear arena, not just between the two most important countries of the region but

between them and international nuclear regulatory authorities like the IAEA, Brazil or Argentina's nuclear policy stances has in certain instances led to concerns whether they still had not given up their nuclear weapons ambitions. Brazil-IAEA contentions regarding access to a new enrichment facility it was building at Resende in April 2004 is pertinent in this regard. These contentions mirrored Iran's interactions with the IAEA over access to Natanz, among other places. Analysts noted that the plant being built upon completion would have the capacity to produce U-235 sufficient for more than 50 implosion-type nuclear devices by 2014 (Palmer and Milholin, 2004, 617).

Brazilian officials strongly contested such claims. Brazil insisted that the facility used novel enrichment technology (apparently 25 times more efficient than other existing technologies), and therefore had to be protected from industrial espionage (Kingstone, 2006). Brazil insisted it was not in a position to give access to IAEA inspectors to inspect it, as it was worried about losing its intellectual property rights over the technology (Ibid). The Resende uranium enrichment plant was built using technology developed by the Brazilian Navy for its programme to develop nuclear-propelled submarines (International Atomic Energy Agency, 2006a). Brazil was therefore not willing to let international inspectors see a proprietary military technology.

The uranium enrichment plant was eventually opened in May 2006 and production started in 2009, with about 700 kilograms of uranium enriched to 4 per cent produced during that year (World Nuclear Association, 2020). Additional enrichment cascades were added in August 2018 (INB, 2018). At its full capacity, the plant was expected to supply half of the fuel required for Brazil's currently operational two nuclear power plants, while work on a third nuclear power plant has been suspended since 2017 with nearly 70 per cent of work completed due to corruption scandals involving its construction. Over and above its argument for having an enrichment facility to supply fuel to its nuclear power plants, Brazil's stance has been that it holds nearly 300,000 tonnes of uranium (World Nuclear Association, 2020) and it made sense to have an advanced centrifuge enrichment programme to power its own needs as well as for purposes of export.

It is pertinent to highlight the US reaction to the issue of Brazil's reluctance to open up Resende to IAEA inspections. The US State Department spokesperson insisted that the Brazil case related to "inspector access" and "nobody should confuse it" with the Iran and North Korea case (Applegarth, 2013). Roger Noriega, US Assistant Secretary of State, insisted that the US

had “confidence that Brazil is a responsible actor” (Koik, 2013). US Secretary of State Colin Powell in October 2004 while visiting Brazil (when the controversy had not yet been resolved) held that “Brazil is a nation the US values as a close partner ...” (BBC, 2004a).

To be sure, Brazil has not been accused of similar indiscretions as Iran has been for its past activities of ‘failure to report’ nor has it been under UNSC sanctions. Brazil has also not desisted from informing the IAEA about the existence of the Resende plant, unlike Iran which held back from informing the IAEA about Natanz or Qom enrichment plants. However, it is pertinent that reports noted that a possible reason for Brazil’s reluctance to allow access to the IAEA was on account of concerns that such inspections could expose its past secret purchases relating to the uranium enrichment programme (*China Daily*, 2004). During the 1970s and 1980s for instance, when the country was under a military dictatorship and was pursuing a military nuclear programme, the person accused of selling secret uranium centrifuge blueprints (belonging to the European uranium enrichment consortium Urenco) to Iraq was found to be involved in selling the same to Brazil as well (Palmer and Milhollin, 2004).

When Brazil did eventually agree to IAEA inspections in October 2004, the IAEA was only given “restricted visual access” to pipes and valves of centrifuges. The IAEA spokesperson insisted that inspectors need not have “total access” as there were “strict visual criteria” to make sure that no nuclear material was being diverted (Kingstone, 2004). Further, Brazilian officials were cited as stating that they reached an agreement with the IAEA because the Agency was “no longer requesting total and unrestricted access” (Applegarth, 2013). Another key part of the solution was the IAEA’s acceptance of Brazil’s proposal on providing computer-generated drawings of the centrifuges instead of direct access.

Brazil meanwhile announced its nuclear-powered submarine plans in 2007, with the intention to have six operational nuclear-powered submarines, with the first submarine to be ready by 2023 (Thielman and Kelleher-Vergantini, 2013). France is actively involved in helping Brazil with its efforts, on the basis of a 2008 agreement to this effect. If successful, Brazil could become the first NPT non-nuclear weapon state (NNWS) to have nuclear-powered submarine. The NPT allows for exemption of safeguards for NNWS as regards nuclear material used for civilian purposes like in naval nuclear propulsion reactors. Analysts note that this right of NNWS to exempt nuclear material use in non-military activities from safeguards was argued by countries like Italy and the Netherlands, during the time of the drafting of the model comprehensive safeguards agreements with the IAEA (Shea, 2017, 6; Kaplow, 2017)

Analysts note that Brazil's justification for undertaking enrichment activities for the purposes of nuclear propulsion for its submarines is also employed by countries like Iran. One of the justifications for Iran's insistence on enriching uranium to beyond 20 per cent was it could be useful for employment in small nuclear reactors for propelling civilian submarines or ships (Thielman and Kelleher-Vergantini, 2013, 6). Iran's safeguards agreement with the IAEA, INFCIRC/214, allows for use of nuclear material in "a non-proscribed military activity", in Article 14 (a)(1) (International Atomic Energy Agency, 1974, 5). Naval nuclear propulsion for civilian purposes could in all probability be justified as falling under the category of a "non-proscribed military activity".

Argentina has also expressed an interest in naval nuclear propulsion. While Brazilian officials point out that their 1988 Constitution prohibits the pursuit of nuclear weapons among other factors as indicative of their non-nuclear intentions, Argentine officials are reportedly worried about Brazil's continuing opposition to the signing of the IAEA Additional Protocol (AP) (Hibbs, 2012). Brazil's view on the AP is that such an additional undertaking would add to the financial and manpower costs of a state like itself which is following international safeguards in good faith (International Atomic Energy Agency, 2013a). Further, as Hibbs notes, for countries like Argentina, the biggest obstacle for adhering to the AP is the difficulty in complying with the requirements of an expanded declaration, given their huge nuclear infrastructure (33 nuclear facilities under safeguards as of December 2012) (Hibbs, 2012). Brazil signed the Comprehensive Test Ban Treaty (CTBT) in 1996 and acceded to the NPT in May 1998. It was the first country to sign the Treaty on the Prohibition of Nuclear Weapons (TPNW), adopted by the UNGA in July 2017.

### **South Pacific NWFZ**

Efforts to create the South Pacific NWFZ, also called as the Treaty of Rarotonga, were led by New Zealand at the South Pacific Forum (SPF). In August 1975, New Zealand along with Fiji requested the United Nations Secretary-General to include an agenda item on a regional NWFZ in the South Pacific (Papadimitropoulos, 1988, 30). The UNGA subsequently adopted the said resolution in December 1975, with 110 countries voting in favour and 20 abstentions (Thakur, 1985, 219).

Even prior to the 1975 initiative, at the first meeting of the Forum when it was established in Wellington in August 1971, the leaders of Australia, New Zealand, Nauru, Western Samoa, Tonga, Fiji and Cook Islands expressed consternation at French atmospheric testing on the

Islands of French Polynesia, despite the partial test ban treaty (PTBT) of 1963 (Pacific Islands Forum Secretariat, 1971). The PTBT, negotiated by the US, the USSR and the United Kingdom, was not signed by France or by China.

The proposal for a Pacific NWFZ was later championed by Australia. The SPF meeting at Canberra in August 1983 urged the urgent creation of a NWFZ, as an effective instrument to put a stop to nuclear testing (Pacific Islands Forum Secretariat, 1983; Pacific Islands Forum Secretariat, 2018). The SPF, at its meeting held at Tuvalu on 27-28 August 1984, agreed on the need to establish a regional NWFZ at the earliest (Pacific Islands Forum Secretariat, 1984); (The SPF was renamed the Pacific Islands Forum in 2000). The Communique issued at the 1984 summit flagged the issue of environmental protection and the supreme sovereign right of South Pacific countries to control access to their ports and resources. The Communique also highlighted the importance of NPT membership, given that the NPT's Article VII encourages the formation of such regional zones.

The 1985 quinquennial review conference was also an important factor that weighed in on the efforts of SPF countries when they issued the communique in 1984. In the run up to the summit, a Forum delegation comprising representatives from Australia, New Zealand and Papua New Guinea visited Murarao Atoll, where the French conducted nuclear tests, in October 1983. This visit was facilitated by an invite from the French government. The mission highlighted the enormous environmental impact of French nuclear testing on the islands. It discovered that the concentrations of dangerous radio-active elements like plutonium-239 were at least four times higher in concentration than on continental France (Comprehensive Test Ban Treaty Organisation, 2020b).

A few months after the 14<sup>th</sup> summit meeting at Tuvalu, a Working Group report of the SPF (under the Chairmanship of Australian diplomat David Sadlier) submitted a report on a regional the NWFZ in November 1984. The Working Group accepted the Australian government's suggestion that the proposed treaty in the South Pacific should ban the stationing of nuclear weapons in the countries of the region, which treaties like the NPT do not. It was noted that West Germany for instance, had US nuclear weapons stationed on its soil though it was a member of the NPT (South Pacific Bureau for Economic Cooperation, 1984).

The Working Group deliberated on issues relating to the geographical scope of the proposed treaty, the issue of radio-active waste, nuclear weapons transit through the zone (which the Latin American NWFZ does not prohibit), among others. The Working Group also



recommended that there was no need for a permanent administrative mechanism to oversee the functioning of the proposed treaty, and suggested that the verification requirements of the treaty could be taken care of by the safeguards provisions of each state's agreements with the IAEA.

A year after the Tuvalu meeting, the Treaty of Rarotonga was signed on 6 August 1985 and entered into force on 1 December 1986. The Treaty has 13 members — Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu. There are seven Dialogue Partners to the Treaty of Rarotonga, which are Canada, the Peoples Republic of China, the European Union, Japan, South Korea, the United Kingdom and the United States.

The NWFZ primarily fructified on account of concerns faced by the countries of the zone due to not just French nuclear testing but also American and British nuclear testing in the region. The US on its part conducted over 60 nuclear tests in the Pacific Ocean between 1946 and 1962. The British conducted nuclear tests between 1952-1957 off the Australian coast, with the full knowledge and permission of Australian governments. The French nuclear testing (which involved nearly 200 atmospheric and underground tests) began in 1966 and continued till 1996. The French conducted their first nuclear test in the Algerian Sahara in 1960. France conducted a total of 14 nuclear tests in Algeria from 1960 till 1967 (Comprehensive Test Ban Treaty Organisation, 2020c).

France, along with the UK and the US, signed and ratified the Treaty of Rarotonga on 25 March 1996, at the headquarters of the SPF at Suva in Fiji, a decade after the Treaty came into being in August 1985. Australian Foreign Minister Alexander Downer welcomed the decision of the three NWS, given that the move will contribute to regional disarmament and non-proliferation objectives (Australian Minister for Foreign Affairs, 1996).

The Treaty of Rarotonga represented an evolution over the provisions of the Latin American NWFZ in that it forbade even the testing of the so-called peaceful nuclear explosives (PNEs), unlike the Treaty of Tlatelolco, which only forbade nuclear weapon tests (Adeniji, 2002, 20). The Tlatelolco Treaty allows for PNEs, as per Article 18, as long as parties to the Treaty notify OPANAL and the IAEA about the nature of the device being tested and the possible radioactive fallout.

In Article 3, the Treaty of Rarotonga explicitly forbade the testing of nuclear explosive devices. The Treaty in Article 4 allows for peaceful nuclear cooperation, but only to those NPT states under IAEA safeguards. In Article 7, the Treaty disallows the NWS to use the region as a

dumping ground for radio-active waste and material. Such anti-dumping provisions, it is significant to note, are not there in the Tlatelolco Treaty.

Unlike the Latin American NWFZ which created a specialised administrative mechanism to oversee the implementation of the treaty, issues relating to the Rarotonga Treaty are dealt with at the multi-lateral South Pacific Forum. A Consultative Committee though was established, with membership drawn from each state party. Any state can withdraw from the Treaty with a notice of 12 months.

Protocol I of the Treaty is applicable to State Parties responsible for administering territories within the geographical zone of the Treaty. This Protocol was adopted at the August 1986 SPF meeting at Suva, Fiji, and was opened for signature in December 1986. France, the UK and the US signed Protocol I a decade later on 25 March 1996. While France and the UK have ratified the protocol, the US has so far not ratified the Protocol I of the Rarotonga Treaty.

Protocol II of the Treaty, which opened for signature in December 1986, is applicable to the five NWS and relates to their commitments not to threaten nuclear use. While the USSR signed this protocol in 1986 (and ratified it in 1988), China did so a year later (ratified it in October 1988). France, the UK and the US signed this protocol on 25 March 1996. France and the UK ratified the protocol in September 1996 and September 1997 respectively. The US has not yet ratified this protocol. Protocol III of the Treaty relates to the NWS commitments not to test nuclear explosive devices within the zone. The US signed this protocol (along with the other two protocols relating to NWS) on 25 March 1996 but is yet to ratify any of them. China, France, Russia and the UK have ratified Protocol III. The US though points to the fact that it has never tested any nuclear device in the area comprising the South Pacific NWFZ (US State Department Archived Content, 2020b).

Analysts have urged the US to ratify the three protocols at the earliest, as they are a “low-hanging fruit” which will strengthen US non-proliferation credentials (Scheinman, 2018). President Barack Obama had in 2011 submitted the protocols for ratification to the US Senate in 2011, as per the administration’s pledge to do so at the 2010 NPT Review Conference (Rev Con) (Nurja, 2011; Congressional Research Service, 2020). The Senate however did not take any action on the matter, due to Republican opposition over its possible negative impact on US nuclear weapons policy. Scheinman argues that US Senate ratification will not harm US security or treaty commitments nor do they prevent nuclear weapons transit. The US in 1991

had declared that its warships did not carry nuclear weapons on board (Hamel-Green, 1998, 61).

It is interesting to note that while Australia and New Zealand have been at the forefront of championing the efforts to establish a regional NWFZ, Australia's nuclear history is unique in that it allowed the UK to test its nuclear weapons off the Australian coast. The UK conducted more than 10 nuclear tests between the year 1952 and 1963, including Britain's first nuclear test on 3 October 1952. There was a lot of controversy about the environmental impact of these tests, especially after it came to light that such tests were conducted with little regard to the safety and security of the original Aboriginal inhabitants of the places where they were conducted, over and above the environmental impact. The British and Australian governments in fact had to pay compensation to the Aboriginal population representatives, many decades after the tests ended (Donnison, 2014). Analysts also point out that Australia helped to an extent in moderating the language of the Rarotonga treaty provisions so that its treaty ally, the United States, specifically the Pacific Fleet, would not face problems (in transporting ships laden with nuclear weapons through the waters of the zone) (Brown, 2012, 5).

The Pacific Island countries continue to face the environmental impact of rampant nuclear testing by the three Western nuclear weapons powers — the US, the UK and France. Apart from these three nuclear weapon states, it is significant to flag that it was Japan which had floated the idea of dumping its radioactive wastes in the Pacific waters near the northern Marianas in 1979 (Fry, 1981, 478; Branch, 1984, 327). The plan was put on hold on account of opposition from the Pacific Island countries, especially at the 11<sup>th</sup> SPF meeting at Tarawa, Republic of Kiribati as well as at the South Pacific Commission meeting at Port Moresby in October 1980 (Pacific Islands Forum Secretariat, 1980; Fry, 1981, 479; Power, 1986a, 458).

There has been renewed focus on Japan's nuclear waste plans in the light of the more than a million tonnes of radioactive water that was currently being held in storage at the site of the Fukushima Daichi nuclear disaster, which happened during the Great East Japan earthquake in March 2011. The company in charge of the plant, Tokyo Electric Power Company (TEPCO), is reportedly running out of storage space to store additional amounts of radioactive water. Japan's Environment Minister Yoshiaki Harada, told reporters in September 2019 that the water may have to be eventually released into the Pacific Ocean or diluted (McCurry, 2019; Reuters, 2019a).

While some have urged Pacific Island countries to oppose Japan's plans, others have pointed out that the contaminated water in fact contains only tritium, which is the least radioactive of elements, and that the environmental impact will be negligible or even absent (RNZ, 2019; Conca, 2019). Still, given the long history of opposition of Pacific Island countries to nuclear waste dumping and nuclear tests, their concern over the Japanese proposal to dump Fukushima water containing radioactive wastes is understandable.

The Rarotonga Treaty, the second NWFZ to be established, was a significant achievement and an improvement in some ways over the Latin American NWFZ, as pointed in earlier sections. Key countries like Australia and New Zealand which have championed the Rarotonga Treaty, have played critical roles in global non-proliferation and disarmament initiatives. The Canberra Commission for instance was established by the government of Prime Minister John Keating in 1995, in response to the decision of the French government to resume nuclear testing in the Pacific (*Arms Control Today*, 1996). The Canberra Commission was made up of eminent personalities which enunciated proposals to take the non-proliferation and disarmament agenda forward. The French eventually gave up nuclear testing in 1996, not in small part due to the enormous pressure they were facing over their continued nuclear testing in the Pacific.

Australia has since become a champion of the 'progressive approach' to nuclear disarmament. It favours gradual risk reduction measures and urges increased transparency among the NWS as regards their nuclear policies. Australia is actively involved in the Non-Proliferation and Disarmament Initiative (NPDI), established jointly with Japan and whose membership has increased with the addition of 10 other like-minded nations, like Canada, Germany, the Netherlands, Mexico, among others. Despite its non-proliferation and disarmament activism, it is pertinent to note that the country is under the US extended nuclear umbrella and has opposed such measures as the 2017 Treaty on the Prohibition of Nuclear Weapons (TPNW). Canberra has held that the treaty provisions do not gel with its obligations as an ally of the US (Department of Foreign Affairs and Trade, 2019; Bhandari, 2019).

Australia meanwhile is also the world's third biggest exporter of uranium. In 2017-18, Australia exported nearly \$600 million worth of uranium (Australian Safeguards and Non-proliferation Office, 2018, 26). There was opposition from Australian civil society groups to the 2014 India-Australia civil nuclear cooperation agreement, as some of them held it was against the terms of the Rarotonga Treaty, which has prohibitions against nuclear cooperation with non-NPT member states (The Parliament of the Commonwealth of Australia, 2014, 55-

56). India's NPT non-membership therefore was a significant factor for those who were opposing the uranium export agreement with India. The groups which testified before the Australian Parliament's Joint Standing Committee on Treaties (JSCOT) specifically highlighting the Rarotonga treaty restrictions on nuclear commerce with non-NPT members included the International Campaign against Nuclear Weapons (ICAN-Australia).

JSCOT conducted exhaustive hearings on the India-Australia nuclear agreement and enquired from the government whether the agreement with India breached the South Pacific NWFZ treaty provisions (Ibid). Article 4 of the Rarotonga Treaty allows for cooperation in peaceful nuclear uses with only those states which are subject to safeguards as per Article III.I of the NPT. While India is not a signatory of the NPT, it has concluded a safeguards agreement with the IAEA in February 2009. As of 2020, India's 14 nuclear power reactors are under IAEA safeguards. India has also signed the additional protocol (AP) to the safeguards agreements, with even more stringent reporting requirements than the standard safeguards agreement, in May 2009. India's AP entered into force in July 2014. Given the above India-specific context, the Australian government informed its parliament that the civil nuclear cooperation with India was consistent with Australia's international obligations (Davenport, 2017).

### **Southeast Asian NWFZ**

The Southeast Asian NWFZ was established through the Treaty of Bangkok on 15 December 1995. The treaty entered into force on 27 March 1997. The origins of the zone lay in the Association of Southeast Asian Nations (ASEAN) declaration on 27 November 1971, termed the Declaration on the Zone of Peace, Freedom and Neutrality (ZOPFAN). The Foreign Ministers of Indonesia, Malaysia, the Philippines, Singapore, and a Thai Special Envoy met in Manila and issued the Declaration which reiterated the Bandung principles of peaceful co-existence (*China Daily*, 2005; Timossi, 2015). It noted the positive move by Latin American countries to establish a NWFZ four years earlier in 1967, and affirmed that they would ensure that South East Asia would remain a zone free of intervention from extra-territorial powers (Centre for International Law, 1971).

Analysts note that three key factors propelled the ASEAN countries (which got together to form the ASEAN in 1967) to propound the idea of ZOPFAN, asserting the principle of external non-interference in their region. These included the US withdrawal from Vietnam in 1969, the diminishing role of the UK in South East Asia after Britain announced in 1968 that it will withdraw from 'East of Suez' by 1971 and Sino-US rapprochement as seen in US Secretary of

State Henry Kissinger's trips to Beijing leading to summit meeting between President Richard Nixon and Mao Zedong in February 1972 (Koga, 2014, 733).

The idea underpinning the declaration — of non-interference by external powers, was propounded formally at an international forum for the first time by Malaysian Prime Minister Tun Abdul Razak at the Non-Aligned Movement (NAM) Summit in September 1970, at Lusaka, Zambia. Razak's plea was in the context of the UK decision to withdraw from the region two years earlier. Razak changed his view to championing non-interference by external powers, given that the original Malaysian idea was that the great powers (US, Russia and China) should guarantee Southeast Asia's neutrality in the aftermath of the British withdrawal. Indonesia held the view that none of these external powers should have a say in regional affairs (Simon, 2007, 13).

The enunciation of the ideal of non-interference by major powers in Southeast Asian affairs has been questioned by regional analysts. For instance, Bilahari Kausikan, former Singaporean Foreign Secretary, has pointed out that the ZOPFAN Declaration deliberately ignored Chinese active involvement in various communist insurgencies in Southeast Asian countries (Kausikan, 2014). Also, Kausikan notes that Southeast Asian nations did not have the wherewithal to prevent such external interference. He notes that when Indonesia and Malaysia declared in 1971 that the Malacca Straits were not an international waterway, both the US and the Soviet Union defied the declaration. Neither Jakarta nor Manila could do anything about it (Ibid). Another domestic driver that created favourable conditions for the establishment of the Bangkok Treaty was the 1987 Philippines constitution which outlawed nuclear weapons (Simbulan, 2016).

Despite such ideals as expounded in ZOPFAN and positive domestic developments in favour of outlawing nuclear weapons, among other efforts, the objective of a regional NWFZ did not come to fruition till 1995. Analysts note that the regional military bases of external powers (as in the Philippines) as well as conflict over Cambodia were prime reasons why the NWFZ could only be realised only two decades later (Hernandez, 1998, 85; Singh, 2000). The sentiments contained in the ZOPFAN declaration for instance received a setback when Cambodia was invaded by Vietnam in 1978, a neighbour and a fellow South East Asian country (Alagappa, 1991, 270). After the Cambodian invasion, the Working Group of the ASEAN Foreign Ministers on ZOPFAN, which was established in January 1975 to take the sentiments expressed in ZOPFAN forward, could only meet again in 1984 (Abad, 2005, 168).

The Paris Peace Agreement ending the Cambodian conflict was signed eventually in October 1991. The US naval and air bases in the Philippines meanwhile were closed in 1992. These developments paved the way for the eventual establishment of the South East Asian NWFZ in 1995. Philippines ratified the agreement in 2001, becoming the last ASEAN member to do so (Dalpino, 2014, 5). It is interesting to note that Cambodia, Laos, Myanmar and Vietnam signed the Bangkok Treaty as observers, as they had not yet taken full membership in ASEAN (Anwar, 2018).

The SEANWFZ treaty covers the territories and exclusive economic zones (EEZs) of the South East Asian states. In including EEZ's of state parties, the Bangkok Treaty goes beyond the provisions of the two previous NWFZ treaties (James Martin Centre for Non-Proliferation Studies, 2013; Cornellier, 2003, 246). The basic undertakings of each state party to the treaty are similar to those of the Latin American and the South Pacific NWFZ, relating to pledges not to develop nuclear weapons or allow nuclear weapons tests. The treaty allows for peaceful nuclear use, under IAEA safeguards (ASEAN, 2012).

In Article 6, the treaty calls for accession to the Convention on Early Notification of a Nuclear Accident (Ibid). The 1986 Convention came into being after both the earlier NWFZ treaties, in Latin America and the South Pacific, came into existence, in 1967 and 1985 respectively. Article 6 requiring each state party to accede to this convention can also be viewed from the prism of the unique geographical footprint of South East Asian states. The environmental impact of a possible accident at future nuclear power plants located in coastal zones will no doubt affect the well-being of populations across territorial or maritime boundaries.

Each State Party is also given the freedom to permit the use of its air space or navigation of its territorial waters. Unlike the South Pacific NWFZ treaty, and similar to the Tlatelolco treaty, SEANWFZ treaty is implemented by the SEANWFZ Commission (made up of members of the Foreign Ministers of ASEAN). This Commission is assisted by an Executive Committee, made up of senior officials of ASEAN.

Apart from the mechanism of IAEA safeguards, these states also created a system for exchange of information among member states for clarifying any outstanding issues. Member states may even request for a fact-finding mission to resolve any contradictions regarding any situation that may arise within their territory. If the state parties are not satisfied with the explanations provided, the treaty allows for the matter to be reported to the IAEA and even to the UN

Security Council (under Article 14) (Ibid). These mechanisms/provisions are unique to the South East Asian treaty and not present in either the Latin American or the South Pacific treaty.

The protocol to the SEANWFZ was adopted by the State Parties on the same day they signed the treaty, 15 December 1995. As per the protocol, the NWS commit not to deploy or test nuclear weapons or threaten State Parties with nuclear weapons use. The ASEAN states have engaged with the NWS to convince them to adhere to this protocol but they have not succeeded so far

ASEAN's engagement with the NWS on SEANWFZ protocol has been infrequent. ASEAN had dialogue with the NWS in May 2001 regarding the protocol while the next direct meeting could only happen a decade later in August 2011 but no progress was made (James Martin Centre for Non-proliferation Studies, 2013). China in 2005 indicated that an understanding was reached with ASEAN on the protocol but has not signed it so far (Permanent Mission of the Peoples Republic of China to the United Nations, 2005). Beijing was willing to sign the protocol in July 2012 at Phnom Penh but did not do so on account of the reservations expressed by the other four NWS (*Xinhua*, 2012). Some of the reservations of the NWS regarding the SEANWFZ protocol relate to the transit of nuclear-powered ships and submarines, and demarcation of EEZs — specifically those relating to the South China Sea, among others (James Martin Centre for Non-proliferation Studies, 2013).

Regional non-proliferation concerns have played a role in the reluctance of countries like the US to provide a pledge of non-use (Zhao, 2017). Myanmar, for instance, sought nuclear technology from Russia<sup>5</sup> and North Korea<sup>6</sup>, which led to concerns about its nuclear intentions (Chandran 2017; Sullivan, 2009). Further, Article 2 of the Protocol to the SEANWFZ pertains to negative security assurance. North Korea, as a nuclear weapon possessing country, is not a state party to the treaty. The US informed ASEAN in 1996 that it will not be in a position to sign the Protocol as it cannot extend the NSA to countries not bound by the treaty obligations (Abad, 2005, 185).

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<sup>5</sup> Myanmar signed a contract with Russia in 2001 to build a 10 MWe nuclear reactor but work could not progress on the project. In 2015, both countries again announced they will cooperate in the nuclear field (Nuclear Threat Initiative, 2015b).

<sup>6</sup> In 2010, Burmese pro-democracy groups have accused the Myanmar junta of procuring uranium enrichment equipment from North Korea. In December 2011, when US Secretary of State Hillary Clinton was visiting the country, the country's leadership insisted that they did not have any illegal dealings with Pyongyang (Quinn, 2011).



Further, some of the ASEAN countries, specifically the Philippines, Vietnam, Malaysia, and Brunei, have maritime disputes with China, relating to the South China Sea (SCS). Given that the Bangkok Treaty defines the zone limits to include the EEZs and continental shelves, uncertainty regarding the overlapping sovereignty claims on the SCS leads to uncertainties over the actual geographical limits of the NWFZ. The US therefore is not forthcoming to provide such legally binding negative security assurances against NPT-recognised NWS like China which could deploy nuclear weapons on such islands or in these waters to threaten US shipping or naval assets.

While the South China Sea continues to generate periodic tensions, Myanmar has signed the TPNW on 26 September 2018 (UN Office for Disarmament Affairs, 2018). Myanmar ratified the Comprehensive Test Ban Treaty (CTBT) in September 2016, two decades after signing it. The NWS at the 2015 NPT Review Conference reiterated that they were willing to sign the SEANWFZ (NPT Review Conference, 2015).

ASEAN meanwhile has been taking steps to further strengthen elements of the Bangkok treaty. It adopted a Plan of Action (PoA) in 2013, encouraging all State Parties to adopt international best practices on nuclear safety and security. It calls for increasing inter-ASEAN cooperation to establish a region-wide nuclear safety regime. Increased cooperation with organisations like the CTBT Organisation (CTBTO), are seen as important. The need to put forward ASEAN's common positions on nuclear non-proliferation and disarmament issues at multi-lateral fora are highlighted (SEANWFZ Commission, 2013). The PoA was extended for a period of another five years, till 2022, in 2017, with the similar agenda (SEANWFZ Commission, 2017).

ASEAN states are active participants in the US-led global non-proliferation agenda. Seven of them — Brunei, Cambodia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, are members of the Proliferation Security Initiative (PSI). Only Indonesia, Laos and Myanmar are not members of the PSI. The initiative seeks to prevent the trafficking of WMD and their components. Over a 100 nations are a part of the PSI and ASEAN nations have played a significant part in disrupting the movement of dual-use technology to and from countries like the DPRK. Analysts note that the Bangkok Treaty continues to be an essential element in ASEAN's tool kit to further a cooperative security agenda, along with other mechanisms like the ASEAN Regional Forum (ARF) — formed in 1994 along with Japan, China, Russia and the US and the 1976 Treaty of Amity and Cooperation (TAC) (Abad, 2005, 178-179).

## **African NWFZ**

Moves towards establishing a NWFZ in Africa were stimulated by French nuclear tests in the Saharan desert (in the area contiguous with Algeria and Mali), which took place from 1959 to 1966. The UNGA on 24 November 1961 passed Resolution 1652 urging member states not to use African territory to carry out nuclear tests and to treat the African continent as a “denuclearised zone” (United Nations General Assembly, 1961). This followed the November 1959 nuclear test by France in the Sahara. France later conducted three atmospheric nuclear tests in 1960. Other African nations like Nigeria broke diplomatic relations with France in 1961 on account of French nuclear testing. France eventually stopped nuclear testing in Africa in 1966 after three atmospheric and 13 underground tests (Adeniji, 2002, 35-37).

In response to the French nuclear tests, the Organisation of African Unity (OAU; now called as the African Union) meeting in Cairo in July 1964 voiced support for UNGA Resolution 1652 passed in 1961 and further declared that they were willing to abide by an international treaty that would prohibit the nuclear weapons manufacture or acquisition (Organisation of African Unity, 1964).<sup>7</sup> An African NWFZ was also endorsed by the NAM at their second summit in October 1964, held in Cairo. Another UNGA resolution 2033 of 3 December 1965 called upon all African states not to test or manufacture nuclear weapons (United Nations General Assembly, 1965). All of the above resolutions were passed overwhelmingly, with Resolution 2033 for instance, garnering the support of 165 countries and none voted against. Only Portugal and France abstained (Brownlie, 1971, 358-359).

Despite the above history dating back to 1961 however, the issue relating to the African NWFZ remained dormant until the 29<sup>th</sup> session of the UNGA in December 1974 (Nmeke, 1984, 146). At its 2309<sup>th</sup> Plenary Meeting in 1974, the UNGA urged its member states to respect the 1964 call by the OAU for the denuclearisation of Africa (United Nations General Assembly, 1974b, 25).

One of the reasons that led to a renewed interest and emphasis on the African NWFZ was the 1974 Indian peaceful nuclear explosion (PNE), a defining moment in international nuclear history. For the first time, a country outside of the NWS category recognised by the NPT detonated a nuclear device, leading to fears that other countries could emulate the Indian decision. In the aftermath of India’s PNE, NWFZ’s generally came into prominence as an

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<sup>7</sup> The OAU declaration was more than a decade before Egypt and Iran proposed a NWFZ for West Asia at the UNGA in 1974.

important non-proliferation and disarmament step. Apart from the African NWFZ gaining prominence after India's PNE, New Zealand with other countries in its region proposed the South Pacific NWFZ (as seen in the sections dealing with the South Pacific NWFZ) and Pakistan proposed a NWFZ for South Asia (discussed in later sections).

In the immediate aftermath of India's PNE, the US and Soviet Union also came together to negotiate a treaty to regulate their own nuclear testing activities. The Threshold Test Ban Treaty (TTBT) came into existence in July 1974 and the Treaty on Underground Nuclear Explosions for Peaceful Purposes (PNE Treaty) in April 1976. The PNE treaty and the TTBT treaty were submitted for US Senate ratification in June 1990 and entered into force in December 1990 (US State Department, 1990). Despite such renewed interest on NWFZs and greater urgency on bilateral arms control measures from the superpowers, the Treaty of Pelindaba establishing the African NWFZ however could not be concluded till 1996 (and entered into force in 2009 only). This was primarily on account of Cold War dynamics and South Africa's nuclear weapons programme.

The Soviet Union in August 1977 charged the South African regime with preparing to conduct a nuclear test at a test site in the Kalahari Desert. It was Soviet satellite reconnaissance photographs which first picked up preparations at the Kalahari military site (Adeniji, 2002; Moore, 1987, 111-115). Moscow brought pressure on the US to force Pretoria to stop the alleged test. The French government warned that they would stop nuclear cooperation with South Africa as the latter had signed a bilateral agreement with France in October 1976 for the building of the Koeberg nuclear research reactor near Cape Town.<sup>8</sup> The French threat was especially considered potentially damaging given that Pretoria was already facing difficulties in securing nuclear material from the US for the 20 MWe South African Fundamental Atomic Research I (SAFARI I) reactor.

The 1957 South-Africa-US nuclear cooperation agreement, initially valid for a period of five years, was renewed in 1962, 1967 and 1974. The Gerald Ford administration in 1976 stopped supplying nuclear fuel to the SAFARI I reactor, in the light of concerns over Pretoria's nuclear intentions, and as a consequence of a general tightening of rules relating to nuclear commerce. The 1978 Nuclear Non-proliferation Act (NNPA) further tightened nuclear commerce rules, with complete ban on such material to non-NPT member countries. In the light of such

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<sup>8</sup> South Africa entered into an agreement with the French company, Framatome (now Areva) in 1976 to build two pressurized water reactors generating 970 MW each. The two units were connected to the grid by 1985.

pressure, Prime Minister Vorster gave assurances to President Jimmy Carter that his country did not intend to develop any nuclear explosive device (Moore, 1987, 112).

Analysts note that the decision by then South African Prime Minister John Vorster to build nuclear explosive devices was taken in 1974 (Lieberman, 2001). Various motives have been attributed to this decision, both internal and external. A prominent external factor was that Vorster's decision was in the aftermath of the fall of the Salazar dictatorship in Portugal in 1974, which led to the subsequent declaration of independence by Pretoria's neighbours, Mozambique and Angola (Fig, 2005, 45-47). Pretoria feared a Soviet expansion into Southern Africa on top of the build-up of Cuban forces in Angola beginning in 1975 (De Villiers, Jardine and Reiss, 1993, 101). South Africa's increasing sense of isolation on the world stage was another prominent factor even as domestically, there was increasing opposition to its apartheid policies and was facing "total conflict" (Walters, 1987, 10-14).

Even prior to the decision of the Vorster government to construct the nuclear test site in Kalahari, the decision to construct a uranium enrichment plant (the Y-2 plant at Valindaba) was taken in 1969. Construction began in late 1970 and was completed by 1974 (Nuclear Weapon Archive, 2012). The production of enriched uranium at the plant was stopped in August 1979 due to a problem encountered in its operation and was resumed in April 1980. The plant was closed down in February 1990 (Stumpf, 1995-1996, 6). The decision to order the Atomic Energy Board (AEB) to begin investigations into the possibility of utilising PNE's in the mining industry was given by the Minister for Mines in March 1971 (Ibid, 4). The programme however was treated as "top-secret" in the light of the critical world reaction to India's PNE (Ibid).

A survey of literature indicates that there are varied interpretations as to the effect of the Indian PNE on South African nuclear weapons decision-making process. Lieberman, for instance, notes that Prime Minister Vorster could have been "prodded" into taking the decision to build nuclear weapons by the Indian PNE (Lieberman, 2001, 53). Other scholars have argued that South Africa could potentially have understood that even if initial world reactions were critical, there would be no long-term international implications over such overt displays of nuclear capabilities (Horton, 1999).

Richard Betts speculates that the Indian "example" could have been one of the options for South Africa to emulate — demonstrate a nuclear weapons capability but refrain from developing a nuclear force. He agrees with Horton that South Africa could have calculated that

while initial reaction would be critical, opposition to such a capability may not sustain for long, “as happened in a sense after the 1974 Indian test” (Betts, 1979, 104-105). Analysts attribute South Africa’s decision to pursue a nuclear weapons capability to the possibility afforded by its covert cooperation with Israel (Purkitt et al, 2002, 188). South African scientists also highlighted the presumed advantage their country had attained in the field of nuclear technology. This was in the light of Vorster’s July 1970 statement that South Africa had pioneered a new method of enriching uranium. Such technologies were especially crucial given South Africa’s huge uranium reserves, which were mostly being exported to the US (Spence, 1981, 441).

In the aftermath of the 1977 Kalahari incident, UNSC passed resolution 418 on 4 November 1977 expressing its “grave concern” about South African nuclear intentions and urged UN member states not to cooperate with the apartheid regime in helping it develop nuclear weapons (United Nations Security Council, 1977). There was speculation South Africa was supplying uranium to Israel, in exchange for arms imports (The next chapter has more details on aspects of such cooperation). In Resolution 32/81 of 12 December 1977, the UNGA affirmed that if South Africa became nuclear, it would hurt efforts to establish a regional NWFZ (United Nations General Assembly, 1977a).

Despite such pressure from the UNGA, UNSC, and countries like the US and France — or as some have argued because of such pressure, South Africa took the decision to pursue a covert nuclear weapons programme as well as continue its secret nuclear cooperation with Israel. Stumpf argues that after Washington cut off fuel supplies to South African reactors in 1976, it lost whatever leverage it had to directly influence Pretoria’s nuclear policy choices (Stumpf, 1995-96, 8).

The 1979 incident, in which a US satellite captured a ‘double flash’ occurrence — usually associated with a nuclear explosion, off the coast of South Africa. This incident is widely speculated to be an Israeli nuclear weapon test, with South African support ((Melman, 2009; Hones et al, 1981). The US or European reactions to this incident were, however, subdued. South Africa’s enormous uranium reserves, it could be argued, were a factor in US response. In a memorandum for the US Secretary of State, Secretary of the National Security Council (NSC) Christine Dodson notes that the NSC opposes any stoppage in commercial nuclear interactions with South Africa (Dodson, 1980). On account of its mineral wealth, a US Senator in 1980 had termed the country the “Persian Gulf of Minerals” (Bowman, 1982, 183). Between

1953 and 1971, the US imported from South Africa 43,260 tonnes of uranium oxide (U<sub>3</sub>O<sub>8</sub>) valued at over US\$450 million (Walters, 1987, 89). Apart from its mineral resources, South Africa's key geographic position astride two oceans and ideological opposition to the Soviet Union were further critical factors guiding American policy towards Pretoria. It was also the dominant military power in Southern Africa (Bowman, 1982, 159-191).

On 24 March 1993, President F.W. De Clerk announced that South Africa had a "limited nuclear deterrent capability" and voluntarily dismantled six nuclear devices prior to joining the NPT on 10 July 1991 (Stumpf, 1995-96, 3). Analysts note that the reasons underpinning the nuclear roll-back decision of the De Clerk government included the need to re-join the international community, after the demise of the Soviet Union (Ihonvbere, 1998, 106-107).

Others have pointed to a combination of factors that guided President de Clerk's decision to dismantle its limited nuclear arsenal. These were the ceasefire on its northern border with Namibia in August 1988 and the withdrawal of Cuban troops from Angola in the same year. Soviet influence in the continent was also gradually reducing. The influence of key personalities in the South African atomic energy establishment and the defence forces who were strong advocates of the nuclear bomb, was also on the wane. Another possible, indeed a 'cynical' reason, relating to the need to prevent the prospect of the African National Congress (ANC)-led government with nuclear arms (Reiss, 1995, 20).

Therefore, even as concerns over the French nuclear tests had diminished after 1966, efforts towards an African NWFZ only speeded up after South Africa voluntarily admitted to its nuclear weapon status in 1993 and the out-going White nationalist regime decided not to transmit those weapons to the government of Nelson Mandela but to dismantle the devices. The African NWFZ Treaty was eventually adopted at Pelindaba on 2 June 1995. The Treaty was opened for signatures at the Cairo Summit of the OAU in April 1996 but entered into force 14 years later, on 15 July 2009, after 28 states (Burundi being the 28<sup>th</sup>) ratified it, as per Article XVII of the Treaty.

As for the provisions of the treaty, in Article 6, in a nod to the South African weapons programme, it states that each party shall destroy nuclear explosive devices prior to joining the treaty, under the supervision of the IAEA. The treaty encourages peaceful nuclear activities and also established the African Commission on Nuclear Energy. Protocol I (requiring NWS not to threaten state parties within the zone with nuclear weapons) and Protocol II (requiring

NWS not to test nuclear weapons) of the treaty have been signed by all the NWS, and ratified, except the US.

The African NWFZ treaty has a unique Protocol III, pertaining to countries which have territories within the geographical limits of the zone, namely Spain and France. France has signed and ratified this protocol, unlike Spain, which insists that its territories – Canary Islands and abutting Morocco, are a part of the European Union and therefore not part of the African NWFZ. Further, unlike France, Spain notes that it is not a NWS and is adhering to all of the elements of the global non-proliferation and disarmament framework, including NPT membership and IAEA safeguards commitments (Stott, 2011, 19). South Africa meanwhile has signed and ratified the TPNW on 25 February 2019.

### **Nuclear Weapon Free Zones: An Assessment**

While the Tlatelolco Treaty came into being in 1967, it was not until 35 years later in 2002 that all the countries of the Latin American region ratified the treaty (Cuba was the last to do so). While Cold War geo-politics played a part as far as Cuba and the treaty were concerned, it is equally pertinent to note that Argentina ratified the treaty (in 1993) more than quarter century after signing it. Regional powerhouses like Brazil not only championed the idea of a regional NWFZ at the UN and at regional forums. However, when Brazil signed the treaty in 1967, it specifically highlighted the fact that the treaty gave it the right to pursue nuclear explosives for peaceful purposes.

Brazil's military leaders, who ruled from 1964-1985, encouraged the pursuit of a secret nuclear programme. Brazil subsequently signed its IAEA safeguards agreement in 1994 and became a member of the NPT in 1998. Brazil's pursuit of naval nuclear propulsion and uranium enrichment meanwhile not only led to a brief period of discomfort with the IAEA (in 2004) but was subsequently used as an argument by countries like Iran to justify their pursuit of uranium enrichment activities.

The Brazil-Argentina bilateral agreements to a specific nuclear material accounting agency to generate confidence in their mutual nuclear programmes was indeed a critical and novel trust building effort. On the whole, analysts note that the nuclear aspirations of big Latin American countries like Brazil and Argentina have no doubt been “socialized” and successfully contained to a large extent within the multi-lateral framework of the Latin American NWFZ (Serrano, 1998, 45, 52; Khalil, 2012, 34).

The South Pacific NWFZ meanwhile was the result of regional concerns due to the nuclear weapons testing activities of the US, UK and France. It was no surprise therefore that unlike the Tlatelolco Treaty, the Treaty of Rarotonga also forbade the PNEs. The Southeast Asian NWFZ had its origins in the principles of cooperative existence and mutual respect, as embodied by the Bandung Conference of 1955 and the ZOPFAN Declaration of 1971. Cold War factors propelled the idea forward, with US withdrawal from Vietnam in 1969 and UK decision to withdraw East of Suez in 1968. Geo-political tensions in South East Asia — the Vietnamese invasion of Cambodia in 1978 for instance, delayed the realisation of the goal of a regional NWFZ till 1995. The NWS reluctance to sign the treaty protocol is proof of the continuing contentions relating to the South China Sea and freedom of navigation, particularly as it pertains to the movement of nuclear-powered warships or submarines.

The African NWFZ was also propelled by the nuclear tests of a NWS, France in this case, as well as by South Africa's nuclear choices. Apartheid South Africa not only built nuclear bombs but also cooperated closely with Israel in the nuclear and ballistic missile fields. After South Africa voluntarily dismantled its limited nuclear arsenal in 1991, the Treaty of Pelindaba was adopted in June 1995. It took another 14 years for the treaty to enter into force, after 28 states ratified it, as per treaty provisions. Out of the 53 African states that have signed the treaty, 41 states have ratified the treaty so far.

Apart from the four major established NWFZs, the 2006 Central Asian Nuclear Weapon Free Zone (CANWFZ) Treaty entered into force in March 2009. Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan are the members of this treaty, which is the only regional zone pertaining to the northern hemisphere. Mongolia's self-declaration of a Single State NWFZ (SS-NWFZ) in 1992 was accepted by the international community through UNGA Resolution 55/33S (United Nations General Assembly, 2000). Mongolia's declaration was after the disintegration of the Soviet Union and the subsequent withdrawal of Russian troops from its territory (Russian troops were in Mongolia from 1924-1990). The Central Asian country, sandwiched between Russia and the Peoples Republic of China, saw the move as an essential part of its new foreign policy framework and an important confidence building measure, as it embarked on its post-Soviet history (Enkhsaikhan, 2000, 349).

Over 67,000 Italians, in protest against the presence of US nuclear weapons, demanded in March 2008 that Italy declare itself to be a nuclear weapon free country. Over 50 per cent of all Belgian mayors were also rallying for the complete withdrawal of US nuclear weapons from



Belgian territory. The UN on its part has declared the decade 2010-2020 as the “UN Decade for Disarmament”.

Pakistan proposed a NWFZ in South Asia at the IAEA in September 1972 (in the aftermath of the Bangladesh war) and thereafter in 1974 (after India’s Pokhran peaceful nuclear explosion). India rejected these calls citing the Chinese nuclear arsenal. India also argued that such zones do not help in the attainment of general and complete disarmament, its preferred policy approach regarding nuclear disarmament (Hamel-Green, 2005, 248). Indian Permanent Representative Rikhi Jaipal reacted to the Pakistani proposal by pointing out that it was a unilateral initiative and was not the result of discussions among the countries of the region (Ahmed, 1979, 99). India and Pakistan, meanwhile, conducted overt nuclear tests in 1998.

The Democratic Peoples’ Republic of Korea (DPRK) signed a Joint Declaration on denuclearisation with the Republic of Korea (RoK) in 1992. Pyongyang also had signed an Agreed Framework (AF) agreement with the United States in 1994. However, in October 2002, it revealed that it had carried out activities related to nuclear weapons, despite the provisions of the AF, and its obligations as a member of the NPT (Sanger, 2002).

The DPRK conducted a nuclear test on 9 October 2006, after withdrawing from the NPT in January 2003. Since then, it has conducted five more nuclear tests and has launched increasingly sophisticated inter-continental range ballistic missile tests. Two summit meetings between President Trump and North Korean leader Kim Jong-un — in June 2018 at Singapore and February 2019 in Hanoi have sought to reduce the tensions but uncertainties have continued to cloud the Northeast Asian security environment. In June 2020 for instance, North Korea destroyed a joint liaison office on its side of the border established in the aftermath of the 2018 Panmunjom Declaration between Pyongyang and Seoul (Masterson, 2020; Shin and Smith, 2020).

Apart from the above zones involving inhabited regions of the world, there have been quite a few treaties banning nuclear weapon tests or deployment in uninhabited regions of the world. These include the Antarctic Treaty (1959), the Outer Space Treaty (1967), the Seabed Treaty (1971) and the Moon Treaty (1979).

**Table 2.1**

**Nuclear Weapon States and NWFZ Protocols Ratification**

	<b>Peoples Republic of China</b>	<b>France</b>	<b>Russia</b>	<b>United Kingdom</b>	<b>United States</b>
<b>Tlatelolco Treaty</b> (Opened for signature: 14 Feb 1967; EIF: 23 Oct 2002)	Protocol II (NSAs)	Protocol 1 (Jurisdictional responsibility)  Protocol II (NSAs)	Protocol II (NSAs)	Protocol I (Jurisdictional responsibility)  Protocol II (NSAs)	Protocol 1 (Jurisdictional responsibility)  Protocol II (NSAs)
<b>Rarotonga Treaty</b> (Opened for signature: 6 Aug 1985; EIF: 11 Dec 1986)	Protocol II (NSAs)  Protocol III (Ban on nuclear testing)	Protocol 1 (Prohibition on stationing or testing of nuclear explosive device)  Protocol II (NSAs)  Protocol III (Ban on nuclear testing)	Protocol II (NSAs)  Protocol III (Ban on nuclear testing)	Protocol 1 (Prohibition on stationing or testing of nuclear explosive device)  Protocol II (NSAs)  Protocol III (Ban on nuclear testing)	US has signed all three protocols but has not ratified any of them
<b>Treaty of Bangkok</b> (Opened for signature: 15 Dec 1995; EIF: 27 March 1997)	NSAs (Not signed or ratified)	NSAs (Not signed or ratified)	NSAs (Not signed or ratified)	NSAs (Not signed or ratified)	NSAs (Not signed or ratified)
<b>Treaty of Pelindaba</b> (Opened for signature: 11 Apr 1996; EIF: 15 July 2009)	Protocol I (NSAs)  Protocol II (Ban on nuclear testing)	Protocol I (NSAs)  Protocol II (Ban on nuclear testing)  Protocol III (Jurisdictional responsibility)	Protocol I (NSAs)  Protocol II (Ban on nuclear testing: Signed but not ratified)	Protocol I (NSAs)  Protocol II (Ban on nuclear testing)	Protocol II (Ban on nuclear testing: Signed but not ratified)
Central Asian NWFZ	Protocol I (NSAs)	Protocol I (NSAs)	Protocol I (NSAs)	Protocol I (NSAs)	

(Opened for signature: Sept 8, 2006; EIF: Mar 21, 2009)					
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**Note 1:** NSAs – Negative Security Assurances

**Note 2:** Protocol 1 of Tlatelolco Treaty relates to only France, the Netherlands, the UK and the US – states with territories in the zone.

**Note 3:** Protocol 1 of Rarotonga Treaty relates to only France, UK and the US

**Note 4:** Protocol III (Jurisdictional responsibility) of Pelindaba Treaty is only applicable to France and Spain.

**Sources:** *Arms Control Today* (2017), “Nuclear weapon free zones at a glance”, July 2017, [Online: Web], Accessed 8 October 2020, URL: <https://www.armscontrol.org/factsheets/nwzf> <https://www.armscontrol.org/factsheets/nwzf>; International Peace Institute (2010), “Annex III: Tables on nuclear weapon free zones”, [Online: Web], Accessed 8 October 2020, URL: [https://www.ipinst.org/wp-content/uploads/2010/04/pdfs\\_tableschapt.pdf](https://www.ipinst.org/wp-content/uploads/2010/04/pdfs_tableschapt.pdf)

## Conclusion

The above historical examination places in perspective the successful efforts to establish geographically limited, regional arms control measures like the NWFZs. As noted earlier, two of the successful efforts (relating to Latin America and the South Pacific) were established during the Cold War while the other two significant zones (in Africa and Southeast Asia) came into being after the end of the Cold War. These zones encompass the region of the ‘Global South’, as they are in the southern hemisphere. As far as the northern hemisphere is concerned, the 2006 Central Asian NWFZ has not entered into force as yet.

Some of these successful efforts, like the African and the Southeast Asian NWFZ, took more than two decades to fructify, after they were first proposed. The Treaty of Tlatelolco came into being rather quickly in 1967, after it was first proposed in 1958. However, it took more than three decades for all countries in the region to ratify it. This does indicate the difficulties that even successful NWFZ efforts had to be overcome, due to extant security dilemmas or great power dynamics.

The fact that NPT NWS, still have not ratified or signed the Additional Protocols to these NWFZ, exemplify the continuing domination of security considerations in dealing with such geographic CBMs. Additional protocols to the NWFZ, as noted earlier, governs negative security assurances and commitments not to test in these zones by the NWS. The US has not signed the protocols relating to the African and South Pacific NWFZs. It has only signed and ratified the Tlatelolco Treaty protocols while it has signed but not ratified the Central Asian NWFZ protocols. All of the NPT NWS, meanwhile, have not signed or ratified the protocol to the SEANWFZ.

While the NWS welcome such regional arms control measures, the impact such measures have on their nuclear deterrent postures continues to determine their behaviour towards such zones. These specifically relate to the transit of nuclear weapons through the zones or the threat of use of such weapons to target countries that are beyond the zone limits. The example of US warships or submarines transiting the territorial waters of Southeast Asian countries and possible targeting of countries like DPRK, which are not members of the SEANWFZ, is one prominent example of the dilemma.

The success achieved in the zones that have been established so far, however, still eludes similar efforts to establish a NWFZ in West Asia. The following chapters will examine key aspects relating to Israeli nuclear dynamics, the pursuit of non-conventional (nuclear and chemical and biological) and conventional (primarily ballistic missiles capabilities and sophisticated arms imports) that have negatively impacted the efforts to establish a similar zone in West Asia.

## **CHAPTER THREE**

### **Israel and Nuclear Weapons**

As pointed out in the chapter on ‘Historical Background’, Israel’s nuclear status was the prime motivating factor for regional countries to champion the cause of a regional nuclear weapon free zone (NWFZ). This chapter examines the different aspects of Israel’s nuclear journey, its doctrinal and policy positions at multilateral bodies like the United Nations (UN) and the International Atomic Energy Agency (IAEA), its approach to regional arms control processes like the Arms Control and Regional Security (ACRS) Working Group, and its views on the nuclear non-proliferation treaty (NPT). The chapter ends by detailing Israel’s policy of prevention while dealing with the regional nuclear pursuits of Iraq, Syria and Iran, respectively.

#### **Israel’s Nuclear Journey**

Israel’s political leaders viewed nuclear weapons as important instruments to ensure security, in the face of threats to its existence from Arab states (Hersh, 1991, 22-23). Yigal Allon, a former general of the Israel Defence Force (IDF) and later a Labour politician, succinctly captured the sense of the predicament Israel was facing when he remarked that if the country had lost any of the inter-state wars it fought in its early years, it would have been “driven into Mediterranean” (Jabber, 1971, 106). Israel’s military leadership’s sense of unease is compounded by its extremely limited geography. This lack of strategic depth implied that Israel had little to no leeway to contemplate the possibility of military losses, either in terms of human resources or in terms of territory. Israel’s military doctrine therefore privileged offensive military actions (by using armoured attacks and air power) to quickly transfer the fighting onto enemy territory, when hostilities broke out (Tal, 2000a, 37; Rodman, 1996, 153). It is in this strategic context of Israel’s early history that its nuclear weapons quest has to be understood.

The Israel Atomic Energy Commission (IAEC) was created in June 1952, within the aegis of the Ministry of Defence. The Nahal Soreq nuclear reactor was built from assistance received from the United States (US) ‘Atoms for Peace’ programme. The reactor’s construction began in 1957 and it became critical on 16 June 1960. Dimona was built, largely with private funds, as a result of secret collaboration with the French (Solingen, 1994, 318). The agreement for cooperation with the French in the nuclear field was entered into in early 1953.

The French helped the Israeli nuclear effort due to a combination of factors encompassing the scientific (they wanted to access the newly developed Israeli method of extracting heavy

water), the political (they were upset with Egypt's Nasser for supporting rebel forces in Algeria) and strategic (Israeli help during the Suez conflict). Analysts also note that the construction of the reactor in 1957 was after the 1956 Suez War. Israel was subject to an US arms embargo even as the Arabs were engaged in rapidly building-up their conventional military might (Jabber, 1971, 22; Hersh, 1991, 33-46; Pajak, 1982, 31).

It is pertinent to note that during the decade 1956-67, France was Israel's main supplier of arms and ammunition (Gazit, 2000, 414). Other analysts have also pointed out that even if Israel was facing an US arms embargo, an important consideration that led Prime Minister David Ben-Gurion to withdraw his country's military from the Sinai after the end of the Suez War was an implicit pledge by the US not to hinder attempts by Israel to achieve a nuclear capability (Power, 1986b, 847).

The US on its part rejected initial efforts by Israel to source nuclear reactors which produced plutonium, given that such reactors had military applications. It also rejected Israel's requests for providing heavy water without safeguards. While Israel in 1959 secured the heavy water from Norway, the US though did supply Israel with 4 tonnes under 'Atoms for Peace' for Nahal Soreq. The US intelligence came to know about the existence of the structure being built in the Negev, which was identified as a nuclear reactor, when the U-2 reconnaissance spotted it in a routine flight in in 1960. When queried by the US, the Israeli government told them that the site under construction was a "textile" plant (Cohen, 1998, 85).

Ben-Gurion informed the Knesset on 21 December 1960 (the first time ever that the existence of the reactor was publicly acknowledged in response to sustained pressure from the Americans) that the 24-megawatt electric (MWe) reactor would be used only for 'training, research, and other peaceful purposes' (Spector, 1984, 121; Solingen, 1994, 318). He also informed the Knesset that Israel had proposed general regional disarmament to the Arab states, with mutual inspections and guarantees (Jabber, 1971, 122). Ben-Gurion further rejected the idea of a NWFZ until conventional disarmament was achieved (Spector, 1984, 122; Pajak, 1982, 33).

The decision to manufacture nuclear weapons, according to analysts, was taken after the June 1967 war. Egyptian chemical weapons were found in the Sinai after the war ended. The comprehensive defeat of the Arabs did not bring a rethink of their long-standing policy positions on diplomatic recognition of Israel. Further, key political and scientific figures who were known to be in favour of the nuclear weapons option, occupied key government positions

after the 1967 war. These included Moshe Dayan, who became Defence Minister just prior to the start of the war and held that position till the 1973 war. Shimon Peres also returned to government, when his new party Rafi, (formed in 1965 after breaking away from the ruling Mapai party), became an alliance partner in the government in 1968. Ernst Bergmann, former Chairman of the IAEC and Scientific Adviser to the Minister of Defence, was also a key bomb proponent. Others also note that Egypt's missile collaboration with Germany in the early 1960s spurred Israel's efforts to actually embark on the weaponisation path (Pajak, 1982, 36; Spector, 1984, 124-125; Barnaby, 1989, 24; Aronson, 1992, 86; Feldman, 1997, 130).

While Israel sabotaged collaboration between Germany and Egypt in the missile field, it went on to collaborate with the French for its own missile programme beginning 1966. Analysts note that Israel paid more than US\$100 million to the privately owned French company Dassault for help on the Jericho missiles (Hersh, 1991, 120). The French-Israeli strategic cooperation though was put on the back-burner by President Charles De Gaulle after the 1967 war. The French President blamed Israel for its 'expansionist' and 'belligerent' policies. He also held the French-Israeli cooperation as "improper" as it was being carried out secretly. The cooperation however was not stopped immediately and the French companies continued to assist Israel (Heiman, 2011, 898; Bhatia, 1988, 39; Weissman and Krosney, 1989, 113).

Some of the key considerations that guided de Gaulle's decision included a gradual warming of French-Arab ties after the end of the Algerian War, the dangers inherent in the spread of nuclear technology or material in unstable conflict zones like West Asia, among others. Analysts like Gadi Heiman point out that de Gaulle also came to the conclusion that assisting states like Israel with their nuclear projects impeded French efforts to seek US nuclear assistance. This was considered crucial in terms of nuclear material as well as technical knowledge, given that France still had some way to go before acquiring such capabilities in developing its own nuclear weapons capability (Heiman, 2010, 111).

After Dimona was revealed, the initial US reaction was very blunt, with President Dwight Eisenhower warning Israel not to go down the weapons route. President John Kennedy increased the pressure, when he insisted on US teams to inspect Dimona on a regular basis. US personnel visited Dimona at least twice a year till 1965. An upset Kennedy also rebuffed entreaties by Ben-Gurion for a State visit to discuss the implications arising out of the formation of the Arab Federation (comprising Egypt, Syria and Iraq) in 1963 (Hersh, 1991, 121).

In order to forestall Israeli nuclear weaponisation efforts, the US strengthened Israel's conventional forces, a phenomenon international relations theorists classify as the 'Dove's dilemma' (Solingen, 1994, 317). The logic underpinning this argument is that if Israel's sense of security gets assuaged to some extent as a result of the conventional arms supply from a super power, there will be a corresponding decrease in the incentives to pursue nuclear weaponisation. At the same time however, supply of sophisticated conventional weapons to Israel could in fact lead to increased weaponisation by its enemies to counter the perceived military advantage that such weapons bestow on Israel. Apart from bolstering Israel's conventional capabilities, during the Johnson administration (1963-69), pressure was applied on Israel to force it to sign the NPT in exchange for the supply of 50 F-4 Phantom aircraft. Israel, of course, did not give such a commitment (Feldman, 1982a, 211; Pajak, 1982, 38; Hersh, 1991, 184).

Israel conducted a 'cold test', which did not involve nuclear material, on 2 November 1966. Israel also did not have the means of delivering a nuclear weapon, be it missiles or nuclear capable bombers, at that point in time (Karpin, 2006, 268). There is widespread speculation however, that a 'flash' recorded by a US reconnaissance satellite over the Atlantic Ocean on 22 September 1979 off the coast of South Africa, was in fact an Israeli nuclear weapon test, conducted either with cooperation with South Africa or alone by Israel (Melman, 2009; Hones et al, 1981). Cooperation between the apartheid South African regime and Israel spanned issues relating to nuclear material transfers (involving the supply of over 500 tonnes of raw uranium from South Africa to Israel) in return for Israel's transfer of technology relating to nuclear-capable Jericho missiles (Sublette, 2001; Kershner, 2010).

Analysts also note that the visit of Maj. Gen Amos Horev, who was a Chief Scientist in the Ministry of Defence, to South Africa in November 1979, in the immediate aftermath of the alleged test, was significant (Pajak, 1982, 41-43; Bhatia, 1988, 44-45; Melman, 2009). South Africa gave Israel the permission to conduct the test apparently in return for the latter's significant strategic cooperation, spanning the nuclear and missile arenas and arms transfers (Nuclear Proliferation International History Project, 2012). It is pertinent to note that John Vorster visited Tel Aviv in 1976, the first such visit by a South African Prime Minister. This followed Moshe Dayan's secret trip to Pretoria in 1974, where in the possibility of an Israeli nuclear test on South African soil was apparently discussed (Hersh, 1991, 264-265). By 1979, South Africa was Israel's biggest arms supplier and reports note that between 1974 and 1993, the value of Israel-South Africa arms trade was over US\$2 billion (Frankel, 2010).



The issue of nuclear and missile collaboration between the two countries was the subject of intense scrutiny by the UN General Assembly (UNGA). In Resolution 32/105 D, titled “Relations between Israel and South Africa”, the UNGA demanded that Israel desist from collaborating with South Africa in the nuclear arena (United Nations General Assembly, 1977b, 33). It is interesting to note that Pakistan was among countries that were at the forefront of criticising Israel’s nuclear cooperation with South Africa. In particular, Pakistan highlighted the September 1979 event over the Atlantic Ocean recorded by the American satellite as proof of Israeli nuclear capability while at the same time insisting that it was not pursuing a military nuclear programme.

Israeli Ambassador to the UN Yehuda Blum strongly rebutted the claims of the Pakistani representative and went on to provide a detailed analysis of the various components of the Pakistani nuclear programme. He further charged that Pakistan had “established a chain of ‘front’ companies throughout 14 countries to acquire clandestinely all the necessary components [for its nuclear programme] piece by piece” (United Nations General Assembly, 1981d, 2). Blum pointed out that Pakistan’s uranium enrichment technology was based on technology stolen by the Pakistani scientist A.Q. Khan, from the research facility where he was working in the Netherlands (Ibid). Israel, therefore, was one of the very first countries to highlight Pakistan’s clandestine nuclear programme, long before the A.Q. Khan proliferation network gained worldwide notoriety for supplying centrifuges and nuclear know-how to countries like Libya and Iran, earning the sobriquet, ‘nuclear walmart’ (El-Baradei, 2011, 168-178).

As for the extent of the Israeli nuclear arsenal, the UN Secretary-General in a September 1981 report estimated that Israel had about 10-15 nuclear warheads at that time, given that about 100 kgs of plutonium 239 (Pu-239) would have been produced at Dimona from 1963 onwards (United Nations General Assembly, 1981e, 20). Mordechai Vanunu, who worked at the Dimona reprocessing plant, revealed to the *Sunday Times* in 1987 that the annual production of weapons-grade plutonium at the plant was 40 kilograms. This would have been adequate, according to analysts, to produce about 150 weapons by the 1980s (Bhatia, 1988, 34-36; Barnaby, 1989, 25; Hersh, 1991, 197). The *Bulletin of Atomic Scientists* in 2014 estimated that Israel could have about 80 nuclear warheads (Kristensen and Norris, 2014).

## **Israel and Nuclear Weapons: Doctrinal Positions**

Israel's Deputy Defence Minister Shimon Peres, in a meeting with President John F. Kennedy on 2 April 1963, affirmed that Israel had no nuclear weapons. Further, he stated that Israel would not be the first country to introduce nuclear weapons into the region (Hersh, 1991, 119). Peres further affirmed that Israel's own interest was in "de-escalating the armament tensions, even in total disarmament" (Ibid). US officials also acknowledged that Peres gave an assurance about Israel not making any efforts in the nuclear field, as long as other countries in the region also did not do so (Foreign Relations of the United States, 1963).

Prime Minister Levi Eshkol reiterated to the Knesset on 18 May 1966 what Peres told Kennedy (Cohen, 1998, 233-235). Eshkol's statement was in response to concerns aired by Egyptian President Gamal Abdel Nasser on Israel's nuclear intentions. Eshkol told the Knesset that Egypt always introduced new weapons systems in the region and also used chemical weapons in the Yemen War (1963-67). The Israeli prime minister charged that Nasser was diverting attention away from the conventional arms race that Egypt was instigating towards Israel's nuclear capabilities. Eshkol asserted that such capabilities did not exist and affirmed that Israel would not be the first to introduce them to the region (Ibid). Cohen therefore notes that credit should go to Prime Minister Eshkol for the long-held Israeli position on nuclear weapons policy, given that he was the one who articulated it on the floor of the Knesset publicly.

Prime Minister Yitzhak Rabin, in an interview with the ABC Television current affairs programme on 7 September 1975, stated that Israel would not be the first to introduce nuclear weapons into the region. He added that at the same time, Israel could not afford to be the second either to do so (Dowty, 1978, 83). Prime Minister Menachem Begin, speaking at a press conference on 24 February 1981, insisted that "Israel will not be the first party in the Middle East to introduce nuclear weapons." This was brought to the attention of the UNGA by Israel's representative to the UN, Yehuda Blum, in June 1981 (United Nations General Assembly, 1981d, 5).

Prime Minister Begin, in the aftermath of the Israeli air raid on the Osiraq reactor in Iraq on 7 June 1981, affirmed that Israel would prevent attempts by inimical regional countries to acquire nuclear weapons (Jones et al., 1998, 206). In the light of failed efforts by the Arab states (in particular Egypt) to place curbs on the Israeli nuclear programme in return for extending their support for the NPT's indefinite extension in 1995, Foreign Minister Ehud Barak in January

1996 affirmed that “Israel’s nuclear policy, ... has not changed, will not change and cannot change” (Steinberg, 1996, 25).

The conceptual term, “opaque” nuclear proliferation, most clearly captures Israel’s nuclear policy positions. The term was first postulated by the celebrated proliferation specialist, Leonard Beaton in 1966, who noted that it denoted a “potential nuclear power that has not sought to realise its potential” (Fortmann, 1992/1993, 151). Cohen and Frankel note that Israel is the “ideal type” of opaque proliferation. It has not conducted nuclear tests and its leaders have oft stated that they would not be the first to introduce nuclear weapons into the region. Further, Israel has not issued any direct nuclear threats against its Arab neighbours. It even does not have a stated military doctrine, at least in the public domain, unlike other nuclear weapon states like the US, which delineates the role that nuclear weapons occupy in its security doctrines (Cohen and Frankel, 1991).

A crucial factor that helped foster this policy of opacity was a tacit agreement between Israel and the US, as part of which the US agreed to tolerate the Israeli nuclear programme as long as it did not publicly acknowledge such capability or test a nuclear weapon. This agreement was entered into between Prime Minister Golda Meir and US President Richard Nixon in 1969, in the presence of Secretary of State Henry Kissinger (Cohen and Miller, 2010, 31).

An important consideration that drove the Israeli nuclear opacity was the imperative of not instigating its Arab neighbours from acquiring nuclear capabilities. If the ambiguity about its nuclear programme was maintained, Israel believed that it could be relatively assured of the fact that regional countries would not invest in efforts to try to acquire similar capabilities. It is important to point out that Israel was not a major factor driving some of the regional weapons of mass destruction (WMD) programmes. Iraq’s nuclear journey began in the late 1970s in response to efforts by Iran to acquire nuclear power reactors. Iran on its part invested in its missile programmes after being subject to missile barrages during the closing stages of the Iran-Iraq war.

In the light of developments relating to the Iranian nuclear imbroglio, the debate about whether Israel has to be more open about its nuclear capabilities in order to project its nuclear deterrence power to potential enemies like Iran, gained ground. This was especially so as Iranian political and military leaders have made statements threatening to destroy the “Zionist entity”. Iranian President Mahmoud Ahmadinejad’s reported statement in this regard gained much traction (Kessler, 2011).

While visiting Berlin, Prime Minister Ehud Olmert, in an interview to German television on 11 December 2006, responding to a question on the concerns emanating from the Iranian nuclear programme, pointed out that Iranian political and military leaders publicly threaten Israel's destruction. He charged that Iran was making every effort to acquire nuclear weapons capability, just as "America, France, Israel, and Russia?" (*Speigel*, 2006). Olmert's 'nuclear slip' — an unintended acknowledgement of Israel's nuclear capability, followed a statement by US Secretary of Defence Robert Gates on the same subject. Just the week before Olmert's interview, Gates had flagged Israel as one of the nuclear powers that was surrounding Iran, apart from Pakistan, Russia and the US military presence in the region (*The Washington Post*, 2006).

Olmert's statement drew mixed reactions from Israeli commentators. Some worried that such an open acknowledgement by the country's top political leader focussed unwanted attention on Israeli nuclear capabilities. This could bring attention to different non-proliferation yardsticks being applied to Israel (as a nuclear weapon possessing country) vis-à-vis Iran (against whom only allegations of pursuing nuclear-weapons related activities were being levelled). Former Foreign Minister Silvan Shalom, for instance, charged that the prime ministers' remarks caused "great harm" to Israel. Yossi Beilin, a member of the left-wing Meretz party, stated that the remarks indicated a "lack of caution bordering on irresponsibility" (Harding and Campbell, 2006). Another Likud member, Yuval Steinitz, had charged that the remarks damaged "50 years of Israel's policy of ambiguity" (*Speigel*, 2006). As against such voices advocating continued caution with regards to Israel's nuclear capabilities, contrary voices have pointed out that 'excessive secrecy' surrounding the Israeli nuclear programme undermined Israel's democratic credentials and hurt its Israel's national security (Pedatzur, 2000).

Olmert's statement, however, if made intentionally, communicated Israel's nuclear deterrence capabilities explicitly to Iran. It clearly conveyed Israel's capabilities to mount a debilitating second strike in case countries like Iran mistakenly targeted the country with WMD. Apart from such 'signalling', Israel also undertook measures to make its deterrent more effective. Prominent among such efforts included the procurement of Dolphin-class submarines from Germany, with ability to function as effective platforms for launching missiles at large distances from its shore in the event of being attacked first by its enemies. This ability overcomes Israel's absence of geographical depth and the danger of losing its valuable missile assets in a precipitating enemy first strike. Israel has also operationalised missile defence systems like the Arrow and David's Sling, both of which have been developed in cooperation

with the US. Israel conducts large missile defence exercises, like Austere Challenge 2012, in conjunction with the US, simulating the shooting down of long range ballistic missiles.

Therefore, as noted in the preceding paragraphs, Israel's nuclear weapons pursuit accelerated after the 1967 War, when Arab hostility did not lessen despite their comprehensive defeat in that war as well as in preceding conflicts. The Egyptian use of chemical weapons in the 1963-67 Yemen conflict further determined Israel's policy choices, as indeed Egypt's missile collaboration with West Germany. The period after 1967 coincided with the domestic political ascendance of the 'bomb lobby' — those who advocated for such a capability like Peres and IAEC Chairman Bergmann. Israel's acquisition of advanced fighter aircraft like the Phantom in 1968 (a deal which was negotiated by Peres) was emblematic of the US resolve to ensure Israel's qualitative military edge (QME) in the conventional sphere, as against its Arab neighbours (Rodman, 2004).

In the face of threats from countries like Iraq (which targeted the Jewish state with intermediate range ballistic missiles during the Kuwait War) and Iran (whose nuclear pursuit was seen as an existential threat), Israel buttressed its nuclear profile. Such measures included high-level political signalling (Olmert's December 2006 interview is a pertinent example) as well as by acquiring potent platforms like submarines from Germany, which could potentially be used for nuclear second strike in case countries like Iran made the mistake of misjudging Israeli capabilities or intentions.

Israel insists it has never threatened its neighbours with nuclear weapons. Recent scholarship has thrown greater light on the events surrounding the moves undertaken by the members of the Levi Eshkol government to ready a nuclear device for possible aerial detonation in the eastern Sinai desert in the event that Israel was faced with reverses in the battlefield during the 1967 Arab-Israeli War. The Israel Defence Force (IDF) Chief of Staff, Yitzhak Rabin, was concerned about a surprise attack on Dimona by the Egyptian Air Force, which flew reconnaissance missions over southern Israel ahead of the war, in May 1967 (Cohen and Pollack, 2019, 3).

Hassan Elbahtimy, drawing upon Egyptian sources and oral interviews, states that Egypt had not planned to attack Dimona but was drawn into the war through miscalculations, including relating to preventing the possibility of Israel attacking Syria, with which Egypt had entered into a mutual security pact, a few months earlier (Elbahtimy, 2019, 7; Laron, 2017). During the second day of the Yom Kippur War, on 7 October 1973, analysts note that Defence Minister

Moshe Dayan urged Prime Minister Golda Meir to pass instructions to assemble a nuclear device for a 'demonstration' strike in order to halt Arab advances. The suggestion was however turned down by Meir (Laron, 2017; Nuclear Proliferation International History Project, 2013).

### **Israel's Nuclear Policy Positions at the UN**

Even as Egypt and Iran called for a regional NWFZ, these countries began their own fledgling civilian nuclear programmes. The Atomic Energy Organisation of Iran (AEOI) was created in 1974. In the same year itself, Iran signed agreements with the US and West Germany to build nuclear reactors. These agreements became void after the Islamic Revolution. The Bushehr nuclear power plant, which was initially intended to have been built with West German assistance, was built by the Russians after a new agreement relating to its construction was agreed upon in 1995. (Bahgat, 2006, 308-309).

Taking forward Egypt's and Iran's advocacy of the idea, the UNGA, in Resolution 3263 of 9 December 1974, for the first time, commended the proposal of a NWFZ in West Asia (as enunciated by the League of Arab States and the Shah). The UNGA pointed out that such a zone would be in consonance with the aims and objectives of the NPT, as well as take forward the momentum generated by the establishment of the Latin American NWFZ (which opened for signature in February 1967) as well as the July 1964 declaration on 'Denuclearisation of Africa' (United Nations General Assembly, 1974a, 27).

In Resolution 3474 of 11 December 1975, pending the establishment of such a zone, the UNGA recommended that states should not produce, acquire or possess nuclear weapons nor should they allow other countries to base nuclear weapons on their territories (Ministry of Foreign Affairs, 1975). In Resolution 32/82 of 12 December 1977, the UNGA urged all regional countries to submit their nuclear facilities to IAEA safeguards (United Nations General Assembly, 1977c, 48).

The UNGA on 11 December 1979 adopted resolution 34/89 on "Israeli nuclear armament" as a step that aggravates international peace and security and called upon states not to cooperate with Israel in developing nuclear weapons, or transfer fissile material or nuclear technology to Israel. The resolution urged Israel to submit its nuclear facilities for IAEA inspections, and requested the UN Secretary-General to prepare a report with the help of qualified experts on the issue of 'Israeli nuclear armament' (United Nations General Assembly, 1979, 65).

Following through with the above suggestion, the UN Study Group on Israeli nuclear armament, comprising of eminent experts, produced a report which was released by Secretary-General Kurt Waldheim on 18 September 1981. The experts included Prof. Ashok Kapur (Canada), Dr. Ali Mazrui (US), Dr. George Quester (US), Mark Kroustalev of the Soviet Union, and Dr. Assad Saab (Lebanon). The experts pointed out that since Israel was not a member of the IAEA, it was under no legal obligation to provide a list of facilities or its activities in the nuclear domain to the international nuclear regulatory body (United Nations General Assembly, 1981e). The experts further stated that the June 1981 attack on the Osiraq reactor “undermined the credibility” of the IAEA safeguards system, given that the IAEA in its inspections of the reactor did not find evidence of activities which were at variance with the terms and conditions of Iraq’s safeguards agreements or its commitments as per the NPT (Ibid, 19).

While Israel welcomed the idea of a NWFZ at the UNGA from the beginning, it abstained from voting in favour of the Egyptian resolution during 1974-1979. It put forward its own draft resolution for a regional NWFZ at the 35<sup>th</sup> Session of the UNGA in 1980, which called for negotiations as the way forward to achieve the objective (United Nations General Assembly, 1981b, 3). The draft resolution called on the UN Secretary-General to convene a conference of regional states as well as states adjacent to the region to negotiate a NWFZ treaty (Ibid).

The Israeli Representative to the UN, Arye Eilan, remarked that Israel was a supporter of measures that sought to prevent nuclear weapons proliferation. He pointed out that Israel ratified two important CBMs in the arms control arena in recent past. These included the partial test ban treaty (PTBT), which Israel ratified on 15 January 1964 and the Outer Space Treaty, which it did on 18 January 1981. Israel had also voted in support of the UN resolution recommending the text of the NPT on 10 June 1968 (United Nations General Assembly, 1980, 19-20).

Eilan cited Resolution 3261 (adopted in 1974), which examined the issue of NWFZ in all its aspects, which acknowledged that the initiative to create such zones should emanate from states residing in a particular region and that states should participate in such zones voluntarily. He brought to the attention of the General Assembly that most of the conflicts in the world were “primarily regional disputes”. He pointed out that many regional states like Syria or Iraq or Kuwait, while signing multi-lateral arms control treaties like the PTBT or the NPT, have insisted that their signatures in a multi-lateral treaty in which Israel may also be a member does

not in any way signify that they recognise its independence or sovereignty (Ibid, 23-25). Eilan stated that such statements are reflective of the deep political divides that straddle the region, which have to be bridged before regional CBMs like the NWFZ can be discussed. He added that a NWFZ can be established if regional states negotiate such a zone in good faith (Ibid, 25).

Israel withdrew its draft resolution on the NWFZ when it was opposed by a number of Arab states (for stressing on direct negotiations) and subsequently voted in favour of an Egyptian resolution (for the first time) on the MENWFZ that was being passed regularly since 1975. While voting in favour of the resolution, Israel's Permanent Representative to the UN, Yehuda Blum, though clarified that it was doing so despite "serious reservations as to the modalities of arriving at the establishment of such a zone as recommended by the resolution before us" (United Nations General Assembly, 1981d, 4).

Israel's Foreign Minister, Yitzhak Shamir, on 1 October 1981, insisted that such a zone should be "freely and directly negotiated among the countries of the region and based on mutual assurances, on the pattern of the Treaty for the Prohibition of Nuclear Weapons in Latin America" (United Nations General Assembly, 1981c, 1). In a letter addressed to the Secretary-General on 26 October 1981, Blum also pointed out that the UNGA in June 1978 (at the Special Session which explored the issue of global nuclear disarmament and arms control measures in depth), had highlighted the fact that the "characteristics of each region should be taken into account" while exploring the possibility of establishing a regional NWFZ (United Nations General Assembly, 1981b, 2; United Nations General Assembly, 1978, 6). Blum pointed out that West Asia was a region "characterised by conflict and tension" and that Israel was "fully aware of the many political differences among the states of the Middle East" (United Nations General Assembly, 1981a, 2).

In a letter addressed to the Secretary-General after the Osiraq attack (which took place on 7 June 1981), Blum stated

In such a volatile area, a nuclear weapon free zone can only be established if each state is contractually assured of compliance with the commitment by all the other states in the region to abstain from introducing nuclear weapons into the region. As long as the resort to war is not ruled out, little faith can be placed either in unilateral declarations amounting to no more than self-denial ordinances in the nuclear sphere, or in the strict and unbroken compliance with such pledges (Ibid).



Israeli Foreign Minister Yitzhak Shamir, speaking at the UNGA on 1 October 1981, affirmed that the best way to remove the threat of nuclear war was through the establishment of a NWFZ “freely and directly negotiated among the countries of the region and based on mutual assurances”, in the manner similar to the treaty that was negotiated to establish a NWFZ in Latin America (United Nations General Assembly, 1981c, 448). He however asserted that Israel opposed every attempt to make this issue a “tool of anti-Israel political warfare” (Ibid). It is pertinent to note that this speech of the Israeli Foreign Minister was in the immediate aftermath of the destruction of the Osiraq nuclear reactor in June 1981.

The UNGA resolutions on the MENWFZ, as well as on the issue of the “Israeli nuclear armament”, have subsequently been passed every year, despite there being no substantial movement on the issue of the MENWFZ. The UNGA expressed concern regularly every year over Israel’s lack of compliance with UNSC Resolution 487 (passed after the attack on Osiraq which called on Israel to establish IAEA safeguards on its facilities) and condemned Israel’s “declared intention” to attack regional nuclear infrastructure if it felt such facilities were a threat to its very existence (United Nations Security Council, 1981a; United Nations General Assembly, 1983a, 2; United Nations General Assembly, 1983b, 61).

After Kuwait’s liberation by coalition forces led by the United States, the UNSC passed resolution 687 on 3 April 1991 requiring Iraq to “unconditionally accept” the destruction of its WMD stockpile, including its chemical and biological weapons and destroy ballistic missiles with a range exceeding 150 kms. The resolution created the UN Special Commission (UNSCOM) on Iraq with the mandate to oversee the destruction of its WMD assets and capabilities. It directed Iraq to “unconditionally accept” not to develop nuclear weapons. The resolution affirmed that the above measures constituted essential steps towards establishing a WMDFZ in the region (United Nations Security Council, 1991b).

The resolution titled “Israeli nuclear armament” was on the agenda of the UNGA till 1993. Subsequently, the resolution, “The risk of nuclear proliferation in the Middle East”, incorporating the language as well as concerns of the earlier resolution titled “Israeli nuclear armament”, was passed by consensus in January 1995. The newly titled resolution incorporated the risk to the region from continued Israeli non-signature of the NPT as well as its non-adherence to the terms of Resolution 487 to submit its facilities to IAEA safeguards (United Nations Security Council, 1981a; United Nations General Assembly, 1995). The Israeli Foreign Ministry pointed out that though the newly titled resolution was passed with 60

countries voting in favour and four against (including the US and Israel), there were over 100 abstentions; in effect, the resolution did not secure the support of nearly two-thirds of the UNGA (Ministry of Foreign Affairs, 1994).

The issue of the West Asian NWFZ got greater traction in forums like the NPT Rev Con and at the IAEA, after 1995. The Arab countries, led by Egypt, made their support to the NPT's indefinite extension in 1995 at the Rev Con contingent on Israel showing greater transparency on its nuclear programme. Their efforts resulted in the 1995 NPT Rev Con adopting the 'Resolution on the Middle East', which expressed concern over the existence of unsafeguarded nuclear facilities in the region, called on the states of the region which had not acceded to the NPT to do so at the earliest, and make efforts to establish a verifiable regional WMD free zone (UN Office for Disarmament Affairs, 1995a). While Israel was not specifically mentioned, the text of the resolution made it amply clear that Israel's unsafeguarded nuclear facilities and its NPT non-signature were essential elements that negatively impacted the realisation of the West Asia WMD free zone.

By the time of the 2000 NPT Rev Con, Israel was the lone regional state that had not acceded to the NPT, given that regional states like Djibouti, Oman and the UAE acceded to the NPT after the 1995 Rev Con. Subsequent sections will examine these developments relating to the NPT in greater detail. The next section deals with the Working Group on Arms Control and Regional Security (ACRS), an important effort by regional countries to find common ground on WMD concerns.

### **Working Group on Arms Control and Regional Security (ACRS)**

Israel and Arab countries were involved in the Arms Control and Regional Security (ACRS) talks, from January 1992. This was in the aftermath of the Madrid process, which began in March 1991. The talks were an effort by the US and the Russian Federation to forge a common understanding on regional security issues. Fourteen regional countries (Algeria, Bahrain, Egypt, Israel, Jordan, Kuwait, Mauritania, Morocco, Oman, PLO (later Palestinian Authority), Qatar, Saudi Arabia, Tunisia, United Arab Emirates and Yemen, participated in these talks.

Key regional countries associated with the pursuit of non-conventional weapons like Iran, Iraq and Libya were not invited to join the multi-lateral process while Syria and Lebanon declined the invite to participate (Jentleson, 1996, 4). Nearly 30 extra-regional, including multi-lateral organisations like the IAEA and the Organisation for Security and Cooperation in Europe (OSCE), apart from the United Nations, participated in the talks.

The global and regional context within which the talks were held was significant. The Cold War had ended after the Soviet Union's dis-integration, a country which was a key strategic partner of many regional countries. The 1991 Kuwait War, when the US-led coalition defeated Saddam Hussein rather swiftly and liberated Kuwait, highlighted the regional security deficit. The missile attacks launched on Israeli territory by the Iraqi leader in a desperate attempt to drag it into the war reaffirmed to the Israeli political leadership the continued threat posed by such regional arsenals. Apart from muscular military options like preventive strikes, Israeli participation in the ACRS talks was an acknowledgement on its part of the usefulness of exploring regional CBMs and transparency measures to deal with such threats.

Over 30 expert-level meetings were held at six plenary sessions during the four years the ACRS process was functional (1992-1995), in places as varied as Egypt, Jordan, Qatar, Tunisia, apart from venues in the US, Europe and Russia. Among some of the significant understandings achieved as part of the process included the setting up of a communications link between the participants to convey views on issues that were discussed at the meetings, maritime CBMs, among others (US State Department, 2001b).

None of these understandings could, however, be implemented. The talks floundered due to divergences on even procedural issues, relating to, for instance, a lack of an agreement on a common agenda for discussion. Specifically, these differences related to whether the countries participating in the talks should discuss conventional or non-conventional weapons as well as over the question of whether the regional countries should first subscribe to global arms control treaties before having discussions over the possibility of establishing a regional WMD free zone (Yaffe, 2001, 9). Egypt specifically was insistent that countries like Israel should first subscribe to global arms control treaties like the NPT (Jentleson, 1996). Further, Egypt made progress in the Middle East Peace Process (MEPP) contingent on Israel giving up its nuclear monopoly; this was strongly objected to by Israel (Steinberg, 1996, 18). The last of the multi-lateral talks was held in September 1995 in Amman, Jordan.

The participating countries of the ACRS Working Group did, however, discuss various initiatives like establishing regional security centres, verification mechanisms for arms control agreements, demarcating of the region for purposes of arms control, among other measures. Given the mutual suspicions that animated the contentions between Israel and the Arab participants at the bilateral and regional level, such discussions on security issues at the multi-lateral level could not make much progress (Ibid; Jentleson, 1996; Jones, 2011, 2). Indian

experts, along with experts from Australia, France and the United Nations, were part of the discussions at Helsinki, where conceptual issues relating to regional arms control were discussed between 29 May and 1 June 1995 (Ministry of Foreign Affairs, 1999).

Analysts note that the ACRS experience drove home the point about the problems associated with linking the pursuit of regional security CBMs with the larger political goals like the MEPP. The process was also reflective of the limitations of extra-regional players or even multi-lateral or international mechanisms like the UNGA in nudging/forcing regional countries to agree on a set of security-related CBMs. Some of the benefits of the 'track-two' process, though, were that regional experts became versed to some extent on the complexities involved in arms control negotiations, specifically relating to the nature of the verification measures that have to be put in place in order to assuage each other's concerns over possible non-compliance (Jones, 2011, 7; Landau and Kurz, 2012; Steinberg, 2006; Kaye, 2012).

### **Israel and the NPT**

Israel voted in favour of the 1968 UNGA Resolution which brought the NPT to existence. Israel, however, subsequently did not sign the treaty. At the UNGA, as noted in the previous sections, successive resolutions have been urging Israel to sign the NPT. As early as in December 1977, UNGA Resolution 32/82 urged all regional countries to sign the NPT. Pending the agreement on a NWFZ, UNGA has been insisting that countries of the region should sign the NPT as an important CBM in itself. Israel however did not accept this view, while at the same time supporting the general principles underpinning the NWFZ. Israel and regional countries in West Asia differed as to the process that would result in the promulgation of such a zone. Israeli Ambassador to the UN, Yehuda Blum in 1981, insisted that adherence to the NPT cannot be an alternative to establishing NWFZ in any region (United Nations General Assembly, 1981a, 2).

The issue of Israel's non-signature of the NPT and its linkages with MENWFZ gained specific attention in 1995, when the decision as to the extension of the NPT had to be taken by its member states. Article X, Paragraph 2 of the NPT (which opened for signature in 1970), required that a conference held after 25 years would decide whether the treaty would be extended indefinitely or for a specific period. At the fourth quinquennial in 1995, under the chairmanship of Ambassador Jayantha Dhanapala, the treaty was extended indefinitely by consensus (UN Office for Disarmament Affairs, 1995b).

The consensus was reached by promising to make renewed efforts on the issue of the West Asian NWFZ in return for the support of the Arab states and members of the Non-Aligned Movement (NAM) — who made up a majority of the NPT membership. These countries made their support for NPT extension contingent on the passage of the ‘Resolution on the Middle East’. These states were upset with Israel’s nuclear status as well as over the general lack of progress on the issue of regional as well as global nuclear arms control and disarmament.

The ‘Resolution on the Middle East’ passed at the Rev Con affirms that a regional NWFZ contributes to bolstering regional security, endorsed the aims and objectives of the MEPP, noted with concern the existence of unsafeguarded nuclear facilities and reaffirmed the importance of early realisation of universal adherence to the NPT (UN Office for Disarmament Affairs, 1995a). Israel, Djibouti, Oman and the United Arab Emirates (UAE) in West Asia, apart from Pakistan and India, were the only states that had not signed the NPT at that point in time. By the time of the next NPT Rev Con in 2000, the other three countries had joined the NPT (UAE in September 1995; Djibouti in October 1996; and Oman in January 1997), leaving Israel as the only regional country that had not yet acceded to the NPT.

Further, the 1995 NPT ‘Resolution on the Middle East’ called on the states of the region to “take practical steps” aimed at making progress towards “an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems ...” (Ibid). A perusal of the above resolution indicates that it clearly acknowledged the inherently political link between progress on the MEPP and efforts that contribute to a NWFZ in the region. Egypt, at the forefront of efforts that brought about the ‘Resolution on the Middle East’, insisted that Israeli nuclear weapons were brought to the centre of the conference’s agenda by the said resolution (Stevens and Tarzi, 2000).

The US believed that singling out Israel would damage the MEPP and consequently hurt, rather than aid, the prospects of a West Asian NWFZ (Rauf and Johnson, 1995, 30). Given that Egypt invested a lot of political and diplomatic capital ahead of the Rev Con in linking its support for the indefinite extension of the NPT to greater scrutiny and international oversight of the Israeli nuclear programme, the Israeli argument that it was better off at the end of the NPT extension process, would seem to hold much water (Steinberg, 1996, 21).

After the Comprehensive Test Ban Treaty (CTBT) was adopted in 1996, the UNGA called on the “only state in the region of the Middle East” that is not a party to the NPT, that is, Israel, to become a member of the treaty and submit its nuclear facilities to IAEA safeguards (United

Nations General Assembly, 1997, 2). As pointed out in previous sections, in the run-up to the indefinite extension of the NPT in 1995, Israel and its regional neighbours engaged in a significant confidence-building process related to the issue of WMD, as part of the Working Group on ACRS. This process however did not result in any significant understandings on the way forward to achieve regional CBMs in the WMD sphere, mostly on account of unbridgeable differences over Israel's nuclear status.

Analysts point out that at the 2000 NPT Rev Con, the US accepted language in the Final Document that explicitly 'singled out' Israel's non-NPT status (Steinberg and Rauf, 2000, 175-176). The Final Document of the 2000 Rev Con welcomed the accession of states such as UAE, Djibouti and Oman among others to the NPT since 1995 and reaffirmed the "importance of Israel's accession to the NPT and the placement of all its nuclear facilities under comprehensive IAEA safeguards, in realizing the goal of universal adherence to the Treaty in the Middle East" (NPT Review Conference, 2000, 17).

While the subsequent quinquennial NPT Rev Con's reaffirmed the goals of the 1995 resolution on the West Asian NWFZ, the 2010 Rev Con specifically called for the convening of a regional conference to discuss the issue and required the appointment of a facilitator to oversee the process. Finnish diplomat Jaako Laajava was appointed to the position in October 2011 and the conference was scheduled to be held in Helsinki in December 2012.

Israel, from the beginning, was deeply sceptical of the 2010 NPT Rev Con resolution, calling it "deeply flawed and hypocritical." It charged that the resolution unduly targeted a country which was the only democracy in the region and which was the "only country threatened with annihilation" (Ministry of Foreign Affairs, 2010). The Israeli Foreign Ministry further stated that the real culprits, when it came to WMD in the region, were countries like Iran, Iraq, Syria and Libya, which "brazenly violated" the terms of the NPT over the years despite being its signatories (Ibid).<sup>1</sup>

The US State Department spokesperson Victoria Nuland in a statement on 23 November 2012 stated that the proposed December 2012 Helsinki conference (which was an essential part of the commitments agreed upon at the NPT Rev Con 2010) could not be convened "because of present conditions in the Middle East ...". She further noted the "deep conceptual gap" regarding approaches towards regional security and arms control arrangements (US State

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<sup>1</sup> The WMD programmes of Iran, Iraq, Libya and Syria are detailed in subsequent chapters.

Department, 2012). She was referring to the geo-political turmoil that the region underwent beginning in 2011 which pushed non-proliferation CBM's like NWFZ to the background, with regime security and state survival gaining prominence during the 'Arab Spring'.

Despite the inability to convene a formal conference, analysts note that the 2010 NPT Rev Con proposal for a regional NWFZ conference led to a number of Track Two meetings to discuss the issue of arms control in West Asia, for the first time in over 15 years since the ACRS process (Kaye, 2012, 415). There was hope of some progress when Iranian representatives, along with Israeli analysts, participated in a European Union-sponsored Track Two meeting in July 2011, where the focus of Arab states like Egypt was on the Israeli nuclear status (Ibid, 420-421). The 2015 NPT Rev Con on its part could not even adopt a final outcome document specifically as a result of the lack of consensus on a proposed plan for moving forward to convene a conference on the West Asian NWFZ.

### **Israel and the IAEA**

Israel has been a member of the IAEA, the global nuclear regulatory body, since 1957. It concluded an agreement with the IAEA and the US, which entered into force on 15 June 1966, for application of safeguards for the Nahal Soreq reactor, built with US assistance. After the Mordechai Vanunu revelations regarding the Dimona nuclear facility to the British press in 1986, the IAEA since 1987 has been demanding that Israel submit its nuclear facilities to safeguards and join the NPT (International Atomic Energy Agency, 1987, 1). The UNSC had made similar demands on Israel in 1981 as part of Resolution 487, passed after the Israeli strike on Osiraq (United Nations Security Council, 1981a). An item, "Israeli nuclear capabilities and threat", was first proposed in 1992 by Arab states (in the aftermath of the 1991 Kuwait War) as an agenda item of the IAEA General Conference but it was not considered due to some reasons, including the possibility of hindering progress at the peace negotiations that followed the Madrid peace conference. It was eventually accepted as an agenda item at the IAEA General Conference in September 1998. This was in the aftermath of such developments as the 1995 'Resolution on the Middle East'.

There was also a greater effort on making the IAEA's safeguards system more effective, in the light of WMD concerns surrounding the Iraqi WMD programme, which led the international nuclear regulatory authority to adopt the 1997 agreement on the Model Additional Protocol (AP). This protocol was additional to the standard comprehensive safeguards agreements (CSA) that states sign with the IAEA in order to carry out safeguards activities at their nuclear

facilities. The AP enhanced the levels of IAEA's powers and capabilities to ensure compliance with a particular states' nuclear declarations.<sup>2</sup>

Mohamad El-Baradei, the IAEA Director-General, visited Israel in July 2004. In the context of his visit, Prime Minister Ariel Sharon insisted that the Israeli policy of ambiguity was as relevant as ever and would continue (BBC, 2004b). Israel was under pressure regarding its nuclear status after Libya voluntarily gave up elements of its nuclear infrastructure in 2003. The Israeli Foreign Ministry insisted that peace and security were important pre-conditions for the establishment of a NWFZ in the region. Further, Israel insisted that its position on IAEA safeguards "cannot be addressed in isolation from regional peace and stability" (International Atomic Energy Agency, 2004a). This was the period that coincided with the increase in concerns over the Iranian nuclear intentions, after the revelations about the Natanz uranium enrichment plant in 2002. The 2003 US invasion of Iraq on the pretext of taking out Saddam Hussein's WMD (which turned out to be false eventually), also negatively impacted regional stability.

At the time of this statement from the Israeli MFA in 2004 at the IAEA, eight states in the region, which were parties to the NPT, were yet to bring into force their safeguards agreements entered into with the IAEA. These were Bahrain, Comoros, Djibouti, Mauritania, Oman, Qatar, Saudi Arabia and Somalia. Additional Protocols were in force in Oman, Iran, Libya, and Kuwait while Mauritania had signed the AP but was not yet in force (International Atomic Energy Agency, 2004b, 3). When the similar resolution on "Israeli nuclear capabilities and threat" was on the agenda of the IAEA General Conference in 2005, the Israeli representative termed it as "frivolous" and charged that the resolution does not "address the most pressing proliferation concerns in the Middle East", in an obvious reference to the growing concerns about the Iranian nuclear programme after 2002 (International Atomic Energy Agency, 2005a).

Apart from urging/demanding Israel to sign the NPT and accede to IAEA safeguards, the IAEA General Conference requested the Director-General to convene special forums to discuss the experiences of other NWFZs and the possibility of applying lessons from such experiences to the West Asian context. Such a request by the General Conference was initially in September 2000, in agenda item "Application of IAEA safeguards in the Middle East". The IAEA in

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<sup>2</sup> The IAEA defines the Middle East region to include the following 23 countries - Algeria, Bahrain, Comoros, Djibouti, Egypt, the Islamic Republic of Iran (Iran), Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, the Syrian Arab Republic (Syria), Tunisia, the United Arab Emirates (UAE) and Yemen (International Atomic Energy Agency, 2015a).



November 2011 organised the ‘Forum on Experience of Possible Relevance to the Creation of a Nuclear-Weapon-Free Zone in the Middle East’, which recognised the importance of universality of NPT membership and Agency safeguards in West Asia. Pertinently, most participants at the Forum did not feel that there was the need to have a peace settlement between Israel and the Arab states prior to the application of comprehensive safeguards (International Atomic Energy Agency, 2011a). This position was in contrast to the view repeatedly expressed by Israel over the years, as highlighted in previous sections, which insisted that peace with the Arab countries was an essential condition for region-wide CBMs to be successful.

The Forum recommended an “incremental step-by-step” approach to overcome the regional trust deficit. The need for the involvement of the nuclear weapon states (NWS) in the initial stages of any process to create a regional NWFZ was highlighted, given that the NWS negative security assurances (the pledge not to use/station nuclear weapons within the geographical scope of the NWFZ) are an intrinsic part of the effort to create a NWFZ. Critically, the Forum highlighted the imperative need of “leadership from within the region themselves as an essential ingredient” in establishing the West Asia NWFZ.

At the IAEA General Conferences in 2010 and 2011, no resolution singling out Israel’s nuclear status was passed. This was considered significant in the light of the 2010 NPT Rev Con calling for a conference in 2012 to discuss the prospects of a West Asia WMDFFZ. It was hoped that such a gesture would help ease the atmospherics at the proposed 2012 conference on the NWFZ. These hopes, however, were short-lived as the conference could not be held anyways. The Iranian Representative to the IAEA slammed the inability to convene the conference as an effort to protect the interests of Israel, “a non-Party that had endangered the peace and security of the region” (Middlebury Institute for International Studies, 2016, 4).

Meanwhile, resolutions on the Israeli nuclear capabilities by Arab states were not passed at the IAEA General Conference in 2013, 2014 and 2015. When a similar resolution was placed on the IAEA General Conference agenda in 2016, the Israeli Representative charged that such efforts were “injurious to the Agency’s credibility as a professional organization” and were outside the scope of the IAEA statute as well as its mandate (International Atomic Energy Agency, 2016a). Israel again highlighted its preferred policy approach of a gradual approach and direct dialogue process based on mutual consensus.

The Israeli Representative to the IAEA, Zafary Odiz, in September 2016, responding to the debate on the resolution relating to the application of IAEA safeguards in West Asia, insisted

that “the NPT could not provide an answer to the unique security challenges of a region in which the NPT had been repeatedly violated by its Parties” (Middlebury Institute for International Studies, 2016, 5). She asserted that accession to the NPT was not a goal in itself but the goal rather should be to ensure safe and secure security environment for all countries of the region.

Egypt termed the situation arising out of the non-convening of the 2012 conference on the West Asian WMD/FZ and lack of adoption of a Final Document at the 2015 NPT Rev Con as “undermining the credibility of the non-proliferation regime as well as previous agreements and decisions” (Middlebury Institute for International Studies, 2017, 1). The US Representative at the IAEA General Conference in September 2016 pointed out that efforts seeking to establish a West Asia NWFZ were pursued without seeking consensus and that such an approach had “undermined trust and confidence and had diminished the prospect of resuming dialogue” (Middlebury Institute for International Studies, 2016, 7).

Meanwhile, Sudan, on behalf of the Arab states, again introduced the item “Israeli nuclear capabilities”, at the General Conference in 2017. Israeli Ambassador Merav Zafary-Odiz, in response, denounced the move and pointed out that the attempt negatively impacted the “building of confidence and trust, paramount to any useful direct regional consultations” (International Atomic Energy Agency, 2017). He further stated that

Our neighbours' insistence on Israel joining the NPT not only ignores the repeated pursuit of nuclear weapons by Middle Eastern members of the Treaty, in a clear violation of their obligations and commitments, but also masks their refusal to engage sincerely with Israel (Ibid).

The Director-General of the IAEC, Zeev Snir, at the 62<sup>nd</sup> IAEA General Conference in 2018, highlighted the “repeated and explicit threats” from “Iran and its proxies” to target Israeli nuclear facilities and stated that his country was taking every precaution to prevent such possibilities. He highlighted the threat posed to the region from Iranian and Syrian activities in the WMD domain (International Atomic Energy Agency, 2018a). The Israeli official was probably referring to a Hezbollah video aired in February 2017 that threatened to target sensitive sites in Israel, including chemical, nuclear and desalination plants (Lieber, 2017). Analysts however note that such threats are “exaggerated” and that Hezbollah makes them in order to drive home to the Israeli public the costs of a possible large-scale military action, thus deterring the government from undertaking such an action (Daoud, 2019). Israeli

representatives to the UN also highlight that fact that Iran often tests ballistic missiles with threatening messages warning the country's destruction written on them.

The 2018 report by the IAEA DG to the Board of Governors on the agenda item "Application of IAEA safeguards in the Middle East" meanwhile pointed out that "there still continues to be a lack of agreement among the States in the region of the Middle East on the substance and modalities of an agreement to establish a Middle East NWFZ" (International Atomic Energy Agency, 2018b, 4).

### **Israel and Other Nuclear/WMD CBMs**

In the aftermath of the brutal chemical weapons attack on Kurds by Saddam Hussein on 16 March 1988, Israeli Prime Minister Yitzhak Shamir at the UNGA called for the banning of such weapons. He termed chemical weapons as the "most odious method of destruction of human life" and urged for direct negotiations between Israel and its neighbours to achieve this objective (Ministry of Foreign Affairs, 1988). Israel signed the 1992 Chemical Weapons Convention (CWC) on 13 January 1993, but has till now not ratified it. At the signing ceremony of the CWC in Paris, Foreign Minister Peres urged the West Asian states to not only strive for a NWFZ but also a "mutually verifiable zone, free of all missiles, chemical and biological weapons" (Ministry of Foreign Affairs, 1993). His successor, David Levy, at the UNGA in October 1996, reiterated the oft stated Israeli position that

After peaceful relations and reconciliation have been established among all states in the region, Israel will endeavour to establish in the Middle East a zone free of chemical, biological and nuclear weapons, as well as ballistic missiles, based on mutual and effective verification (Ministry of Foreign Affairs, 1996).

Israel's NPT non-signature meanwhile has been flagged as an impediment when other countries in the region were urged to sign CBMs like the CWC. Egypt, for instance, tied its signature of the CWC to Israel's willingness to at least commit itself to sign the NPT (Nashif, 1996, 49). Israel, on the other hand, states that it would only ratify the CWC if Egypt did so. Egypt, apart from North Korea and South Sudan, have not signed or ratified the CWC. Israel has also been wary of allowing the Organisation for the Prohibition of Chemical Weapons (OPCW) from carrying out inspections at military sites where chemical weapons have been stored.

Analysts note that Israel tying its ratification of the CWC to the signing of the treaty by Egypt is illogical, and in fact, equates Egypt's possession of chemical weapons with its nuclear weapons capabilities, to Egypt's advantage (Cole-Hamilton and Keinan, 2016). Former Justice Minister Yossi Beilin even suggested (in 2001) that Israel ratifying the CWC could result in the country gaining broader international acceptance, noting, Israel cannot afford to be the "pariah" state for ever (Barak, 2010).

Israel, however, continues to insist that the absence of peace and the lack of normalised relations between it and the states of the region undermines the role of international treaties that could work in other parts of the world. Israel further notes that it consistently adheres to international norms in the field of non-proliferation. Israel, for instance, highlights the fact that it has passed stringent export control legislations like the Chemical, Biological, and Nuclear Export Control Order in 2004, which aims to curb the proliferation of dual-use items to unauthorised recipients (Ministry of Foreign Affairs, 2013a). Therefore, even without signing treaties like the CWC, it insists it was following global non-proliferation standards.

Most countries with significant industrial/technological capabilities in the WMD sphere (specifically in the manufacture and production of dual-use items) have instituted strict export control legislations in order to prevent the inadvertent sale of such items to entities proscribed by the UNGA/UNSC or other multilateral organisations like the European Union. This has been especially so since UNSC Resolution 1540, which was approved unanimously on 28 April 2004, which required UN member states to have such domestic legislation in place to curb inadvertent transfers of sensitive technology.

Further, it is pointed out Israeli analysts that many of the requirements of the arms control treaties are not stringent enough and hence, do not prevent the build-up of conventional or non-conventional forces (Steinberg, 1991, 65; Cohen, 1995, 52). Steinberg for instance points out that the IAEA's monitoring mechanisms, specifically in the time period between two manual inspections, are technologically obsolete. He states that the IAEA does not have enough manpower or financial resources to ensure robust verification in problematic states like Iraq, Syria and Libya, which have not only shown keen interest but put in place advanced programmes to acquire WMD.

Israel signed the Comprehensive Test Ban Treaty (CTBT) on 25 September 1996. Israel was one of the co-sponsors of the resolution relating to the CTBT at the UNGA. While Israel has not signed the 1972 Biological Weapons Convention (BWC), it has signed other CBMs like

the Convention for the Suppression of Acts of Nuclear Terrorism (on 27 December 2006), the Convention on Physical Protection of Nuclear Material (CPPNM) (on 21 February 2002), the Amendment to the CPPNM (on 16 March 2012), and is an integral part of US-led global initiatives like the Proliferation Security Initiative (PSI) and the Global Initiative to Combat Nuclear Terrorism (GICNT). Israel has also signed the Convention on Early Notification of a Nuclear Accident (1989) and the Convention on Assistance in Case of a Nuclear Accident or a Radiological Emergency (1989) — both within the context of cooperation with the IAEA (United Nations Security Council, 2012).

### **Regional Nuclear Programmes and Israel's Policy of Prevention**

Israel has followed a policy of prevention while dealing with regional WMD programmes that it considered posed a security threat. The policy denotes Israel's military actions in preventing a WMD threat from maturing, as against 'pre-emption', a military action undertaken to neutralise an imminent attack. Israel's attacks against the Egyptian and the Syrian Air Forces in the 1967 War are held as classic examples of pre-emptive military attack while its air raid against Osiraq in 1981 and the US invasion of Iraq in 2003 are examples of preventive military attacks (Mueller et al, 2006). Israel's policy of prevention has ensured that its regional monopoly on possession of nuclear weapons was maintained. Lawrence Freedman argues that 'prevention' and 'pre-emption' are "controlling strategies" that assumes that an adversary employs force to its advantage and therefore cannot allowed to do so. In contrast to "controlling strategies", "coercive strategies" (such as 'deterrence') assume that an adversary's calculations can be influenced (Freedman, 2003, 106).

The Israeli policy of prevention while dealing with WMD threats has been criticised for being against the norms of international behaviour, among other concerns. Israel however has repeatedly undertaken such military actions, as it contends such WMD programmes pose an existential threat if they are allowed to mature. As noted in earlier sections, Israel's military doctrine since its founding privileged offensive military actions, to transfer the fighting on to enemy territory, given its limited geographical depth. A defeat in any of the inter-state wars since its founding was viewed as an end of the Jewish state (Jabber, 1971, 106). The formulation of a former Deputy Chief of the IDF, Israel Tal that the IDF was a defence force only in appellation but in fact was geared towards offensive operations in reality, is pertinent (Tal, 2000a, 43).

Given the absence of formal diplomatic relations with most of its Arab neighbours, and with their hostility as expressed in the wars they waged against it, Israel has clung to its core policy formulation that WMD capabilities along with the means to deliver such weapons in inimical states, posed an existential threat. As regards Iran especially in recent history for instance, Israeli political leaders have consistently held that not only would Iran use WMD against it, but that it would potentially transfer such weapons to terrorist proxies for use against Israel. This was explicitly stated so by Prime Minister Benjamin Netanyahu to President Barack Obama in May 2009 (Prime Minister's Office, 2009). The Israeli prime minister has also insisted that, unlike the Soviet Union — which was deterred by the United States during the Cold War, Iran cannot be deterred, as it was led by “militant jihadis” (Ministry of Foreign Affairs, 2012).

### *Strike on Osiraq*

Israel's destruction of the Osiraq nuclear reactor, under construction in Iraq with French assistance, on 7 June 1981, is an epitome of such a policy of prevention. Israeli fighter jets destroyed the reactor in a daring raid. Prime Minister Begin justified the Israeli attack as a “morally supreme act of national self-defence” and asserted that the attack was launched prior to the impending introduction of nuclear material into the plant, which could have led to even greater radio-active damage regionally (Pajak, 1982, 53; Bhatia, 1988, 77-78; Weissman and Krosney, 1989, 16).

Foreign Minister Shamir, speaking at the UNGA in October 1981, defended Israel's action, insisting that his country was “the principal target” of the Iraqi nuclear programme, and alleged that Baghdad was on the “verge of producing” nuclear weapons, even though the reactor was not even operational. He insisted that Israel was justified in taking any action to prevent such an eventuality and reiterated Israel's policy that “it will not be the first country in the Middle East to introduce nuclear weapons into the region” (United Nations General Assembly, 1981c, 448).

Later that month, the Israeli government submitted a document, “The Iraqi nuclear threat: Why Israel had to act?” to the UN Secretary General (United Nations General Assembly, 1981f). The document listed Iraq's participation in wars against the Jewish state in 1948, 1967 and 1973, its support to Palestinian terrorism directed against it, Iraq's substantial progress in the nuclear and missile fields, its open threats of seeking to destroy the Jewish state, the ineffectiveness of the IAEA safeguards system (despite Iraq being a member of the NPT and

the IAEA) — due to inadequacies in detecting non-diversion of nuclear material, and affirmed that Israel's actions were within its “right to self-defence”. Israel insisted that if allowed to progress in its nuclear march, Iraq would have been in possession of sufficient amount of plutonium to build one nuclear warhead by 1985 (Ibid, 15; Marom, 1986, 36).

It is significant to note that Iraq was building its reactor with support from France, the same country which helped Israel's nuclear efforts to a substantial degree, as seen in previous sections. Iraq, in fact, requested for a 500 MWe reactor in 1976 but settled for a 70 MWe reactor when the French refused to provide the larger reactor on account of possible proliferation concerns (Ibid, 115). Tel Aviv was therefore wary of Baghdad acquiring nuclear capabilities with the help of the French which could give it the option to produce nuclear weapons (United Nations General Assembly, 1981f).

The international community, however, was not receptive to the Israeli explanations justifying its air raid on Osiraq. The UNSC termed the Israeli action a violation of the United Nations charter and urged it to submit its nuclear facilities to IAEA safeguards (United Nations Security Council, 1981a, 10). It also asserted that Iraq had an “inalienable sovereign right” to develop peaceful nuclear technology in furtherance of its economic development “consistent with the internationally accepted objectives of preventing nuclear-weapons proliferation” (Ibid.).

The Director-General of the IAEA, Sigvard Eklund, termed the Israeli attack on Osiraq an attack on the safeguards system of the IAEA (United Nations Security Council, 1981b, 203). On 26 September 1981, the IAEA expressed “grave concern” over the Israeli military aggression against a civilian reactor which was under its safeguards system (Iraq had concluded a Safeguards Agreement with the IAEA in 1972, after signing the NPT in 1970) and decided to suspend all cooperation/assistance to Israel under the IAEA's technical assistance programme (International Atomic Energy Agency, 1981, 3; Feldman, 1982b, 114). Then US Senator and astronaut John Glenn famously remarked that the Israeli strike was the “first gigantic vote of no-confidence in the international non-proliferation regime” (Boudreau, 1993, 24).

The IAEA Board of Governors (BoG) adopted a resolution a few days after the Osiraq raid (with the US abstaining) urging the IAEA General Conference that would meet in September of that year to consider denying Israel the rights and privileges flowing out of the membership of the IAEA (International Atomic Energy Agency, 1997a, 95). The resolution also reminded Israel of the need to follow through with the provisions of the UNSC Resolution 487, which

inter alia, urged it to submit its nuclear facilities to IAEA safeguards (United Nations Security Council, 1981a). Only the Nahel Soreq reactor was under IAEA safeguards while Dimona was not. Given that Israel was one of the founding members of the international nuclear regulatory body, such threats were significant.

However, despite not following through on the UNSC's injunctions subsequently — and notwithstanding serious reservations raised by Arab states as to the negative impact of Israel's nuclear facilities not under IAEA safeguards, Israel's IAEA membership was not suspended. The US played a significant part in ensuring that the threat of suspension was not carried out, as it in turn threatened to withdraw from the IAEA General Conference if the resolution on Israel was put to vote. Suspending any member from the IAEA required a two-thirds majority voting in favour of such a resolution, which did not look a possibility with the strong US opposition (Ibid, 95-96).

Scholarship as to the rationale for Israel's action and the impact of the Osiraq raid on the subsequent growth of the Iraqi nuclear capabilities has been mixed. Shai Feldman in his 1982 study pointed out that the immediate and short-term advantage lay with the Israelis, given that they destroyed a fledgling nuclear reactor. Others like US Air Force (USAF) officer Peter Ford agree that the raid provided a "one-time benefit" for Israel and that the success of future such attacks depended on available intelligence and Israel's ability to penetrate what would in future be obviously hardened targets (Ford, 2005). Malfrid Braut Hegghammer conducted interviews with significant members of Saddam Hussein's inner circle in the aftermath of the overthrow of his regime by the Bush administration. Her research suggests that Saddam's nuclear intentions got a major boost after the Israeli raid and he did everything in his power to develop a covert nuclear programme, which was only successfully removed after pain-staking work by the IAEA and coalition forces in the aftermath of his removal (Hegghammer, 2011).

Some have even flagged Israel's domestic politics as one of the determinants for the timing of the raid. Rachel Bzostek, for instance, notes that there was the possibility that Likud may be voted out of power in the upcoming elections on 30 June 1981, and the new government may/may not undertake the military option (which she terms 'anticipatory military activities', a better term for her than 'pre-emption' or 'prevention'). This would have left Israel with an 'existential' threat, as the Iraqi reactor was expected to become 'hot' (operational) by September of that year (Bzostek, 2008, 157). Bzostek further points out that the Osiraq attack



was undertaken after “a prolonged period of concentrated effort by the Israelis to try to get the project halted”, through diplomatic pressure on the reactor supplier, France.

Jed Snyder also points out that Labour Party leader Shimon Peres, who was expected to become prime minister if Menachem Begin lost the elections, was not in favour of a military solution to set back the Iraqi nuclear capabilities. In May 1980 for instance, Peres urged Begin not to take any action, as it would diplomatically isolate Israel. Also, Francois Mitterand was elected as the French President in May 1981 and there were expectations that he would follow a stricter policy as regards French nuclear assistance to Iraq (Snyder, 1983, 583-584).

Given the fact that Israel had used US-supplied F-15s and F-16s in the arid, the US government initiated an investigation as to whether such use violated US law. Paul F. Power notes that the investigation was not completed, given that a positive finding would have made it imperative to curtail/stop US arms supplies to Israel (Power, 1986b, 858). In the aftermath of the international censure of its actions, Power further notes that domestic US opinion was queered to a certain extent against Israel; this made it easier for the Reagan administration to approve the sale of sophisticated equipment like airborne warning and control aircraft (AWACS) to Saudi Arabia, despite rigorous opposition by Israel and Jewish American lobby groups (Ibid).

It is pertinent to note that Israel is not alone in targeting other countries nuclear/WMD facilities in preventive attacks. Iran had targeted the same Iraqi reactor (Osiraq) on 30 September 1980, in the initial days of the Iran-Iraq war, when two Iranian Phantom F4-E jets tried to bomb the reactor but could cause only limited damage (Weissmann and Krosney, 1989, 3). Iraq on its part attacked the Iranian reactors at Bushehr, at the end of the Iran-Iraq war, on 19 November 1987 (Reed, 1987). The US also bombed the Iraqi research reactor at Tuwaitha in 1991 while Saddam Hussein launched Scud missiles in the direction of Dimona, during the Kuwait War (Ramberg, 2008, 6).

Analysts like Anthony D’Amato, while examining the legal justifications and implications of the Israeli strike, note that Article 51 of the UN Charter allows for self-defence, only if “an armed attack” occurs on another nation state (D’Amato, 1983, 587-588). In the case of Osiraq, Israel justified its strike as an act of “anticipatory self-defence”. Article 2(4) of the UN Charter prohibits armed action or use of force by its member states that will impact either the “territorial integrity” or “political independence” of that nation state. D’Amato notes that Israel’s unannounced strike was not against Iraq’s “territorial integrity” and it is questionable if Israel’s action curtailed Iraq’s “political independence”.

### *Strike on Deir Al Zour, Syria*

The Israeli Air Force (IAF) launched a raid on a Syrian site near the Euphrates River, about 450 kms from Damascus, on 6 September 2007, ostensibly against an undeclared nuclear project (Sanger and Mazetti, 2007). Israel did not acknowledge the strike in the immediate aftermath of the incident. An Israeli official was, however, cited as stating anonymously that the strike was intended to “re-establish the credibility of our deterrent power” (Ibid.). North Korea on 11 September 2007 condemned the Israeli action and expressed “full support and solidarity to the Syrian people in their just cause to defend the national security” (Crail, 2007). This interestingly made North Korea one of the first countries to criticise the purported Israeli action, thus inadvertently confirming its involvement/linkages with the destroyed facility, as pointed out later by the US representative to the IAEA (see sections below).

The IAEA issued a statement on 15 October 2007 indicating that it had no information about any Syrian “undeclared nuclear facility” and requested member countries to provide information about any such facility to it in confidence (International Atomic Energy Agency, 2007a). While the Israeli attack in September 2007 was not the first attack on a nuclear facility of another country, it was the first attack on a nuclear facility that was not declared as such to the IAEA or to the international community. Syria ratified the NPT in September 1969 while its IAEA safeguards agreement entered into force in 1992.

As per the terms of its standard safeguards agreement, there is ambiguity as to when a state should declare to the IAEA about such construction activities. This was the similar loophole which was exploited by Iran in its arguments with the IAEA, when questions were raised about its nuclear facilities like the underground uranium enrichment facility at Natanz. The Additional Protocol (entered into by a member state in addition to its safeguards agreements) has more stringent requirements of providing information to the IAEA. Syria, of course, has not entered into such an agreement with the IAEA so far.

The IAEA launched its investigation into the Syrian reactor incident in April 2008, seven months after its destruction in the Israeli air raid. This was in the aftermath of the US government releasing information about the reactor site to the world press on 24 April 2008, in a background briefing by senior unnamed intelligence officials. The officials informed that Syria started constructing the reactor from the late 1990s/2000 and it was nearing “operational capability” (Federation of American Scientists, 2008).

Given that satellite images of the building under construction resembled similarities with the Yongbyon plutonium power reactor, US officials noted that there was a clear evidence of cooperation with North Korea in the construction of the reactor,. The US officials also revealed that a North Korean delegation visited Damascus after the destruction of the reactor. The officials more pertinently revealed that Israel shared intelligence about the reactor to the Bush administration and that both sides had discussions about possible policy options to deal with the emerging situation. They pointed out that Israel considered the Syrian reactor an “existential threat” and that Israel carried out the attack on its own, without any “green light” from the US, adding though that such permission was not sought (Ibid).

By the time the IAEA inspectors visited the reactor on 23 June 2008 (the one and only visit to the site allowed by Syria), Syria had erased the entire reactor site and constructed a new building on top of the erased site. The IAEA BOG passed a resolution on 9 June 2011, and referred to the UNSC the Syrian nuclear issue, for non-compliance with its safeguards agreement as it did not provide prior information about the facility (International Atomic Energy Agency, 2008b). The Israeli action was criticised by IAEA Director-General Mohammed El-Baradei, specifically for not sharing information with the Agency and for destroying the facility (Ibid).

While Russia and China (along with Azerbaijan, Ecuador, Pakistan and Venezuela) opposed the resolution which found Syria in non-compliance, eleven other states of the 35-member BOG abstained. 17 members voted in favour of the resolution, while Mongolia was absent during the vote (Crail, 2011a). The resolution also noted that there was “significant number of particles of anthropogenic [man-modified] natural uranium” at the destroyed reactor site, leading to serious questions about how such particles ended up at that site. The BOG, therefore, noted that there was “absence of confidence that Syria’s nuclear program is exclusively for peaceful purposes” (International Atomic Energy Agency, 2008a). Syria insisted that the munitions used to destroy the facility accounted for the presence of anthropogenic uranium at the site. The IAEA discounted such a possibility and concluded that the destroyed building was “very likely a nuclear reactor” (International Atomic Energy Agency, 2011b, 6-7).

Israel finally confirmed in March 2018 that it had struck the Syrian nuclear facility, 10 years after the event. Prime Minister Netanyahu took to Twitter to confirm, when he tweeted

The Israeli government, the Israel Defense Forces and the Mossad [intelligence services] prevented Syria from developing nuclear capability. They are worthy of full

praise for this. Israel's policy was and remains consistent — to prevent our enemies from arming themselves with nuclear weapons (BBC, 2018a).

The IDF also pointed out the Islamic State militants seized control of Deir Al Zour in 2014, and that if the completed nuclear facility capable of producing plutonium had fallen into their hands, it could have led to incalculable consequences dangerous for Israel in particular and the region in general (Ibid).

After the prime minister's acknowledgement, *Ha'aretz* published a lengthy investigation into the decision-making that accompanied the raid (Harel and Benn, 2018). Another report published in the *New Yorker* revealed that the first real proof of the activities at Al Zour that came by the Mossad's way was when agents stole information from the personal laptop of the head of the Syrian atomic energy agency, when he was attending a conference in Vienna in March 2007 (Makovsky, 2012).

While Israel briefed the Bush administration officials in April 2007, the US officials were not enthused about a military option to roll back Syria's efforts, especially by Israel. They cited Israel's disastrous 2006 Lebanon War and the dangers that a strike on Syria by Israel could lead to a wider conflict, involving both Syria and the Hezbollah. Given that domestic Iraqi security situation had begun to show some stability, even as there was uncertainty about the situation in Afghanistan, the Bush administration was not very keen on opening up a 'third front' militarily in West Asia (Ibid). Further, there was no proof that Syria was building a reprocessing plant, essential to further refine the plutonium into weapons-grade material (Reidel, 2013, 43).

Given the above positions of the Bush administration, the Olmert government went ahead with its decision to strike the facility militarily. Apart from the purported existential threat from a completed nuclear reactor that was designed to produce plutonium, analysts also note another critical factor that drove the Olmert government was the need to rectify what was widely seen as disastrous decision-making during the 2006 Lebanon War (Harel and Benn, 2018). The professional reputation of the IAF, which had been dented during the 2006 Lebanon War as its air strikes were viewed as not sufficient to deter the numerous Hezbollah rocket attacks, was restored in the Israeli security architecture to some extent. After Netanyahu's acknowledgement, Israel's intelligence minister Israel Katz asserted that the Syrian raid reinforced Israel's longstanding policy of prevention (Holmes, 2018).

Syria's non-cooperation with the IAEA on the Deir al zour reactor, meanwhile, has been a recurring theme of concern, not only at the IAEA but at the NPT Review Conferences and at the UNSC. The 2010 NPT Rev Con, for instance, noted that "since 2008 Syria had not been cooperating with the Agency in throwing light on the nature of the Deir al zour site destroyed by Israel and other sites" (NPT Review Conference, 2010, 8). The US government representative, at the IAEA BOG meeting in March 2018, pointed out that Syrian non-cooperation with the IAEA was "not a trivial matter" and criticised Syria's "repeated pattern of obstruction and obfuscation in dealing with the Agency". The US Representative reminded the audience that while Syria was slow to react to the strike, it was the North Korean government which was the first country to criticise the Israeli action (US Mission to International Organisations in Vienna, 2018).

Even as the civil war raged in Syria, Israel has carried out repeated air raids against suspected Syrian chemical storage sites, military facilities and disrupted the movement of trucks that were supposedly carrying missiles/arms and ammunition to the Hezbollah. Some reports note that Israel has conducted as many as 100 air strikes inside Syria since 2011. Among the significant strikes include the September 2017 attack by the IAF launched to destroy an arms manufacturing facility of the Syrian regime near the town of Masyaf. Israeli analysts like Amos Yadlin, a former chief of military intelligence and an ex-IAF fighter pilot who in fact was one of the pilots that destroyed Osiraq in 1981, wrote that the Israeli raid in Masyaf, in an area considered to be under Russian air protection, signified that it would go to any extent to safeguard its interests. Further, he notes that it also proves that air defence systems, even Russian ones, are not effective in the face of credible intelligence and resolute action (Yadlin, 2017). In May 2018, the IAF launched a bombing attack near the town of Al Qusayr, with reports suggesting that the site contained an underground nuclear facility, or even nuclear fuel from the destroyed nuclear reactor at Deir Al Zour. While Israel did strike targets near the town, analysts noted that evidence remained inconclusive if any of the targeted sites were nuclear-related, though by most accounts were related to Syria's military (Albright et al., 2018).

### ***Iranian Nuclear Programme***

The most significant regional security challenge to Israel in the past two decades was that posed by the Iranian nuclear programme. The Iranian nuclear contentions first came into public limelight and international scrutiny when an Iranian opposition group, the Mojaheddin e-Khalq, in August 2002 revealed the existence of the Natanz uranium enrichment plant. As per

Iran's safeguards agreements with the IAEA, it was supposed to inform the world nuclear regulatory body about the construction of nuclear-related facilities. Iran contended that it was only obliged to inform the IAEA prior to the introduction of nuclear material in any facility and since Natanz was still being constructed at that point in time, it was under no legal obligation to do so (International Atomic Energy Agency, 2003c, 4). It did not provide any satisfactory explanation, however, as to why it was being constructed underground, other than contending that the move was to protect it from any possible attack by its enemies.

Iran and the IAEA engaged in a long process of negotiations to resolve such contentions, even as the IAEA sought better explanations for its nuclear activities. Iran also entered into negotiations with the European Union (EU)-3 countries — France, Germany, and the United Kingdom initially, which later expanded into the EU-3+3 in June 2006, with the involvement of the other permanent members of the UNSC (US, China and Russia). The Iran nuclear issue was referred to the UNSC by the IAEA BoG in February 2006 due to “the absence of confidence that Iran's nuclear programme is exclusively for peaceful purposes resulting from the history of concealment of Iran's nuclear activities” (International Atomic Energy Agency, 2006b).

Israel has held that unresolved contentions relating to the Iranian programme were an existential threat. This was due to the fact that many Iranian political and military leaders have publicly vowed to destroy the Jewish state — variously called as the ‘Little Satan’ or the ‘Zionist Entity’. Israel asserts that Iranian nuclear weapons are a recipe for disaster, as Iranian political and military leadership have publicly called for its physical destruction. As examined in the chapter dealing with the Iranian nuclear issue, Israel was at the forefront of a diplomatic campaign to put maximum pressure on Iran to stop its nuclear march, which it contended was only geared towards building a nuclear weapon. Iran, on the other hand, held that pursuing a civilian nuclear programme was well within its rights as a member of the NPT and that the pressure being placed on it was unjustified (International Atomic Energy Agency, 2012).

The Iran—EU-3+3 (also called the P5+1) negotiations got dragged on for many years (after they began in mid-2006). In fact, they were suspended from Jan 2011-April 2012, over differences on the nature and the substance of the contentions. Iran specifically held that charges of political considerations were driving the process rather than any genuine security concerns emanating from its civilian nuclear programme (International Atomic Energy Agency, 2005b, 12). The contentions were especially severe over the ‘possible military

dimensions' (PMD) of the Iranian nuclear programme. The PMD title was for the first time included in the March 2008 report of the IAEA Director-General to the BOG.

The PMD charges were further detailed in the November 2011 report to the BOG (International Atomic Energy Agency, 2011c). The IAEA Director-General noted that Iran carried out activities that were relevant to the development of a nuclear explosive device. These activities included procurement of nuclear/dual-use material by military-related individuals/entities, efforts to design nuclear weapons, securing nuclear weapons development information and documentation from illicit networks, among others (Ibid, 1-12). The Director-General noted that while some of the activities had both civilian and military applications, some of them had military applications, raising the nature of concerns even further. Further, he stated that the charges were based on "credible" information that was obtained from more than ten countries (Ibid, 3). When the IAEA subsequently did not share with Iran the confidential information on which the charges were based, Iran insisted that it cannot be expected to effectively counter such charges "without the provision of original documents with authenticity" (International Atomic Energy Agency, 2013c).

Iran also did not permit IAEA inspectors to visit military sites like Parchin, where suspicions were raised about the possibility of nuclear-related activities. Iran refused inspector access to such facilities, as it was essentially a military facility. As per Iran's safeguards agreement, the IAEA could only ensure nuclear material accountancy at declared sites (that is, declared by the host country) and had no jurisdiction over inspecting military sites. The IAEA, however, insisted that suspicions were raised as to the possibility of the usage of nuclear material at the explosives containment vessel that Parchin housed.

In the light of the above unresolved contentions and the lack of progress in multi-lateral negotiations to resolve such contentions, there was increasing clamour domestically within Israel for a repeat of the 'successful' military attack that the country had conducted on Osiraq as the only effective solution to the problem. Prime Minister Benjamin Netanyahu at the UNGA in September 2012 (during the course of which he showed up a cartoon depicting Iran's alleged nuclear progress) insisted that Iran's nuclear enrichment facilities could be "credibly targeted" (Ministry of Foreign Affairs, 2012). He charged that diplomacy spearheaded by the US and the international community had failed to deter Iran from its nuclear path.

Then Defence Minister Ehud Barak, while responding to questions regarding the exercise of a military option to offset Iranian capabilities, revealed in August 2015 that Israel had made

preparations to attack Iran at least three times between 2009 and 2012. It, however, did not carry out such strikes in the face of perceived deficiencies in operational capabilities and lack of complete consensus at the highest echelons of the Israeli government (Ravid, 2015).

While Netanyahu and his senior cabinet colleagues were busy contemplating the possibility of striking Iranian nuclear facilities militarily, many influential sections of the Israeli public (apart from the opposition political parties) were against the exercise of a military option to target Iranian nuclear facilities. Some of the prominent critics included the former head of Mossad, Meir Dagan. Retired military officers belonging to the group Commanders for Israel's Security (CIS) also criticised Netanyahu's robust opposition to the JCPOA after it was negotiated. They were primarily concerned about the negative impact such advocacy would have on the strength of the US-Israel relationship (Azulay, 2015).

There was also strong opposition to military strikes from close allies like the US. The US Chiefs of the Joint Staff, Gen. Martin Dempsey, for instance, in an interview to the CNN in February 2012, termed discussions about the possibility of militarily striking Iran as "premature" (CNN, 2012). President Barack Obama, in very strong language, termed rumours about possible military strikes as "too much loose talk of war" (Obama White House, 2012a). Regional countries like India, among others, also termed the possibility of such strikes as "unacceptable international behaviour" (Ministry of External Affairs, 2008). India was concerned about the negative impact such strikes would have on regional peace and stability, given the millions of its expatriate population who live in the region as well as the significant trade and economic linkages with the region.

After the JCPOA was eventually agreed upon between Iran and its interlocutors in July 2015, Netanyahu continued to stridently oppose the provisions of the agreement. He charged that the deal, in fact, brings Iran closer to a nuclear weapons capability. He specifically highlighted the deal's inspection and verification regime as insufficient and that similar deals like the JCPOA in the past (like the 1994 Framework Agreement with North Korea) had unravelled, leading to that country's eventual nuclearisation (Ministry of Foreign Affairs, 2015a).

Netanyahu was one of the few world leaders who welcomed President Donald Trump's decision to withdraw the US from the JCPOA in May 2018. The US stated that it was doing so as the JCPOA does not adequately address Iran's ballistic missile programme and that the deal has not changed what it termed as Iran's regional destabilising behaviour, including the promotion of terrorist activities (US State Department, 2018). The fact that the deal does not



deal with Iran's alleged destabilising activities in the region but is only limited to curtailing its nuclear programme was conveniently not highlighted.

The lack of operational capabilities (including sufficient numbers of bunker busting bombs) and the relative uncertainty surrounding the possibility of success (against numerous Iranian nuclear facilities which were geographically dispersed as well as housed underground) prevented Israel's exercise of a preventive military option to set back Iranian nuclear capabilities during 2010-2015. Israel though carried out punitive activities against the Iranian nuclear infrastructure and human resources, as noted in Chapter Six. Israel's policy stances in the period after the Trump withdrawal are also examined in greater detail in that chapter.

### **Israel and West Asia WMDFZ: An Assessment**

Constituencies in favour of NWFZ have existed domestically within Israel. The Committee for Denuclearisation of the Middle East, for instance, was founded in 1961 by Eliezer Livne, a politician belonging to Mapai, Ben-Gurion's own political party. The initiative aimed at denuclearising West Asia by means of a mutually supervised agreement with the Arab governments. In the initial years however, when Israel's primary strategic threat was the combined conventional might of Arab armies, Israeli governments' favoured conventional disarmament first, before the establishment of a NWFZ (Jabber, 1971, 126; Pajak, 1982, 33). Israeli leaders from the 1970s onwards lent their voice in support of a regional NWFZ as they considered such support strengthened their preferred policy option of nuclear opacity (Kaye, 2012, 416). In fact, as noted in previous sections, they pitched support to a NWFZ as reflective of their support for non-proliferation goals and objectives, in the face of countries like Egypt and multilateral bodies like the UNGA and the IAEA repeatedly requiring Israel's signature on the NPT.

While Israel's neighbours as well as the international community have since then been calling upon Israel to sign the NPT and become a 'mainstream' member of the non-proliferation regime, Israel has been insisting on direct negotiations with its Arab neighbours and Iran since 1979 as the only way forward on a NWFZ. Israeli political leaders have also tried to expand the scope of regional arms control and disarmament initiatives measures, to not only include nuclear but also chemical, biological weapons. This was in the light of the fact that its Arab neighbours built arsenals of such weapons, termed as the "poor man's" deterrent, in the face of apparent Israeli nuclearisation. Foreign Minister Peres's address at the CWC signing ceremony in 1993 is reflective of this policy preference. Peres in his address to the UNGA in September

1994 further stated that his government's wish was that West Asia should not only be "nuclear-free" but also "free" from "missiles", "hunger", "discrimination" and "tyranny" (Ministry of Foreign Affairs, 1994).

Foreign Minister Levy reiterated Israel's long-held position at the UNGA in 1996 that Israel would strive to establish such zones spanning the nuclear, chemical and biological spectrums, after comprehensive peace is established between it and its neighbours. Apart from such 'mainstream' positions, Israeli politicians have also expressed opinions distinct from the long-standing government positions. In March 1995 for instance, Yossi Beilin, a member of the Israeli Cabinet, stated that negotiations for the MEPP and the MENWFZ could proceed "in parallel" (Steinberg, 1996, 22). Analysts like Steinberg note that such positions, which did not carry much weight going forward, were at variance with the long-standing Israeli positions that CBMs like the NWFZ could only be negotiated after the conclusion of the peace process.

Israel, therefore, has been insisting that following a 'global approach' will not help resolve the unique security problems of the West Asian region, in the words of the Israeli Ambassador to the Conference on Disarmament, Eyan Bentsur, in 1997 (Ministry of Foreign Affairs, 1997). Israeli analysts note that their country prefers a gradual approach to arms control negotiations, which have to necessarily follow a process of confidence building and political transformation (Landau and Stein, 2013). Israel though has been supportive of regional arms control negotiations that took place even as comprehensive peace was not established. Israel's positions regarding the ACRS talks are instructive in this regard. Bentsur described the ACRS process as an "essential pillar to support the peace process as a whole and an integral part of it" (Ministry of Foreign Affairs, 1997). Bentsur further informed the CD at Geneva that:

After peaceful relations and reconciliation are established among all states in the region, Israel will endeavour to establish in the Middle East — through direct negotiations among all its members — a zone free of chemical, biological and nuclear weapons, as well as ballistic missiles, based on mutual and effective verification (Ibid).

As for the position on treaties like the NPT, Israel points out that many of the states in the region which have signed the NPT have not lived up to the letter and spirit of the treaties they have signed and instead violated the requirements of the said treaty. Iran, Iraq, Syria and Libya and their behaviour vis-à-vis the NPT are often cited as case studies of an all too familiar phenomenon that Israel repeatedly warns about as it pertains to the difficulties inherent in agreeing to a pan-regional WMD CBM.

Israel, therefore, views multi-lateral instruments like the NPT and the IAEA as not serving its security interests, given that countries like Iraq and Iran have been accused of not following through with the provisions of these treaties and organisations, despite agreeing to abide by the terms and conditions of such treaties. The Iranian nuclear imbroglio, in the view of the Israeli government and analysts, illustrates the inadequacies of treaties like the NPT in effectively addressing concerns about the nuclear activities of its member states. Israel instead insists on mutual negotiations with its regional neighbours in order to build a sound basis of regional security, accompanied by verifiable arms control measures.

As for Israel's doctrinal positions, Alan Dowty in 2005 noted that the "ambiguity" surrounding Israel's nuclear policy has diminished over the past many years, initially to "opacity and subsequently to "non-acknowledgement" (Dowty, 2005, 3). Further, he notes that the strategic circumstances enveloping Israel's nuclear pursuit have also changed. While initially, such capability was justified on account of it being a sure guarantor of preventing conventional defeat at the hands of its numerically superior Arab enemies, the WMD programmes of regional countries are increasingly a cause of concern, as was seen in the responses to the Iranian nuclear programme.

As for the policy of prevention, which Israel swears by, the strike on Deir Al Zour is a proof of the support for exercising such a policy course across the domestic political spectrum, when confronted with purported WMD threats. The strike was carried out by the government of Ehud Olmert of the Kadima party (founded by Ariel Sharon and Olmert among others after splitting from Likud). Netanyahu was the leader of the opposition, who was informed about the decision prior to the strike and he indicated later that he supported the decision from the beginning (Crail, 2007). The strike on Osiraq was carried out by the government of Menachem Begin, who founded the Likud. The Labour leader Shimon Peres, however, was opposed to the Osiraq strike, as pointed out in previous sections. Netanyahu on his part led vigorous international efforts for the exercise of similar option vis-à-vis Iran.

Another critical aspect which analysts note differentiated Israeli aerial strikes on Al-Kibar in 2007 to that of Osiraq in 1981 was the level of discussions the Israeli governments had with the respective US administrations. As noted earlier, the Olmert government engaged in detailed discussions with the Bush administration about the intelligence it had collected on Al-Kibar and even discussed policy options with it. While the Bush administration was less willing to exercise the military option to offset Syrian capabilities, they had no opinion as to the

advisability of Israel carrying out a strike on its own accord, if it felt a strike was justified due to the existential nature of the threat posed by the Syrian nuclear reactor.

When Begin attacked Osiraq on the other hand, there were limited discussions with the Reagan administration about the nature of the Iraqi threat and there were almost no discussions about military options to set back Iraqi capabilities (Bass, 2015). It is equally pertinent to point out that even prior to destroying Osiraq reactor in an air raid, Israel tried to sabotage the reactor core, being manufactured (prior to being shipped to Iraq) at a French facility in Toulon in April 1979 and even assassinated the head of the Iraqi nuclear programme in his hotel room while he was visiting Paris in June 1980 (Ibid, 30; Weissman and Krosney, 1981, 5).

## **Conclusion**

Israel remains the only country that does not overtly acknowledge it possesses nuclear weapons. Its unique policy of opacity/ambiguity, however, has stood it in good stead, thus far. The pressure on its Arab neighbours to match Israeli nuclear capabilities was attenuated to an extent. They did pursue their own nuclear and other WMD programmes, and ballistic missiles, as detailed in subsequent chapters. Israel's policy of prevention, examined in this chapter, ensured that their nuclear programmes did not come to fruition. Israel's military action in Iraq (1981) and Syria (2007) are proof of its muscular policy in this regard. Israel also waged a relentless diplomatic and covert campaign against the Iranian nuclear programme.

As detailed in this chapter, Israel has been wary of multi-lateral efforts in the non-proliferation sphere. It did not sign the NPT while its major nuclear facility, at Dimona, continues to be beyond the purview of the IAEA. It has signed the CTBT and the CWC but has not ratified either of the treaties. Egypt has tied its signature of the CWC to Israel signing the NPT. While Israel has welcomed the concept and philosophy of a regional NWFZ, it prefers a regional process to achieve such significant nuclear arms control efforts, as against the multi-lateral approach championed by countries like Egypt.

Israel has also been insistent that unless the regional security deficit is bridged, CBMs like NWFZ cannot fructify. Israel points to the examples of countries like Iraq and Libya, which signed global treaties like the NPT and had facilities under IAEA safeguards but carried out covert activities in undeclared facilities. It, therefore, notes that verification measures of any regional CBM must be robust, to overcome the trust deficit. The impact of Israel's normalisation agreements with the UAE and Bahrain in September 2020 — despite lack of

progress on the establishment of the Palestinian state, as required by the Arab consensus of 2002, is discussed in Chapter Seven.

The subsequent chapters will deal with the policy positions of other regional states on the West Asia WMD/FZ, the concerns generated by the Iranian nuclear imbroglio as well as the nuclear/WMD efforts of other West Asian states like Libya, Iraq, Syria, Egypt and Saudi Arabia and the mutually reinforcing dynamics at play which have hindered progress on efforts to establish a regional WMD/FZ.

## CHAPTER FOUR

### **Regional Non-Conventional Capabilities**

While Chapter Three has examined the dynamics associated with Israel's policy positions on nuclear weapons in depth, this chapter examines the nuclear quests of Iraq and Libya primarily, and the responses such pursuits generated. Regional countries also pursued chemical and biological weapons capabilities and used such capabilities in conflict situations. The chapter brings to attention the fact that such weapons of mass destruction (WMD) concerns led to the imposition of unilateral and multilateral economic sanctions as well as military responses, which negatively impacted regional strategic stability. The cumulative impact of such concerns has been that efforts to establish the West Asia nuclear weapon Free Zone (NWFZ) were further stymied.

#### **Iraq**

The Iraqi Atomic Energy Commission was established in 1956, four years after the establishment of its Israeli counterpart. The establishment of the Commission coincided with the American 'Atoms for Peace' programme, when Third World countries were offered cooperation in the nuclear energy sector by the Eisenhower administration as a means to develop their economic and technological wellbeing. Iraq's nuclear journey began in earnest when its efforts to obtain a research reactor from the Soviet Union succeeded in 1962, when it got a 2-megawatt electric (MWe) research reactor (Solingen, 2006, 143). Iraq signed the nuclear non-proliferation treaty (NPT) in 1968 and ratified it on 29 October 1969.

In 1976, Iraq signed a contract with France for two reactors, including the 70 MWe Tammuz 1 reactor located at Osiraq. This was the result of an agreement with the French government dating back to 1974, whereby, France consented to provide the reactor in return for Iraq buying French arms and ammunition. Iraq, in turn, agreed to provide France a long-term supply of oil (Spector, 1984, 166). It is pertinent to note that this agreement involving a credible supply of West Asian oil to France was in the aftermath of the 1973 oil crisis.

Iraq, under Saddam Hussein, viewed civilian nuclear power as an essential route to acquire expertise and capabilities that could potentially be channelled into making nuclear weapons. In September 1975 for instance, a few months ahead of finalising the deal for the Osiraq nuclear reactor with the French, in an interview with a Beirut magazine, Hussein affirmed that the Iraqi search for a nuclear reactor was the "first Arab attempt at nuclear arming" (Weissman and

Krosney, 1981, 89; Spector, 1984, 174). There was also clamour from senior members of his government to acquire a nuclear weapons capability, one of whom was cited as insisting in 1977 that the Arabs “must get an atomic bomb” (Weissman and Krosney, 1981, 89).

Analysts’ note that for Saddam Hussein, Iran was as much a threat in the WMD domain as were Israeli capabilities in this regard (Feldman, 1997, 135). After Israel destroyed Osiraq in June 1981, two years after construction began in 1979, Iraqi leader Saddam Hussein urged “peace loving nations” to assist the Arabs in acquiring nuclear weapons and “counter balance” Israel’s nuclear capability (Weissman and Krosney, 1981, 27). Among Iraq’s neighbours, Egypt was also concerned about Iraqi WMD and nuclear capabilities, apart from Israeli WMD capabilities (Feldman, 1997, 132).

### *Attacks on Iraqi Nuclear Infrastructure*

Israel undertook measures to ensure that Saddam Hussein’s efforts towards acquiring nuclear technology were scuttled. Israel, for instance, in April 1979 severely damaged the reactor core of the reactors being built for Iraq in the French coastal city of Seyne Sur Mer. Later in June 1980, the death of a prominent Iraqi nuclear scientist in a Paris hotel room was attributed to Israel. The scientist, Yahya al-Meshaad, was reportedly in Paris to examine the shipment of enriched uranium that would have been shipped to power the US\$363 million Osiraq reactor. A month later, the only woman who was the witness to the murder was also killed on the streets of Paris (Wade, 1980, 1001; Weissman and Krosney, 1981, 5).

After Israel destroyed the Osiraq reactor (examined in greater detail in Chapter Three), part of the Tuwaitha nuclear complex, Prime Minister Menachem Begin justified the timing of the raid by noting that the reactor would have become critical in the near future and if Israel attacked a functioning nuclear reactor, it would have led to radioactive fallout and greater negative consequences regionally (Pajak, 1982, 14). It is important to note that Israel is not the only country that swears by the policy of pre-emptively attacking enemy infrastructure related to nuclear energy. Iraq attacked the Bushehr nuclear power plant in November 1987 (Bhatia, 1988, 82-83).

Iran attacked the Osiraq reactor unsuccessfully on 4 October 1980. Earlier on 30 September 1980, a few days after Iraq launched the war against Iran, Iranian Phantom jets attacked Osiraq. While they did not do much damage, the attack did lead to the extension of the plants commissioning schedule, from end 1980 to mid-1981 (Spector, 1984, 171). In effect, it could be argued that the September 1980 Iranian attack on Osiraq in fact determined the timing of

the eventual Israeli attack on Osiraq in June 1981. As noted earlier, Israeli leaders affirmed that they had to carry out the raid before the reactor became operational, to prevent regional radioactive spread.

Apart from the Israeli attacks (as well as by Iran) on the Iraqi nuclear infrastructure as noted above, Israel took extreme steps to prevent Iraq from acquiring niche capabilities vis-à-vis delivery systems. Israel's targeting of the Canadian artillery engineer Gerald Bull, who was allegedly involved in building of a 'super gun' for Saddam Hussein as part of 'Project Babylon', is pertinent in this regard. Bull was working on an artillery system that could potentially fire shells from Iraqi territory, hundreds of kilometres away, into Israel. The engineer was allegedly assassinated by Israel in Brussels in March 1990 to prevent the project from being realised (Malone and Halevy, 1991). A month after Bull's assassination, the United Kingdom seized parts manufactured by a British company that were to be used for the project. While initially denying that the project existed, Iraq after the Persia Gulf War in July 1991 acknowledged that it did pursue the project (Central Intelligence Agency, 1991a).

### ***Iraqi Invasion of Kuwait***

Iraq's nuclear quest was away from world headlines for the most part after the Israeli raid on Osiraq and the Iraq-Iran war, which witnessed Iraqi use of chemical weapons against Iranian civilian populations in places like Halabja (more on these in later sections). After Saddam Hussein invaded Kuwait in August 1990, the world's attention was again focussed on Iraq's hegemonic ambitions and the dangerous implications of Iraq's pursuit of such capabilities on regional stability. The significance of the Iraqi invasion of Kuwait as it pertained to regional WMD was that the United Nations Security Council (UNSC) passed Resolution 687, creating the UN Special Commission (UNSCOM) tasked with carrying out inspections of Iraq's WMD capabilities.

The ostensible reason why Saddam Hussein invaded Kuwait was on the charge that Kuwait and other members of the Organisation of the Petroleum Exporting Countries (OPEC) were producing oil in excess of their quotas in order to drive down the oil prices. This was negatively hurting Iraq's economy, which was badly damaged in the aftermath of the end of the eight year war with Iran in 1988. Saddam Hussein largely financed his war effort with loans from the Gulf countries, especially the United Arab Emirates (UAE) and Kuwait, and in fact owed nearly US\$37 billion to them at the end of the war (Grammas, 1991, 2; US State Department,



1991). Saddam's contention was that these countries should cancel Iraqi debt, as in fact he had protected them from Iranian expansionism in the aftermath of the Islamic revolution (Ibid).

The immediate dispute with Kuwait related to the tiny oil sheikdom pumping more than its quota of oil from the Rumaila oil field, on Iraq's southern borders. Iraq alleged that Kuwait had in fact pumped oil equivalent of more than US\$14 billion, and that as a result, the loans that the Iraqi regime had taken, to the tune of US\$10 bn from Kuwait, had in fact to be cancelled (Karsh and Rautsi, 1991; Hayes, 1990).

The United Nations Security Council (UNSC), in Resolution 660 passed the very same day that Iraq invaded Kuwait, condemned the Iraqi action as a "breach of international peace and security" and demanded that it pull back its forces (United Nations Security Council, 1990a). In a unanimous decision passed a few days later on 6 August (with 13 countries voting in favour and none against; Cuba and Yemen abstained), the UNSC passed Resolution 661 which completely banned all exports from Iraq, the flow of funds or finances other than for humanitarian purposes, the imports of arms and ammunition, and established a committee made up of UNSC members to oversee the implementation of these stipulations (United Nations Security Council, 1990b). After Iraq announced the "eternal merger" with Kuwait, the UNSC passed Resolution 662 asserting that the action had no legal validity, declared it as "null and void" and demanded that Iraq take back its actions pertaining to its annexation of another UN member state (United Nations Security Council, 1990c).

Even as the UNSC passed these resolutions overwhelmingly, there was no positive response from the Iraqi regime. The George H.W. Bush administration, on 20 August 1990, passed National Security Directive 45, which explicitly stated that US interests in the region included access to the region's energy resources and the security and wellbeing of its regional allies. The US affirmed that it would use military force to protect these interests (The White House, 1990). Bush also stated that the US would deploy to the region in response to urgent requests from the Saudi King and the Emir of Kuwait (Ibid).

Despite these responses, by the end of August 1990, Iraq declared that Kuwait had become its 13<sup>th</sup> province. UNSC Resolution 678 of 29 November 1990 allowed Baghdad "one final opportunity" to implement the provisions of Resolution 660 before 15 January 1991, failing which, the UNSC authorised its Member States "to use all necessary means", in cooperation with Kuwait, to do so (United Nations Security Council, 1990d).

The US-led international coalition launched 'Operation Desert Storm' the day after the deadline set by the UNSC, on 16 January 1991. President George H.W. Bush in a televised address on 17 January after military operations began under the overall command of Gen. Norman Schwarzkopf insisted that the "world could wait no longer" given that Saddam Hussein did not listen to the pressure from sanctions or UNSC resolutions (*Los Angeles Times*, 1991). Bush insisted that even as the world waited, Saddam Hussein tried to add nuclear weapons to his arsenal of chemical weapons (Ibid.).

The US-led coalition included nearly 40 countries and over 900,000 troops. Nearly 700,000 of them were Americans, out of which nearly half a million were based out of Saudi Arabia. While a massive air campaign, involving 100,000 sorties and nearly 90,000 tonnes of bombs destroyed most of the Iraqi army and assets, ground operations were over in less than five days (Collins, 2019). Military operations ended by end February 1991, inexplicably leaving Saddam Hussein in power. President Bush, while announcing the ceasefire on 28 February 1991 demanded that Hussein follow through on all of the UNSC resolutions passed in the aftermath of his military adventure, inform coalition forces of the presence of landmines and sea mines planted by his forces, agree to pay reparations to Kuwait and other forces, and release of prisoners of war, among other measures.

Iraq agreed to nullify the annexation, release prisoners of war (POW) and pay reparations but expressed opposition to the economic and military sanctions imposed by the various UNSC resolutions (Rosenthal, 1991). The military operations were a resounding success, with the fourth generation air campaign completely subduing the armed forces of a third world country. Technological advancements and cutting edge communication protocols like Global Positioning System (GPS) were used for the first time in battle to deliver effective results (Builder, Banks and Nordin, 1999, 55-71).

Despite such success, however, there were questions raised vis-à-vis the nature of the US policy towards Iraq prior to its annexation of Kuwait, specifically the role of the US Ambassador to Baghdad, April Glaspie and also pertaining to intelligence assessments of Iraqi behaviour. In her meeting with the Iraqi dictator on 25 July 1990, for instance, Glaspie allegedly informed the Iraqi leader that the US had "no opinion" regarding Iraq's simmering border dispute with its southern neighbour. Analysts note Hussein could have probably misinterpreted her statement as a "green light" on his subsequent military assault (Brands, 2004, 114).

As for intelligence estimates, it is pertinent to point out that the 1989 National Intelligence Estimate (NIE), “Iraq: Foreign Policy of a Major Regional Power”, stated that Iraq may not indulge in any major war with its regional adversaries in the near term, given that it would need time to recover from the eight year war with Iran (Central Intelligence Agency, 1989; Russell, 2002, 195-196). The US intelligence underestimated Iraq’s need for economic resources to rebuild its battered economy after the war and the deep seated discontent among the top Iraqi leadership with Kuwait’s activities pertaining to the Rumaila oil field, bordering Iraq.

The US or its regional allies also did not adequately take steps to deter the massive build-up of Iraqi forces on Kuwait’s border ahead of the war. Five days after Iraq’s military action however, the US began its massive deployment — Operation Desert Shield, to deter Saddam Hussein from possibly waging a punitive attack against Saudi Arabia. The American deployments were as per Operation Plan (OP PLAN) 90-1002, a military contingency plan specifically prepared to come to the aid of Saudi Arabia, if the need ever arose. The US Central Command (CENTCOM) under Gen. Schwarzkopf dusted the plan and put it into motion, which entailed the deployment of over 200,000 troops (Builder, Banks and Nordin, 1999, 56). Eventually however, nearly three times that number was needed to execute the war. These troops were airlifted to the region in a span of 5-8 months. This was the largest airlift in US Air Force history, after the Berlin air lift of 1948-1949 (Pawlyk and Swarts, 2016).

### ***UNSC Resolution 687 and UN Special Commission (UNSCOM)***

Iraqi Deputy Prime Minister and Foreign Minister Tariq Aziz on 27 February 1991 informed the Security Council that Iraq would abide by the provisions of UNSC resolutions passed after its invasion of Kuwait. The UNSC passed Resolution 686 on 2 March 1991 requiring that Iraq accept liability to damages caused to lives and property in Kuwait as a result of its actions, inform the UNSC of the location of mines or booby traps planted by it in Kuwait — including any chemical and biological weapons that could have been transported onto Kuwaiti territory during its occupation, cease further hostile action and release all prisoners of war, among other critical measures. India was among three countries that abstained on this resolution, along with China and Yemen while Cuba voted against it. The other 11 members of the UNSC voted in favour of the resolution (United Nations Security Council, 1991a).

A month later, UNSC passed Resolution 687 on 3 April 1991 which took cognizance of the fact that Iraq had used ballistic missiles during the Gulf War. The Iraqi leader did not use his arsenal of chemical or biological weapons against coalition forces. Audio recordings of

Saddam's meetings with his officials in the run-up to the Kuwait invasion — released after Saddam's capture and the overthrow of his regime in 2003, however, revealed that he contemplated targeting Saudi cities like Riyadh and Jeddah, apart from Israeli cities. This was in case Israel or the US used WMD against his forces or if they attempted regime change (Buch and Sagan, 2013). Iraqi officials in December 1990 also threatened to use chemical weapons against coalition forces amassing on its borders, if they launched an attack against Iraqi forces (Central Intelligence Agency, 1991b, 10).

Resolution 687 urged Iraq to unconditionally reaffirm its obligations under the 1925 Geneva Protocol and to ratify the 1972 Biological and Toxins Weapons Convention (BWC). Further, the resolution demanded that Iraq “unconditionally accept” the destruction of all chemical and biological weapons and all ballistic missiles with a range greater than 150 kms, under international supervision. Towards this objective, the resolution created the United Nations Special Commission (UNSCOM), to carry out on-site inspections of Iraq's biological, chemical and ballistic missile capabilities. Further, 687 demanded that Iraq disclose the location of its entire nuclear infrastructure to the International Atomic Energy Agency (IAEA) within 15 days after the adoption of the resolution, and within four months, provide an inventory of all of its nuclear materials to the IAEA and to the UNSC. The resolution stated that the creation of the Special Commission and Iraq's obligations towards the IAEA requiring it to declare its nuclear infrastructure were steps towards the goal of establishing a West Asia zone free of WMD (United Nations Security Council, 1991b).

Iraq expressed its formal acceptance of UNSCOM on 18 April 1991. A day later, Ambassador Ralf Ekeus was appointed as the Executive Chairman. While the IAEA would be solely responsible for monitoring Iraq's compliance as regards its nuclear infrastructure, the UNSCOM would assist the IAEA and oversee whether Iraq was implementing the provisions of Resolution 687, relating to the dismantling of the country's ballistic missile inventory.

Iraq's compliance, however, with the terms of the resolution was deemed to be rather poor by the UNSC. The UNSC had to pass a further two resolutions, 707 in August 1991 and 715 in October 1991, both demanding that Iraq stops its concealment activities or destroying of material evidence, and allow UNSCOM teams to travel without hindrance throughout the country (United Nations Security Council, 1991c; United Nations Security Council, 1991d). It was only in June 1992, ten months after the deadline set by 687, that Iraq provided its reports as to the nature of its WMD programmes, which were, however, deemed insufficient by

UNSCOM (Zilinskas, 1995, 230). In September 1993, Iraq finally accepted the provisions of Resolution 715 (as noted earlier, passed as a follow-up to 687 and 707 in face of Iraqi non-compliance). By then, economic and other sanctions imposed by the UNSC were beginning to bite the Iraqi government.

The first on-site IAEA inspection of Iraq's nuclear infrastructure took place in May 1991. A key technical facility housed at al-Atheer, whose sole purpose Iraq admitted was to design and build nuclear weapons, was destroyed by UNSCOM in April 1992 (United Nations Security Council, 1997, 17). Documents recovered from the site showed that Iraq was involved in experiments relating to an implosion type nuclear device and was actively courting international procurement networks to supply the requirements (Pilat, 1992, 1225; World Affairs, 1991, 117). Despite al-Atheer, UNSCOM charged Iraq with not being very forthcoming in sharing the required information about the full extent of its WMD programmes. This was on account of the fact that it took Iraq more than two years to share information regarding its nuclear equipment supplying companies (Wolfsthal, 1993a, 21).

Iraq's acknowledgment to UNSCOM that it was indeed pursuing nuclear weapon capabilities at sites like al-atheer proved assessments by US intelligence and by Israel which painted a worrying picture of its nuclear intentions, despite being a member of the nuclear non-proliferation treaty (NPT) since 1970. The CIA, for instance, in its pre-war assessment of Iraq's WMD, while acknowledging that Iraq did not have a nuclear weapons capability as on January 1991, stated that it could produce a "nuclear explosive design", within a year, if "no major obstacles were encountered" (Central Intelligence Agency, 1991b, 14).

After the end of the Iraq-Iran war, the IAEA in April 1989 in fact affirmed that all declared nuclear material under safeguards inside Iraq had been accounted for (International Atomic Energy Agency, 1989b). But in places like al-Atheer, Iraq was carrying out activities outside the purview of the IAEA. When Israel contended such IAEA assessments, Iraq responded by pointing out that the Jewish state remained the only country in West Asia which did not sign the NPT or place its entire nuclear infrastructure under IAEA safeguards. Iraq charged that Israel was only interested in maintaining its nuclear monopoly in the region and was doing everything in its power to prevent other countries from acquiring the capabilities it already possessed. Baghdad further warned that if Israel repeats such charges or attacks its nuclear infrastructure like it did in 1981, it would take retaliatory action (International Atomic Energy Agency, 1989c).

In January 1990, on the twentieth anniversary of Iraq's ratification of the NPT, Baghdad affirmed that while it was pursuing its nuclear programmes for scientific and economic reasons, it was subject to "heinous armed aggression" by Israel in June 1981 and accused Israel of introducing nuclear weapons into the region. It urged renewed pressure by the international community to force Israel to give up its nuclear monopoly and sign the NPT as an essential element to achieve the goal of a West Asia free of nuclear weapons (International Atomic Energy Agency, 1990).

Prior to the Kuwait War, US intelligence estimates assessed that Iraq would be able to produce a nuclear weapon within a decade. Iraq was able to recover about 12 kgs of highly enriched uranium from the damaged reactor at Tuwaitha after the Israeli raid. Further, Iraqi scientists prior to the Kuwait War were caught smuggling nuclear explosion triggering devices called Krytons, among other undeclared covert activities (Ruthen, 1991, 14). The highly enriched uranium that Iraq managed to salvage from Osiraq was, however, under IAEA safeguards and that there was no evidence as yet with Western governments that Iraq did have uranium enrichment infrastructure (Bunn, 1990, 23).

UNSCOM did reveal that Iraq carried out covert activities among others, relating to uranium enrichment involving electro-magnetic isotope separation systems (EMIS) like the calutrons, which were economically costly to run and technologically not effective. Calutrons, short for California University Magnetrons, are an outdated technology initially used by the US to enrich uranium for the Manhattan project. After Iraq's plutonium route was blocked by the bombing of Osiraq, Iraq built undeclared facilities housing the large calutrons to enrich uranium for its bomb programme (Albright and Hibbs, 1992, 3).

After the UNSCOM was created, Iraq did everything in its power to destroy the facilities housing such infrastructure but experts surmised that the destroyed buildings housed these inefficient systems whose sole purpose was to enrich uranium (Albright and Hibbs, 1992; Thorne, 1992; Erkman et al, 2008, 28-66). The fact that Iraq could build these large facilities outside the glare of IAEA inspectors without declaring them to the UN agency was glaring for critics of the Iraqi nuclear programme (Gallucci, 1992, 14; Dolley and Leventhal, 2001). Iraq had two EMIS sites — ash-Shaqat and al-Tarmiya. The later was bombed during the US-led air raids (Zifferero, 1993, 8).

The UN inspections also revealed the extensive Iraqi chemical and biological weapons programme. In mid-1995, UNSCOM came to know about the import of nearly 40 tonnes of

biological ‘growth media’ — material used for the growth of micro-organisms. Iraqi chemical and biological weapons (CBW) programme details further came to light when Saddam Hussein’s son-in-law, Lt. Gen. Hussein Kamal Majid, defected to Jordan in mid-1995. This prompted Saddam Hussein to share more information about Iraq’s programmes with the UN inspectors as he was worried that Lt. Gen. Majid might reveal information about the inner workings of the Iraq regime in exile (Wedgwood, 1998, 725; Daniszewski and Wright, 1996). The UN inspections also revealed that Iraq imported over 400 tonnes of natural uranium in various chemical forms, without reporting such imports to the world nuclear regulatory authority (Thorne, 1992, 21).

The UNSCOM inspections along with the work of the IAEA continued in Iraq till October 1998, when Iraq unilaterally suspended its cooperation with the IAEA. Earlier in March 1998, Iraq had submitted a final declaration regarding its entire nuclear infrastructure to the IAEA. It explained that its activities after the end of the Kuwait War related to its nuclear infrastructure was solely the responsibility of Lt. Gen. Hussein Kamal (who was killed by Saddam’s security forces after he returned to Baghdad from Jordan in March 1996), and that he acted without any knowledge of the Iraqi government on matters related to possible securing of assistance relating to uranium enrichment (United Nations Security Council, 1998a). The Director General of the IAEA, Mohammed el-Baradei in his report to the UN Secretary General Kofi Annan stated that Iraq’s March 1998 declaration was consistent with the picture obtained by the IAEA’s Iraq Action Teams (IAT) and the UNSCOM inspections (Ibid).

Such conclusions about the extent of Iraq’s WMD infrastructure or explanations regarding its past concealment activities, however, did not gel with critics of the programme. Khidir Hamza, a former high level official involved with Saddam Hussein’s nuclear programme, who defected to the West after the Kuwait War, for instance affirmed that the Iraqi contention that its nuclear behaviour was due to the decisions of one man (Hussein Kamal) who acted without the knowledge of other arms of the Iraqi government, was not true (Hamza and Albright, 1998). This was because he himself was involved in covert procurement activities whose sole purpose was to build a nuclear explosive device.

On 16 December 1998, the US and the UK launched aerial attacks against Iraq — Operation Desert Fox. Over four days of bombings were conducted, targeting nearly 100 sites. Given that the American military action did not have UNSC authorisation, France, China and Russia lifted the oil embargo on Iraq, which was in place since the Iraqi invasion of Kuwait, and effectively

disbanded the UNSCOM. The IAEA's access to facilities inside Iraq was blocked from December 1998 onwards. The IAEA, therefore, stated that without such access, it will not be able to implement in full measure the provisions of UNSC resolutions 687, 707, 715 and 1051 going forward. While the first three resolutions were passed by the UNSC in April, August and October 1991 respectively, Resolution 1051 was passed in March 1996. It established an import/export mechanism relating to items relevant to the implementation of UNSC resolutions pertaining to verification of Iraq's nuclear and WMD infrastructure and activities (International Atomic Energy Agency, 1996).

While UNSCOM's work inside Iraq was suspended as a result of non-cooperation from Iraqi authorities, IAEA continued to verify that there was no diversion of nuclear material from Iraq's declared activities, as part of its physical inventory verification (PIV) activities. The IAEA, however, insisted that without the presence of UNSCOM inspectors as part of the IATs, it was not in a position to verify Iraq's compliance with the relevant UNSC resolutions relating to its WMD and ballistic missile programmes (International Atomic Energy Agency, 1999; International Atomic Energy Agency, 2000).

Even as Iraq faced the combined American and British military action, which was triggered by alleged Iraqi non-compliance with UNSCOM, Iraq stopped cooperating with the work of the UNSCOM accusing it of being an agency for carrying out espionage activities on behalf of the US. It was especially angry with the work of individuals working for UNSCOM like David Kay, leader of UNSCOM's sixth inspection team, who later received a distinguished award for his work from the US government. Iraq criticised such felicitations to Kay, who it charged with being reckless and provocative in his inspections and for threatening US Air Force interventions if the Iraqis did not follow through on his demands, for entering army facilities without prior notifications, for stealing documents, among other faults (International Atomic Energy Agency, 1992).

The work of the UNSCOM created by Resolution 687 was very unique in non-proliferation history. UNSCOM activities led to the destruction of over 130 Iraqi ballistic missiles, 200 missile warheads, 70 launchers, 40,000 chemical weapons munitions, 10,000 kgs of bacterial growth media, among other significant successes (The Parliament of the Commonwealth of Australia, 2003). The IAEA was tasked with verifying the absence of nuclear weapons in the territory of a member state — for the first time ever, as its primary job related to nuclear material accountancy. Resolution 707 approved of aerial inspections to ensure Iraq's



compliance with 687 while Resolution 715 approved of monitoring of even nuclear exports to Iraq. U-2 reconnaissance planes, Mirage fighter jets and helicopters were used extensively to carry out the work of the UNSCOM, in the face of active Iraqi obstructions and destruction of covert facilities. Such tools and provisions were over and above the normal nuclear material accountancy framework that NPT member states had to follow till then vis-à-vis their interactions with the IAEA (Pilat, 1992, 1226).

The UNSC meanwhile in December 1999 established the UN Monitoring, Verification and Inspection Commission (UNMOVIC) vide Resolution 1284 as a subsidiary body of the Council to replace the UNSCOM. China, France, Russian Federation and Malaysia abstained on the resolution establishing the UNMOVIC. It required Iraq to cooperate with UNMOVIC to address any additional concerns vis-à-vis its WMD programmes and transferred all the assets and staff of UNSCOM to the new body (United Nations Security Council, 1999a). Hans Blix was appointed as the head of UNMOVIC in February 2000, after Russia opposed the move to appoint Dr. Rolf Ekeus, who had earlier headed UNSCOM (UN Monitoring, Verification and Inspection Commission, 2019).

Iraq did not accept the terms of the new Commission, and did not even engage in discussions with it till 2002, when talks between Iraq and members of the commission were held in March, May and July 2002 in New York and Vienna. UNMOVIC meanwhile used other means of gathering information on Iraq's activities, through satellite imagery and inputs from other UN member states, even as it trained over 200 experts from around the world for the possible task of implementing its work inside Iraq (United Nations Security Council, 2002a).

Iraq's Foreign Minister Naji Sabri in a letter to UN Secretary General Kofi Annan on 16 September 2002 informed him that Iraq was willing to allow UN inspectors "without conditions" (United Nations Security Council, 2002b). The UNSC in November 2002 adopted Resolution 1441 charging Iraq with failure to cooperate with UN inspectors, demanded that Iraq provide within 30 days an enhanced and up to date declaration relating to its WMD programmes and delivery systems, required "unimpeded, unconditional and unrestricted access" to UNMOVIC inspectors, and provided sweeping powers to UNMOVIC and IAEA inspectors to seize incriminating evidence (United Nations Security Council, 2002c).

The first team of UNMOVIC inspectors arrived in Baghdad on 25 November 2002 (United Nations Security Council, 2002d, 7). Iraq provided its first declaration by 7 December 2002, involving over 12,000 pages of documentation. UNMOVIC found very little new information

relating to proscribed weapons programmes, though it did agree that some new information was present relating to its past activities on chemical weapons and ballistic missiles. By February 2003, more than 40 no-notice inspections were conducted and over 300 chemical and biological samples were collected. Iraq admitted to UNMOVIC inspectors in December 2002 that it had imported a large number of missile engines, in contravention of Resolution 687 (United Nations Security Council, 2003a). On 18 March 2003, all UNMOVIC staff inside Iraq were withdrawn by Secretary General Kofi Annan, on account of the imminent start of military action against Baghdad by the US-led coalition (United Nations Security Council, 2003b).

### ***Operation Iraqi Freedom and Aftermath***

In the aftermath of September 11, 2001 Al Qaeda terror strikes in the US, Iraq came under renewed Western and American scanner for the alleged threat it posed. The George W. Bush administration viewed the WMD programmes of countries like Iraq and Iran with renewed suspicion and concern. The major ominous scenario for US policy makers in the aftermath September 2001 was the prospect of Saddam Hussein using WMD against American targets or interests.

President Bush in his January 2002 State of the Union address described Iraq, along with Iran and Libya, as constituting an “axis of evil” (George Bush White House, 2002a). Bush stated that Iraq continued to be hostile towards America, supported terrorism, and that it continued to develop nuclear weapons despite UNSC sanctions. The US President charged that the Iraqi regime “kicked out” international inspectors, precisely because it had something to hide regarding its WMD programmes. However, as noted in previous sections, after UNSCOM inspections ended, UNMOVIC inspections found very little evidence of Iraq pursuing activities proscribed by the UNSC in its various resolutions.

Countries like Iraq, Iran and Libya, for Bush, posed a grave danger to world peace, especially if they shared such weapons and technologies with terrorist organisations like Al Qaeda. Bush affirmed that his administration “will not permit the world's most dangerous regimes to threaten us with the world's most destructive weapons” (Ibid). Six months later, at West Point, Bush contended that the US was faced with a unique threat, at the “cross-roads of radicalism and technology.” Bush stated that weak states can cause catastrophic damage to even militarily powerful countries, due to a combination of factors relating to advances in their ballistic missile technologies and their extant chemical, biological and nuclear weapons programmes (George Bush White House, 2002b).

The Bush administration continued to highlight Iraq's non-implementation of UNSC resolutions, non-cooperation with UNSCOM and UNMOVIC, and Iraq's activities in the run up to Operation Iraqi Freedom (OIF), the US-led military operation against Saddam Hussein. These details were released by the White House ahead of Bush's speech at the UNGA in September 2002 in the publication "A decade of Deception and Defiance" (George Bush White House, 2002c). Apart from WMD concerns, the document also had details about Saddam Hussein's domestic policies, his refusal to account for prisoners of war (POW) of the Kuwait War, illegal export of Iraqi oil in violation of UNSC resolutions, among other issues.

Even as the military operations against the Taliban in Afghanistan began in response to September 2001 terror strikes, the Bush administration started exploring military solutions to effectively deal with the Iraqi government. In August 2002, talking to reporters in his home state of Texas, Bush indicated that he had "a lot of tools" at his disposal to deal with Saddam and that the American people clearly understood that WMD in his hands were dangerous to the US and its allies (George Bush White House, 2002d). In October 2002, the resolution to authorise the use of armed force against Iraq was approved by the US Congress (US Congress, 2002). The resolution cited previous US Congressional as well as UNSC resolutions passed against Iraq, specifically UNSC Resolution 687 which authorised the use of "all necessary means" to enforce Iraq's compliance with the terms of that resolution on Kuwait. The Iraq Liberation Act of 1998 also expressed the sense of the Congress that the US should pursue efforts to remove Saddam Hussein from power (US Congress, 1998).

Various arms of the US government got together to publicise the purported WMD threat posed by the Iraqi government. The Director of Central Intelligence (DCI) in his 2002 report to the US Congress on global WMD threat scenario insisted that despite ten years of sanctions, Saddam Hussein continued to have an "interest" in developing nuclear weapons. The CIA highlighted the fact that personnel working for the Iraqi government were caught by the UN trying to smuggle thousands of high-strength aluminium rods for use in a centrifuge enrichment programme. The CIA stated that Iraq still had a dedicated cadre of nuclear scientists and engineers and that it continued to develop ballistic missile technology with ranges beyond 150 kms, including re-establishing rocket fuel factories destroyed during the Kuwait War or subsequently by the UNSCOM inspections (Central Intelligence Agency, 2002).

The US agencies in October 2002 produced a National Intelligence Estimate (NIE) on Iraq's WMD capabilities. This estimate became the subject of much criticism in the aftermath of the

March 2003 US invasion of Iraq. The NIE reiterated most of the points highlighted in the DCIs report to the US Congress and assessed that while the Iraqi regime “does not yet have nuclear weapons or sufficient material to make any” and that the Iraqi government had “reconstituted” its nuclear weapons programme after the departure of the UNSCOM inspectors in December 1998 (National Intelligence Estimate, 2002).

Such estimates and assessments by the US agencies were also supported by reports of think tanks. The International Institute for Strategic Studies (IISS), in its September 2002 report, *Iraq's Weapons of mass Destruction: A Net Assessment*, insisted that Iraq had a “persistent” commitment to develop nuclear, biological and chemical weapons and their delivery systems and that could have “probably moved” these capabilities forward since inspections ended in 1998. In a Press Statement, the IISS Director ahead of the report’s release stated that while Iraq did not possess nuclear material, it could however assemble nuclear weapons if fissile material was secured from outside sources. The IISS assessed that Iraq still had substantial biological and chemical weapons capabilities and that its al-Hussein missiles with a range of about 650 kilometres could still strike most regional targets, including in Israel (CNN, 2002; Defence-aerospace.com, 2002).

Secretary of State Colin Powell’s remarks to the UNSC on 5 February 2003 captures the essence of US policy pitch on Iraq’s WMD threat. Gen. Powell presented before the UNSC information in the form of intercepted telephone conversations, satellite photographs, video evidence, among other information, to affirm the US contention that the Iraqi dictator was indeed actively pursuing WMD programmes and that the US cannot afford such efforts to go unchecked, especially so in the post 9/11 world (US State Department, 2003). The “fatal flaw in the unreliability of evidence” as presented to the UNSC by Powell (who headed the US military during the Kuwait War) was later highlighted as being the root cause of the massive loss of face that the US had to endure after it invaded Iraq (Zarefsky, 2007).

It is astonishing to note that just a week before the US launched military operations against Iraq, the IAEA Director General Mohammed el-Baradei in his report to the UNSC on 14 February 2003 stated that even as the nuclear regulatory authority was continuing with its inspections inside Iraq, it “found no evidence of ongoing prohibited nuclear or nuclear related activities in Iraq,” since IAEA inspections re-started in December 2002 (International Atomic Energy Agency, 2003a). Further, UNSC Resolution 1441 of 8 November 2002 had required Iraq to cooperate with the IAEA inspectors to clarify concerns regarding its WMD

programmes, cooperation which was on-going at the time the US launched its massive military assault (United Nations Security Council, 2002e). The IAEA inspections inside Iraq stopped after 17 March 2003.

Further, despite President Bush and his officials like Defence Secretary Cheney continuously harping on the links between Saddam Hussein and Al Qaeda ahead of the US military operations in Iraq, such links were very tenuous and not proven. In effect, the Bush administration misled US and world opinion while building the case for the invasion of Iraq (Pffifner, 2004). The National Commission on Terrorist Attacks upon the United States, also known as the 9/11 Commission, in its final report released on 22 July 2004 stated that despite some contacts between Saddam Hussein and Al Qaeda, there was no evidence that there was a “collaborative, operational relationship” (The National Commission on Terrorist Attacks upon the United States, 2004, 66).

The belief that only military action was inevitable to counter Saddam’s government also rested on “flimsy foundations”, for John Mearsheimer and Stephen Walt, who wrote a celebrated article in the January 2003 issue of *Foreign Policy* magazine. They contended that Saddam’s past actions eminently showed that he can be deterred. His possible possession of nuclear weapons, in their view, also would not make any difference, as the US deterred the Soviet Union successfully during the Cold War (Mearshiemer and Walt, 2003).

Mearshiemer and Walt’s article generated a lot of counter arguments, by analysts who pointed out that the two ‘realist’ professors ignored Saddam’s past history of using chemical weapons. They also highlighted the fact that deterring the Soviet Union required “careful calculation” from both sides of the divide — an element which will surely be missing from the temperamental Iraqi leader as and when he acquires nuclear weapons, and the catastrophic consequences that the world has to face if the hypothesis put forward by the two university professors turns out to be false (Lieber et al, 2003, 4-10).

Others like David Cortright and George Lopez argued that past UN inspections (UNSCOM and UNMOVIC) were successful in getting to know the full extent of Saddam’s WMD programmes and that the US government should continue to pressure the Iraqi regime for continued UN inspections to keep a tab on Iraq’s WMD intentions. Further, the UN and the US sanctions have been very successful in squeezing Iraq’s sources of revenues from its oil exports and the US should convey to Saddam that if his behaviour changes, these sanctions could be

eased gradually. In effect, they were arguing for a policy of “enhanced containment” (Cortright and Lopez, 2002).

The Bush administration, however, did not listen to such policy advice but went ahead with launching a massive military attack on Iraq on 20 March 2003. Unlike the Kuwait War, which was sanctioned by the UNSC and which involved more than 40 countries as part of the US-led coalition, OIF only involved military contributions from the United Kingdom, Poland, Australia, Canada, Netherlands and Italy. The ‘Iraq War’ led to the death of over 4,000 US service personnel and nearly 32,000 were injured, as of December 2019 (US Department of Defense, 2019). A decade after the war, a study estimated in 2013 that the Bush administration’s military misadventure had cost the US over US\$2 trillion, while over 130,000 Iraqi civilians lost their lives (Trotta, 2013). Saddam Hussein was captured by US forces in December 2003 and executed in 2006. The Iraqi Parliament approved the US-Iraq Status of Forces agreement in 2008, which stipulated that most of the US forces would leave the country by December 2011.

The Iraq Survey Group (ISG) was constituted by the US-led multi-national military forces with the express intention of searching for Saddam’s WMD in the aftermath of OIF. The head of the ISG, Charles Duelfer, in testimony before the Senate Armed Services Committee in March 2004, in the face of no new evidence regarding Iraq’s WMD, famously stated that his group was focussing on the Iraq’s dictator’s “intentions” and not just physical evidence (Kerr, 2004a, 30). The ISG did not find physical evidence of Iraqi WMD activities undertaken after the Kuwait War, which led to huge criticism about US (and of allies like the UK) policy options flowing out of politically manipulated intelligence estimates. The government of Tony Blair also had to face a lot of criticism for its intelligence assessments (specifically the one released in September 2002) which made a strong case for the war in Iraq when no WMD were found in the aftermath of OIF (Morrison, 2011; Boyd-Anderson, 2003)

In the months after OIF, when the US did not find any significant evidence of Iraqi nuclear weapons-related activities, DCI George Tenet continued to defend the controversial October 2002 NIE (which was a significant portion of the justification framework for the US invasion) by asserting that the NIE was based on intelligence gathered over a period of a decade and that it demonstrated consistency in the work and assessments of the US intelligence community (Central Intelligence Agency, 2003; Central Intelligence Agency, 2004). Tenet insisted that even if Saddam did not have a nuclear weapon, evidence pointed to the fact that he was

interested in acquiring such a capability and he would have done so at “some point” if there was no US military action (*Arms Control Today*, 2004).

A key piece of evidence touted by the Bush administration was the charge that Iraq had an agreement with Niger to import uranium. This was stated by the US State Department which released a Fact Sheet on the issue in December 2002. The IAEA DG, in his report to the UNSC in March 2003, however clarified that after a “thorough analysis,” the IAEA concluded that the documents on which such charges rested were “not authentic” (International Atomic Energy Agency, 2003b).

It was charged that the primary reason why Iraq’s WMD threat was ‘inflated’ was to achieve regime change inside Iraq and remove Saddam Hussein from office (Kaufmann, 2004). The Bush administration and its group of neo-conservatives believed that regime change would lead to a pliable pro-US regime in Baghdad and that US interests lay in such a policy course. The greater failure of the Bush administration neo-cons, therefore, was the belief that Saddam Hussein could be replaced rather easily with a pro-American regime (Fitzgerald and Lebow, 2007; Conway, 2012). Such assessments did not come to pass and the US and its allies were caught in the Iraqi quagmire with huge loss to people and material over the course of a decade and more.

Director-General el-Baradei in his April 2004 report to the UNSC pointed out that large quantity of contaminated scrap from Iraq had ended up in foreign countries, most of it from sites which were earlier being monitored by the IAEA (International Atomic Energy Agency, 2004c). El-Baradei noted that it was not clear whether this scrap was deliberately shifted out of Iraq or a result of looting in the aftermath of the war. He therefore acknowledged the possibility that the task of the Agency in examining the real extent of Iraq’s nuclear capabilities became complicated, and raised concerns about the further proliferation implications of Iraqi nuclear material and equipment (Ibid).

The CIA on its part , after examining the possibility of Iraqi nuclear material ferreted out of the country, however in 2005 ruled out the possibility that Saddam might have transferred Iraq’s WMD to other countries, including Syria, in the face of the imminent US military attack in 2002 or 2003 (Central Intelligence Agency, 2005). In September 2005, the IAEA carried out its annual physical inventory verification (PIV) at the Tuwaitha nuclear storage facility. The IAEA Director-General informed the UNSC that all safeguarded nuclear material was accounted for (International Atomic Energy Agency, 2005c).

The Report of the Commission on the Intelligence Capabilities of the United States regarding WMD (also called the Robb-Silberman Commission after their chairpersons, Lawrence Silberman and Charles Robb) which submitted its report in 2005, pointed out that a combination of complex factors were responsible for the plethora of US government agencies wrongly coming to the conclusion that Saddam Hussein was very close to developing a nuclear weapon prior to the Iraq War. These included, according to the Commission, lack of proper expertise as most of the intelligence assets were trained to focus on the threat from the Soviet Union, inherent difficulties in detecting and interpreting data relating to dual-use technologies, poor coordination among the more than 15 intelligence organisations, lack of dynamism in adapting to constantly evolving threats, and organisational culture at intelligence agencies (Govinfo.gov, 2005). The CIA in 2006 (report released in 2013) admitted that it was in effect guilty of “misreading intentions”, in the light of the Iraqi regime’s deception and lack of cooperation, which forced US intelligence agencies to presume the worst-case scenarios (Central Intelligence Agency, 2006).

The UNSC in December 2010 passed resolution 1957, terminating the provisions of Resolutions 687 and 707 and removed economic and other sanctions imposed on Iraq. The resolution urged Iraq to ratify the IAEA Additional Protocol (AP) at the earliest as well as sign the Comprehensive Test Ban Treaty (CTBT) (United Nations Security Council, 2010a). Iraq signed the AP to its standard safeguards agreement in October 2012, becoming the 199<sup>th</sup> nation to do so. The AP ensures a greater degree of transparency regarding a NPT member states civilian nuclear programme. Iraq ratified the CTBT on 26 September 2013. It had earlier in August 2008 signed the CTBT. The Iraqi Foreign Minister Ibrahim al-Jaafari told the UNGA in September 2017 that Iraq would like to take the help of the international community to build a peaceful nuclear programme (United Nations General Assembly, 2017). Al-Jaafari did not repeat this request subsequently in 2018. The Iraqi Foreign Minister’s 2017 statement led to speculation whether the current or future Iraqi governments could possibly pursue a nuclear WMD programme, flowing out of its civilian programmes (Amir, 2017).

## **Libya**

Libya established its Atomic Energy Commission (AEC) in 1973, under the direct control and supervision of its ruler Muamar Qaddafi, just four years after he took over the reins of power in September 1969 when his group of Free Unionist Officers Movement overthrew King Idris al-Sanusi. The Libyan leader wanted to gain international prestige and regional stature by



pursuing a nuclear weapons programme, to push forward his agenda regarding Arab unity. The Libyan leader also believed that India's 1974 peaceful nuclear explosion (PNE) increased its international stature (Flatte, 1985, 31).

Libya sought nuclear technology from China, Pakistan and even India, among others. Libya tried to get nuclear technology from China in 1970, when the Vice Chairman of Libya's Revolutionary Command Council went to Beijing at the express instructions of Qadhafi to discuss with Prime Minister Chou Enlai the possibility of China transferring nuclear technology to Tripoli. Beijing however refused to provide the technology (Feldman, 1982a, 78; Flatte, 1985, 31). In the aftermath of the Chinese rebuff, Qadhafi publicly aired the prospect of his country offering US\$1 million worth of gold to anybody who would be willing to share the technology (Micallef, 1981, 14). Tripoli signed a secret nuclear agreement with Islamabad in 1973, as part of which the Libyan dictator agreed to finance the Pakistani nuclear programme in return for accessing its nuclear infrastructure (Spector, 1984, 151).

The Libyan leader turned his attention towards the Soviet Union for nuclear technology, when his efforts with China did not succeed. In 1975, Libya signed an agreement with Moscow for a 10 MWe reactor, after a visit by Soviet Prime Minister Alexei Kosygin to Tripoli. A large number of Libyan students were also dispatched to study nuclear engineering in Soviet universities and research centres (Flatte, 1985, 31-32; Micallef, 1981, 14).

Libya signed the NPT in 1975 — which was a pre-condition for the supply of the Soviet reactor, but did not have a safeguards agreement with the IAEA till 1980 (Potter, 1985, 477). The Soviet Union in 1958 became extremely careful in sharing its nuclear technology with other countries, after being initially very cooperative in sharing such technology, especially with China beginning from 1955. The Soviet Union is also suspected of either constructing or assisting in the construction of a uranium enrichment plant for China during 1955-58 (Ibid, 469; Duffy, 1978, 84). After Beijing expressed its intention to develop its own nuclear weapons in 1958, Moscow became strict in sharing its nuclear technology with other countries, like Hungary or Czechoslovakia (Potter, 1985, 470). However, the fact that Iraq was able to get such technology, including reactors from countries like France, when Moscow initially rebuffed the Iraqi government's entreaties for nuclear technology, convinced the Russians that even Qadhafi could possibly get such technology from the West if they rejected his requests.

The Libyan-Soviet cooperation on nuclear matters occurred despite the obvious ideological differences between the two countries; Libya professed Arab unity underpinned by Arab

nationalist and Islamist views, as against the Soviet Union's communist ideology. However, apart from commercial considerations, Cold War geo-politics of North Africa also played an important role. The Soviet Union viewed its relationship with Libya, especially on the question of arms exports, as geo-strategically important after Anwar Sadat withdrew Soviet experts in 1972 and tilted towards Washington (Bruce St John, 1982, 134-135).

The Libyan government entered into an agreement for cooperation for peaceful uses of nuclear energy with France in 1976 and with the Morarji Desai government in 1978. The agreement with India involved the exchange of scientists, among other provisions in return for the provision of at least three million metric tonnes of petroleum products (Micallef, 1981, 14-15). When Libya insisted on expanding the scope of such cooperation, India became worried about its nuclear intentions. The government of Prime Minister Indira Gandhi subsequently did not fulfil the terms of the 1978 agreement (Spector, 1984, 155).

Libya also established cooperation with Argentina in the nuclear field. An initial agreement was signed with Argentina in 1974 for help in nuclear materials mining. Later, during the 1982 Falklands War with Great Britain, Qadhafi gave monetary support to Argentina, following which a large delegation was despatched to Tripoli by the military dictatorship in Buenos Aires to discuss nuclear technology (Flatte, 1985, 32). Libya was also interested in the rich uranium resources of fellow African countries like Gabon, Niger and the Central African Republic. Libya financed pro-Libya armed insurgent groups in these countries in order to get a foot hold in their domestic politics (Micallef, 1981, 15).

In the 1970s, Libya even started purchasing yellow cake from a uranium mine in Niger, which was controlled by France. Reports note that it offered money more than prevailing international market rates for uranium to purchase over 1200 kgs from Niger. Libya then used such resources, apart from its oil money, to enter into nuclear cooperation agreements with countries like Pakistan — which was in dire need of both nuclear materials and finances to kick start its own nuclear programme after the 1974 peaceful nuclear explosion (PNE) by India (Bergner, 2012, 95; Wright, 1981, 33). As part of the Atoms for Peace programme, a large number of Libyan citizens had taken advantage of opportunities to study nuclear engineering at US universities. The US, however, was so concerned later with Qadhafi's openly declared nuclear intentions that it had to put in place policy measures specifically denying admission to Libyan students in such programmes (Flatte, 1985, 32).

In the aftermath of the June 1981 raid on Osiraq that destroyed the Tammuz reactor, Qaddafi insisted that he “had nothing but scorn for the notion of an Islamic bomb,” given that a nuclear weapon “terrorises humanity” irrespective of one’s religion (Spector, 1984, 155). Even as he was saying such things publicly, Qadhafi dispatched his Foreign Minister to Moscow a few weeks after the raid expressly seeking Moscow’s help for a possible raid on Dimona (Geleskul, 2012, 139). A decade later however, Qadhafi in May 1992 wished that his country had in its possession atomic weapons, though he admitted that such weapons could not possibly be used with regard to the Israel-Palestine conflict (Feldman, 1997, 134-135).

### ***Unilateral and Multilateral Sanctions***

The US was worried about Libya’s covert and overt efforts in the nuclear domain, coupled with the openly expressed desire of the Libyan dictator to achieve the nuclear weapons capability. The CIA in a February 1985 NIE after a technical analysis stated that the Libyan efforts to acquire nuclear weapons were “rudimentary” with “serious programme deficiencies”, including a shortage of scientists and engineers to sustain a large-scale programme (Central Intelligence Agency, 1985). The US meanwhile undertook a series of measures, including economic sanctions and military actions, as noted below, to pressure Libya over its WMD programmes and regional policies, particularly its support for terrorist activities.

Libya was determined to be a ‘state sponsor of terrorism’ on 22 December 1979, one of the first countries to be designated as such, in the aftermath of the destruction caused at the US Embassy in Tripoli on 2 December 1979. The demonstrators were expressing solidarity with the Iranian revolution. The US Navy shot down two Libyan Sukhois over the Gulf of Sidra in August 1981. The Reagan administration imposed a ban on the import of Libyan oil in 1982.

Subsequently, the US declared a ‘national emergency’ with respect to Libya in 1986, requiring a complete ban on economic activity between US citizens and Libyan nationals. The Reagan administration determined that the policies of the Libyan government constituted an “unusual and extra-ordinary threat” to US national security (National Archives, 1986). Libya’s involvement in terrorist activities perpetrated at European airports in December 1985 (leading to the death of five American citizens in Rome and Vienna) and a restaurant in Berlin, Germany, frequented by American soldiers, in April 1986, which led to injuries to over 50 US soldiers, were direct attacks against US military personnel (Nephew, 2018, 10).

The US State Department in a report in January 1986 stated that the Libyan government violently targeted Libyan dissidents living in Europe and the US by using its Embassies

overseas as conduits for such activities, and was providing refuge for international terrorists like the Venezuelan Illich Ramirez Sanchez, also known as 'Carlos the Jackal' (Central Intelligence Agency, 1986; *The New York Times*, 1986). The Reagan administration launched air strikes involving over a hundred aircraft targeting the Libyan leader's compound outside Tripoli in response to the bombing of the Berlin restaurant. The US had intercepted communication from Tripoli to its Embassy in Berlin ordering the restaurant bombing (History.com, 1986).

On 21 December 1988, a bomb planted on Pan Am flight 108 operating from London to New York led to an explosion over the Scottish town of Lockerbie, killing 270 people (259 passengers and crew and 11 people on the ground; out of this, 189 were US nationals). The US Acting Permanent Representative to the UN, in a letter to the UN Secretary-General dated 23 December 1991, three years after the incident, accused Libyan nationals working for its intelligence services as responsible for planting the bomb that led to the explosion. The US accused Libyan agents of using explosives manufactured by a Swiss firm that had close links with the Libyan military. Among the dead were three Indian nationals and four Indian-Americans (United Nations Security Council, 1991e).

UK's Permanent Representative to the UN in a letter to the UN Secretary-General written a few days after the letter by the US Representative accused Libyans, Abdul Basit al Megrahi and Al Amin Khalifa Fahimah, of being behind the Lockerbie incident (United Nations Security Council, 1991f). Al Megrahi was the head of security services at the Libyan Arab Airlines, the state airline of the Libya. On 19 September 1989, a year after the Lockerbie disaster, another plane carrying 170 people from Brazzaville, Congo to Paris blew up over the Sahara. The Permanent Representative of France to the UN, in a letter dated 31 December 1991 to the United Nations Secretary-General, accused Libyan agents of carrying out the dastardly act (United Nations Security Council, 1991g). In a combined letter to the United Nations Secretary-General, the US, UK and France demanded that Libya surrender those accused of the two crimes to authorities in the UK, France and the US and pay appropriate compensation (United Nations Security Council, 1991h; United Nations Security Council, 1991i).

The UNSC in Resolution 731 on 21 January 1992, within a month of receiving the letters from the US and the UK accusing Libyan officials of complicity in the Lockerbie bombing, condemned the loss of lives and deplored the non-cooperation of the Libyan government in addressing issues relating to the incident (United Nations Security Council, 1992a). Later in

Resolution 748 of March 1992, the UNSC demanded that Libya cease supporting terrorist activities, decided that all UN member states will deny permission to any flight that takes off from the Libyan territory, imposed an arms ban on Libya and decided that all UN member states will reduce the strength of Libya's diplomatic missions worldwide — given their role in fomenting terrorist activities (United Nations Security Council, 1992b).

Resolution 883 of November 1993 required UN member states not to allow access to funds or resources on their territories owed to Libya and imposed a ban on the supply of equipment for use in Libya's petro-chemical industry (United Nations Security Council, 1993). It was not until 1998 that Libya agreed to send the two suspects to stand trial at The Hague, Netherlands, after lobbying by President Nelson Mandela of South Africa and by Saudi Arabia. Till then, Tripoli was arguing that its citizens could not be guaranteed fair trial in the US or in the UK (Deutsch, 1999).

The UNSC passed Resolution 1192 in August 1998 when Tripoli agreed to send the two Libyan nationals charged with carrying out the Pan Am bombing to stand trial in the Netherlands. It further stated that sanctions against Libya would be suspended if the Libyan authorities fully cooperated with the investigations and stand trial (United Nations Security Council, 1998b). Subsequently, in April 1999, the UNSC announced that sanctions against Libya, including those related to the arms ban, would be suspended, after it was confirmed that the two Libyan nationals arrived in the Netherlands to stand trial (United Nations Security Council, 1999b). In January 2001, the courts sentenced Megrahi to life imprisonment while al-Amin Fahima was acquitted (Megrahi was later released on health grounds in August 2009 as he was suffering from terminal stage cancer. He died in May 2012 in Tripoli).

It was not until September 2003, when the UNSC vide Resolution 1506 lifted the arms embargo imposed as part of Resolution 748, after Libya accepted responsibility for the bombings that downed the two planes, agreed to pay compensation and pledged to renounce terrorism (United Nations Security Council, 2003c). In April 2003, Libya had agreed to pay US\$10 million to each family of the Pan Am victims in three instalments and in August 2003, it announced the establishment of an escrow account in a Swiss bank to pay the compensation (US State Department, 2009a). For the downed Brazzaville-Paris flight in 1989, Libya initially paid compensation of US\$34 million in 1999 when a French court found six Libyans guilty of being responsible for the bombing. Later in January 2004, Libya agreed to pay US\$170 million, a US\$1 million each per person who died in that flight (Venema, 2014).

As noted in earlier sections, Libya was also subject to restrictions imposed by countries like the US for its support to terrorist activities, including restrictions on US personnel and companies doing business inside Libya, among others. The 1996 Iran and Libya Sanctions Act (ILSA) is a prominent example of a punitive measure directed against the country. The Act required that the US administrations pursue all measures to ensure Libya's compliance with UNSC resolutions relating to its terrorist activities as well as end all efforts to acquire WMD. The Act banned US involvement in the development of the country's petro-chemical resources or its aviation programmes, on the belief that the Libyan leader could use resources accruing from such investments to fund his WMD programmes. The Act warned of sanctions if an investment exceeding US\$40 million was made in Libya's petro-chemical sector in a year. These sanctions included denial of loans from US financial institutions or US EXIM Bank loans, among others (US Congress, 1996).

ILSA was valid for an initial period of five years. It was renewed by President George W. Bush for an additional period of five years in August 2001, even though no sanctions were imposed under the Act. In February 2004, diplomatic relations between the two countries resumed. In April 2004, President Bush judged that Libya fulfilled conditions related to the Lockerbie bombing of the Pan Am flight and subsequently certified to the US Congress that Libya was not involved in any terrorist activity in the six months prior to his certification. In June 2006, Libya was formally removed from the US State Department's list of states sponsoring terrorism (Schwartz, 2007, 553). In August 2006, Libya was removed from the purview of the ILSA and the name of the Act was changed to Iran Sanctions Act (ISA). In January 2009, respective ambassadorial positions were filled in both the countries. It was therefore after 37 years that a US Ambassador was stationed in Tripoli, as Washington had recalled its Ambassador way back in 1972, in the wake of the coup d'état in 1969.

### ***Libya's Denuclearisation***

Libya on 19 December 2003 announced that it was giving up its nuclear programme. By January 2004, the IAEA was able to conduct an inventory of nuclear materials and components (including ballistic missile components) and transferred them to facilities in the US under IAEA safeguards (International Atomic Energy Agency, 2004d; Kerr, 2004b, 29). Libya in January 2004 ratified the CTBT. The country even agreed to host a CTBT monitoring radionuclide station on its territory, at Misratah (Comprehensive Test Ban Treaty Organisation, 2004).

In March 2004, Libya signed the AP to its standard safeguards agreement. IAEA Director-General el-Baradei hoped that the Libyan decision to sign the AP was a “first step” towards achieving a WMD free West Asia (Nuclear Threat Initiative, 2004). About 15 kgs of highly enriched uranium (HEU) was air lifted to Russia, the original supplier of the HEU to fuel the 10 MWe Tanura Nuclear Research reactor supplied by it, in March 2004. The cost of the fuel removal was more than US\$700,000, funded by the US (International Atomic Energy Agency, 2004e). The National Emergency with respect to Libya was removed in September 2004, as it was judged that the country’s WMD programmes were no longer a cause for concern (US State Department, 2004a).

As to the extent of Libya’s covert nuclear activities over the decades, the IAEA DG in his report to the Board of Governors (BoG) in May 2004 pointed out that Libya had carried out undeclared activities related to uranium conversion and enrichment, from 1980 onwards till 2003. It acquired uranium conversion plant, including gas centrifuges from a ‘foreign source’ received documents pertaining to nuclear weapons design, from a ‘foreign source’ and sophisticated instruments like mass spectrometers, from a ‘foreign procurement network’ (International Atomic Energy Agency, 2004f, 6).

While the ‘foreign procurement network’ was obviously the A.Q. Khan network, the IAEA Director-General does not explicitly say so in his report to the BoG. Libya also imported yellow cake containing over 1500 tonnes of uranium from 1978-1981, and uranium hexa fluoride (UF<sub>6</sub>), even as late as September 2000 and February 2001, from the same network which supplied it the machinery pertaining to the uranium conversion facility. Libya had nearly 12 nuclear research related sites, and more than 20 places in universities and scientific research institutions were involved in nuclear research (Ibid). In another report in August 2004, el-Baradei appreciated the fact that the country was very cooperative with the Agency which has helped the IAEA to gain a clearer understanding of its past undeclared nuclear programme, specifically related to the cooperation with the proliferation network (International Atomic Energy Agency, 2004g)

It is pertinent to note that even as Libya was cooperating with the IAEA, the US and the UK in clarifying the nature of its covert nuclear activities, Abdul Qadeer Khan, the father of the Pakistani nuclear weapons programme and the brain behind the proliferation network that bears his name, was arrested on 31 January 2004 by the Pakistani authorities, under US pressure. The Khan network was in fact exposed when the US, in a joint operation with the UK, Germany

and Italy, intercepted the *BBC China*, a German-owned cargo ship docked at a port in Italy, in October 2003. The ship was found transporting uranium enrichment machinery bound for Libya. Analysts note that the Khan network intended to provide Libya with the needed expertise and equipment related to uranium enrichment to be able to produce at least ten nuclear weapons annually (MacCalman, 2016, 111; Albright and Hinderstein, 2005, 113).

In the aftermath of the interdiction, British and American intelligence offices and WMD experts paid two trips to Tripoli confronting the Libyan leader and his associates with irrefutable evidence of on-going Libyan covert WMD activities. While most analysts highlight the impact of the interception in the subsequent decision of the Libyan government to denuclearise, others have pointed out that the interdiction could have been facilitated by intelligence provided by the Libyans themselves, in order to provide proof of the A.Q. Khan network (Wright, 2004; Tobey, 2017, 32-35). Tripoli expressed a desire to clear the air regarding its WMD programmes with its Western interlocutors in the aftermath of the US invasion of Iraq (Anderson, 2006, 46).

Analysts note that the Libyan WMD disarmament decision is proof that tough unilateral and multi-lateral economic sanctions targeting the country's key petro-chemical sectors and arms ban, along with a strict implementation of key export control regimes like the Missile Technology Control Regime (MTCR), and counter-proliferation initiatives like the Proliferation Security Initiative (PSI), makes it difficult for states on the look out to procure such items for their covert activities and could ultimately lead to their dismantlement (Miller, 2007; Bahgat, 2005; Kerr, 2004c). Apart from such factors primarily associated with an international security agenda shaped by the post-9/11 world, other analysts have pointed to the Libyan regime's changing foreign policy priorities which were increasingly concerned about regime survival (Hegghammer, 2008).

After the 'Arab Spring', the Qadhafi regime cracked down hard on protesters. The Obama administration in February 2011 passed Executive Order 13566, declaring a 'national emergency' with respect to Libya and blocking the property and assets of the Libyan leader and his children and associates in the United States (Obama White House, 2011). A day after the Obama administration's decision, the UNSC re-imposed the arms embargo on Libya vide Resolution 1970, and put in place asset freezes and travel bans on key government officials. A sanctions committee was also established to oversee its implementation (United Nations Security Council, 2011).



In October 2011, Qadhafi was killed by rebels near his home town of Sirte. The socio-political churning and instability in the aftermath of his death further complicated US relations with the North Africa state, especially when the transitional government in October 2011 announced that it had discovered a previously undisclosed chemical weapons storage facility. Concerns re-emerged as to whether Libya had not fully given up its WMD assets, despite sustained pressure in the form of sanctions and other punitive measures (Busch and Pilat, 2013, 451). The discovery of the new facility was jarring especially when Libya had entered into an agreement with the Organisation for the Prohibition of Chemical Weapons (OPCW) in 2008. In January 2004, Libya had declared its stocks of chemical weapons to OPCW. These included over 3,500 aerial bombs and nearly 25 tonnes of sulfur mustard (Terrell et al, 2016, 187).

Subsequently, in a brazen attack on the compound of the US Embassy in Benghazi in September 2012, US Ambassador Christopher Steven was killed. Ahmed Abu Khatallah, a Libyan militant leader, was charged with orchestrating the attack on the US Embassy compound. He was captured by US forces in June 2014 and sentenced to 22 years imprisonment for his role in the attack in June 2018. The ‘national emergency’ with respect to Libya imposed by Obama has been renewed every year by President Donald Trump. Libya meanwhile signed the 2017 Treaty on the Prohibition of Nuclear Weapons (TPNW). Libya was also one of the co-sponsors of the 2016 UNGA resolution that established the treaty.

## **Egypt**

Egypt decided to ratify the NPT in December 1980 and eventually signed it on 16 February 1981 (Feldman, 1982a, 72). Egypt has long held that if Israel gets nuclear weapons, it would need to match the Israeli capabilities “at any cost” (Bhatia, 1988, 15). During the 1960s, President Gamal Abdel Nasser was able to secure Soviet promise that it would respond to a nuclear attack against Egypt by its enemies, presumably the United States or Israel. After the break with the Soviet Union and alignment with the United States, President Anwar Sadat tried to get similar guarantees from Washington (Barnaby, 1987, 104).

President Sadat in December 1974 affirmed that if Israel introduced nuclear weapons to the region, Egypt would “find a means to have them too” (Pranger and Tahtinen, 1975, 8). The influential newspaper *Al Jumhuriya* in one of its Op-Eds during that period asserted that as long as Israel opposed nuclear disarmament in the region, there was no alternative to the manufacturing of an Arab atomic bomb (Feldman, 1997, 134). The paper insisted that an Arab nuclear capability will ensure a “balance of power” in the region and guarantee regional peace

(Ibid). Speaking to reporters in Riyadh in 1976, President Sadat stated the obvious when he noted that the combined Arab military prowess would be made redundant if Israel threatened them with nuclear weapons (Feldman, 1982a, 61). In an interview with the American Broadcasting Corporation (ABC) in February 1977, Sadat insisted that Israel must sign the NPT (Ibid, 68).

Apart from threatening to go nuclear if Israel acquired such capabilities and insisting that Israel must sign the NPT, Egyptian leaders threatened to target nascent infrastructure that could potentially allow Israel to acquire nuclear weapons. President Nasser for instance in May 1966 affirmed that Arab countries will have to “destroy immediately everything that enables Israel to build an atomic bomb” (Karpin, 2006, 274; Feldman, 1982a, 66). While obviously, Cairo could not carry out such pre-emptive threats, the Egyptian Air Force did fly reconnaissance missions over the Dimona reactor in May 1967 prompting concerns in the Israeli government that Egypt was planning to destroy the reactor (Karpin, 2006, 276; Cohen and Pollack, 2019, 3).

Egypt’s first civilian nuclear reactor was operational by 1961. But its plans to build additional reactors were not successful. Later in 1992, Egypt entered into an agreement with Argentina to build a 22 MWe research reactor, which became critical in 1997. Egypt signed a contract with Russia in 2017 for the construction of a 1,200 MWe reactor that is expected to go critical in 2026. The project is expected to cost nearly \$30 billion but is facing criticism about its viability coupled with safety concerns (*The Arab Weekly*, 2019).

As for its stance on nuclear non-proliferation and disarmament issues, Cairo affirms that continued nuclear weapons possession and their modernisation undermine the NPT. The country has voted in favour of the TPNW on 7 July 2017, has ratified the 1925 Geneva Protocol and the 1972 Biological and Toxins Weapons Convention (BWC), though it has not yet signed the Chemical Weapons Convention (CWC). Cairo affirms that establishing a WMD free zone in West Asia is essential for regional security and that the region should follow in the footsteps of other regions that have established such zones (Egyptian Ministry of Foreign Affairs, 2019). Egyptian Foreign Minister Sameh Shoukry speaking in February 2018 at the Conference of Disarmament (CD) at Geneva stated that a weapons of mass destruction free zone (WMDFZ) in West Asia should be based on “collective security” rather than “selective security” (*Egypt Today*, 2018).

Chapter 3 has details about Syrian nuclear issues, including the September 2007 Israeli strike on Deir al Zour and developments subsequent to it. Chapter 6 examines the Iranian nuclear issue and regional and global reactions in detail.

### **Regional Chemical and Biological Weapons Capabilities**

Concerns associated with Israeli nuclear weapons played a key role in determining regional non-proliferation and arms control decisions. Supreme Leader Ali Hashemi Rafsanjani viewed chemical weapons as the “poor man’s atomic bombs” (Feldman, 1997, 138). Egypt’s Minister of War Gen Abid al-Rammy Gemassy stated the obvious when he noted that nuclear weapons were not the only weapons of mass destruction but that chemical weapons and incendiary weapons could be equally effective (Feldman, 1982a, 69). President Sadat in 1970 affirmed that Egypt had biological weapons which will be used against the Israeli civilian population, in case it was attacked with nuclear weapons (Bahgat, 2007, 410). Egypt later in 1972 signed the Biological Weapons Convention (BWC).

The West Asian regimes have the dubious distinction of using chemical and biological weapons on civilian populations during times of conflict. Egypt’s Nasser used poison gas in in the Yemeni conflict, which ran from 1963-1967. Egypt deployed over 70,000 troops in the conflict, which resulted after a military coup toppled the Yemeni government in 1962. Egyptian forces however got bogged down against Saudi Arabia-backed Yemeni tribes. Analysts note that Nasser used chemical weapons delivered by aircraft in order to flush out Yemenis who took shelter in mountainous terrain, which precluded the employment of conventional forces against them. Over 1400 people lost their lives as a result of such chemical attacks (Shoham, 1998, 48; Federation of American Scientists, 1999).

Saddam Hussein’s regime used chemical weapons against Iran and the Kurds during the Iraq-Iran war. Mustard gas and nerve agents were used beginning from 1984 and more than 7000 Iranians died as a result of such use (Regencia, 2018; Ali, 2001). The chemical attack on the town of Halabja in March 1988 reportedly killed 5,000 people (*Arms Control Today*, 2002a, 14). Writing in 1987, Frank Barnaby cites reports of the British Broadcasting Corporation (BBC) which indicated that Iraq was producing 60 tonnes of mustard gas per month (Barnaby, 1987, 100-101). Ahead of the Kuwait War, Saddam Hussein in April 1990 vowed to “burn half of Israel” given that Iraq possessed “binary chemical weapons” (Feldman, 1997, 139; Nashif, 1996, 41).

While the 1925 Geneva Protocol was the extant regime that governed chemical weapons prior to the Iran-Iraq War, analysts note that the Protocol did not explicitly prohibit the stockpiling or production of chemical weapons, which the 1997 CWC eventually did and which the 1972 BWC did vis-à-vis biological weapons. However, it is important to note that while the production and stockpiling of such weapons was not prohibited, there was no legal imprimatur or military logic that could justify the indiscriminate use of such dastardly weapons (Ali, 2001, 45).

In this decade, the use of chemical weapons by the regime of Basher al Assad has come in for international condemnation. Assad is alleged to have used chemical weapons against civilian populations, starting from December 2012. In August 2013, a sarin attack on the outskirts of Damascus in the suburb of Ghouta is alleged to have killed over 1,300 people. President Obama famously in a press conference at the White House on 20 August 2012 stated that if the Assad regime used chemical weapons, that “would change my calculus” (Obama White House, 2012b). The Obama White House assessed with “high confidence” on 30 August 2013 that the Assad regime used a nerve agent during the 21 August attack on Ghouta using rocket and artillery fired from regime-controlled territory that led to the death of 1,429 people, including 426 children (Obama White House, 2013).

The administration’s resolve to deal with such indiscriminate chemical weapons use however lost credibility when it did not militarily intervene to confront the Assad regime, as Obama had promised he would. The US and Russia instead got together in September 2013 to put forward a Framework Agreement as part of which Syria agreed to give up its chemical weapons stockpile, under the supervision of the OPCW, by mid-2014 (Organisation for the Prohibition of Chemical Weapons, 2013). Syria identified over 1,300 tonnes of chemical weapons, which were expected to be removed completely by the OPCW. However, in April 2017, a sarin gas attack in Khan Sheykoun killed about 100 civilians while more than 50 were killed a year later when two Syrian Air Force helicopters allegedly dropped chlorine bombs (BBC, 2018b). Recent scholarship shows that the Assad regime in fact used chemical weapons to varying degrees on nearly 300 occasions since 2012 (Lombardo, 2019; Schneider and Lutkefend, 2019).

As for the linkage between Israeli nuclear weapons and Arab non-proliferation and arms control decisions, Egypt for instance held its signature to the 1997 CWC contingent on Israel signing the NPT (Nashif, 1996, 49). Analysts note that Arab countries had essentially four

responses to the prospects of Israel acquiring the nuclear weapons capability. These included the following:

- a) Sign the NPT and accept IAEA safeguards on their nuclear facilities;
- b) Secure superpower nuclear guarantees;
- c) Try to develop an Arab deterrent capability to counter the Israeli capability, by developing their own chemical and biological weapons capabilities; and
- d) Threaten to go down the nuclear weapons path if Israel continued on its nuclear march (Feldman, 1982a, 67).

Most of the Arab countries followed a combination of the above mentioned options. Syria's long-standing Defence Minister Mustafa Tlas, who occupied the position during 1972-2004, in September 1984 asserted that the Soviet Union promised to come to the aid of the Syrians if ever Israel used nuclear weapons against their country (Spector, 1985, 133). All of them developed potent chemical and biological weapons arsenals, which unfortunately were also used against civilian populations by the Syrian, Egyptian and Iraqi governments. Countries like Libya, Iraq and Syria tried to go down the nuclear route but, as was shown in previous sections, could not do so either due to lack of technical resources or due to international pressure. Even if they did sign the NPT, the Iranian experience (as will be shown in Chap 6) as well as the Iraqi and Syrian record, proved that they did not quite follow through on their NPT commitments but in fact established clandestine, covert programmes, beyond the purview of the IAEA or the OPCW inspectors.

## **Conclusion**

The chapter has placed in perspective regional WMD pursuits and the responses such pursuits generated. Israel employed its policy of prevention to target regional nuclear infrastructure, in Iraq (in 1981) as well as Syria (in 2007). Even Iran targeted nascent the Iraqi Osiraq nuclear reactor, though unsuccessfully. Iraq and Libya were the subject of stringent US as well as UNSC punitive measures. After the Kuwait War, renewed attention was focussed on Iraq's WMD capabilities. The UNSCOM was created to account for the country's WMD capabilities. UNSCOM inspections did reveal that Iraq pursued clandestine nuclear weapons capabilities, at technical facilities like al-Atheer, even as it was allowing IAEA inspections in facilities it had voluntarily declared to the agency. Al-Atheer was destroyed by UNSCOM in April 1992.

Iraq's cooperation with UNSCOM was unique as it was the first time that the IAEA, the world's nuclear regulatory authority, was also given the responsibility to verify the absence of nuclear

weapons in a member state. The work of UNSCOM was carried further by UNMOVIC, created in 1999. UNMOVIC did its work till early 2003, when it was withdrawn by the UN Secretary-General on account of the US invasion of Iraq, whose primary justification was continuing concerns about Iraqi WMD capabilities. When these concerns did not bear fruit in any significant measure, there was a lot of criticism about US assessments regarding such capabilities.

The 2003 US invasion of Iraq though did influence Libyan leader Qadhafi's December 2003 decision to voluntarily give up his WMD pursuits. Libya's denuclearisation was viewed as a significant regional security gain, even though subsequently, it came to light that Libya still did not fully declare its chemical weapon assets. In the aftermath of Arab Spring and Qadhafi's death in October 2011 however, Libya continues to be rocked by internal political strife. Egypt meanwhile continues to insist that it will only sign the CWC if Israel signs the NPT. Egypt has been in the forefront of efforts to focus world attention on Israel's nuclear capabilities, be it at the NPT Review Conferences or in regional forums like ACRS, as seen in Chapter Three. Egypt's civil nuclear plans and regional implications are detailed in Chapter Seven.

As for chemical and biological weapons capabilities, the region has seen an unfortunate use of chemical weapons against civilian populations in conflict situations, ranging from Yemen (1960s) to Iraq (1980s) and Syria in recent times. As will be seen in Chapter Seven, apart from Egypt and Israel, other regional countries have signed the CWC, while Israel has not yet signed the BWC. The next chapter examines regional conventional capabilities, specifically the pursuit of ballistic missile capabilities and the responses such pursuits generated. West Asia has also been a key arena of sophisticated arms imports, which exacerbate regional security dilemmas and impinge negatively on efforts to establish regional CBMs.

## CHAPTER FIVE

### **Regional Conventional Capabilities**

This chapter examines three aspects related to regional conventional capabilities that impacted the weapons of mass destruction (WMD) policies of West Asian states and the responses they have generated. These include ballistic missile development, arms imports and external military presence of great powers. These three factors related to the conventional sphere impacted regional military dynamics and perceptions and have been a factor in West Asian states justifying the pursuit of asymmetric non-conventional capabilities to gain military advantages.

#### **Ballistic Missile Capabilities**

The pursuit of ballistic missiles has always been an essential part of the security policies of West Asian states. Such pursuits have been more often than not helped by external military powers at varying times to further their own regional strategic priorities or for commercial considerations. France and the United States (US) for instance have not only been significant arms suppliers to the region but have actively participated in furthering the missile programmes of countries like Israel and Egypt. Countries like the Democratic Peoples' Republic of Korea (DPRK) and South Africa have also been involved in similar engagements — DPRK with Iran, Iraq and Syria while South Africa vis-à-vis Israel.

The flow of benefits has also not been one-sided. South Africa on its part supplied Israel with critical nuclear material in return for seeking Tel Aviv's expertise pertaining to the Jericho missile (Kershner, 2010; Spector, 1984, 135). Analysts note that from 1960 to 1989, countries as varied as Italy, France, West Germany, the Soviet Union, the Peoples Republic of China (PRC), and the DPRK helped in the missile programmes of West Asian states, including in transfers and technical assistance (Nolan, 1991a, 18). The Soviet Union, for instance, sold the 300 kms range Scud-B missiles to Egypt, Iran, Iraq, Libya, Syria and Yemen, which these countries later modified and improved the range in their respective arsenals (Nolan and Wheelon, 1990, 37). After the September 2001 terror strikes in New York, the relationship between terrorism and WMD proliferation associated with so-called 'rogue' state became the foremost security issue, especially so for the United States and major powers in Europe (Chubin, 2006, 1).

The following sections examine key aspects relating to the pursuit of ballistic missiles by Iran, Israel, Saudi Arabia, Egypt and Syria. The responses such pursuits generated by the United States, specifically so vis-à-vis Iran after 2003, are then examined. This is because Iran's WMD and ballistic missile pursuits epitomised the purported nature of the threat posed by such states at the "cross roads of radicalism and technology", as President George W. Bush stated at West Point in June 2002 (George Bush White House, 2002b). WMD concerns vis-à-vis Iraq and Libya and the responses they generated have been examined in Chapter Four.

### *Iran*

Iran saw great strategic value in the pursuit of ballistic missiles, given its experience during the end stages of the Iran-Iraq War. Iran lost more than 3,000 civilians in 1987 and 1988 and that Tehran, had to be evacuated by more than a quarter of its population due to constant rocket and missile barrages from Iraq (Chubin, 1994, 21; Eisenstadt, 1994, 112; Ali, 2001, 52). Further, it made strategic sense to try to build ballistic missile capabilities in the aftermath of the disastrous war with Iran, during the course of which the Islamic republic had to suffer huge losses in terms of its human resources and material. For instance, Iran lost one-third of its fighter aircraft and more than 60 per cent of its inventory of tanks during that decade (Chubin, 1994, 35).

Iran also faced difficulties in refurbishing and maintaining its inventory of fighter aircraft among others, due to the rupture in its relationship with the US after 1979. Iran had sourced most of its equipment during the time of the Shah. Given the above, Iran privileged the pursuit of missiles over fighter aircraft. It is a fact, however, that fighter aircraft can carry more payload than a single missile and most importantly, are re-usable, unless they are shot down. Therefore, they are only cost-effective if aircraft attrition rates are quite high, which was true in the Iranian case during the Iran-Iraq War (Fetter, 1991, 9).

As noted in the previous chapter on Regional Non-Conventional Capabilities, Iran had to face the brunt of Iraqi chemical weapons attacks on its civilian populations. More than 7,000 Iranians were killed during the Iran-Iraq War due to the Iraqi use of chemical weapons (Regencia, 2018; Ali, 2001). The nature of the chemical weapons used included tear gas, mustard gas, and even nerve agents. The chemical attack on the town of Halabja in Iraqi Kurdistan (which was under Iranian control at that time) in March 1988 reportedly killed 5,000 people (*Arms Control Today*, 2002b, 14).



Given the above dynamics, Iran saw merit in developing ballistic missile capabilities. Former President Ali Akbar Rafsanjani in September 1988 (when he was Speaker of the Iranian Parliament) acknowledged that ballistic missiles were the “most important” weapons in a nation’s inventory (Chubin, 1994, 22). Developing a missile capability was also cost effective, given that Iran’s antagonists like Iraq and Saudi Arabia (more on these aspects in later sections) were spending huge resources to build their conventional arsenals rapidly. Iran meanwhile got critical support from countries like China in its missile quest. Iran for instance imported CSS-8, M-11 missiles as well as C-802 and C-801 anti-ship cruise missiles from China (Feickart, 2006, 54). Such Chinese missile transfers, especially the cruise missiles, were a major concern to the US Defence Department, given the probability that they could be used against US forces in the region.

China gave a written commitment in February 1992, a month ahead of joining the nuclear non-proliferation treaty (NPT), that it would abide by the norms of the Missile Technology Control Regime (MTCR), a technology control regime created by the Group of Seven industrialised nations initially in 1987 — which prohibited transfer of technology or equipment that could assist in the development of missiles beyond a range of 300 kms and a payload of 500 kgs (Yuan, Saunders and Lieggi, 2002, 156). Beijing, however, in 1996 was accused by the US of providing assistance to the Iranian Shahab missile programme (Katzman, 2003, 16). The DPRK built missile test facilities and rocket propellant manufacturing units in Iran, while Russia provided critical help in the development of Iran’s Shahab-3 programme, and supplied other critical equipment like surface-to-air missiles and air defence systems (Venter, 2005, 56, 210).

Russia became a member of the MTCR in 1995 but continued supplying specialised equipment like high-grade steels and metals like tungsten, even after being admitted as a member (Katzman, 2003, 9). The Clinton administration imposed sanctions on Russian military entities and passed punitive sanctions legislations like the 2000 Iran Non-Proliferation Act (INA) threatening sanctions against entities that engaged in missile proliferation behaviour. The INA also threatened to cut US funding to cooperative US-Russian activities, even relating to the space station, if Moscow did not demonstrate a sustained commitment to back away from helping Iran’s ballistic missile activities and its WMD quests (US Congress, 2000).

Iran’s space launch vehicle activities have also been an issue of concern for US administrations. Iran’s first satellite was launched in 2005 with Russian help. In August 2008, the *Safir* satellite launch vehicle was launched. When a new rocket engine, *Simorgh*, was displayed by Iran in

February 2010, the US Director of National Intelligence (DNI) told the US Congress that such capabilities could potentially transform into an inter-continental ballistic missiles (ICBM). US intelligence assessments highlighted the fact that Iran had the largest ballistic missile force in West Asia and that it was producing a large range of cruise missiles, including those that are designed for use against ships (Clapper, 2013, 7). Iran's cruise missiles, like *Khalij Fars* and *Ghader*, with a range of 200 kms, entered into service in 2011.

In 2016, Clapper specifically noted that one week before the Joint Comprehensive Plan of Action (JCPOA) Adoption Day, which was on 18 October 2015, Iran publicised the launch of a new and accurate ballistic missile, *Emaad* (Clapper, 2016, 24). The missile is a variant of the Shahab-3, which is fuelled by a liquid propellant and with a range of 1700 kms and payload capacity of 750 kgs. After its test firing on 11 October 2015, however, there has been no follow up testing of the missile, touted to be the most accurate in Iran's missile arsenal. This does give credence to those analysts who noted that Iran still had a long way to go before mastering the guidance technologies that it purportedly used in the *Emaad* missile (Wilkin, 2015). The impact of sanctions has also been flagged as a significant inhibiting factor that has prevented Iran from making substantial progress in its missile quest. For instance, the International Institute for Strategic Studies (IISS) in 2012 pointed out that Iran had difficulty in sourcing key ingredients for its rocket motors. Further, the report also highlighted long gaps in the testing of new long range missiles like the *Sejjil*, which was first tested in November 2009 and later in February 2011.

Such gaps, the report concluded, could possibly be the result of disruptions in the overseas supply chain networks as a result of stringent United Nations Security Council (UNSC) sanctions. Most pertinent was the March 2007 arms ban imposed as per UNSC Resolution 1747, relating to battle tanks, artillery systems, combat aircraft, attack helicopters, warships and missile systems, in order to prevent what the Security Council called a "destabilising accumulation of arms" (International Institute for Strategic Studies, 2012; United Nations Security Council, 2007). IISS in 2005 in its net assessment on Iran's ballistic missile capabilities had pointed out that Iran was still dependent to a significant extent on DPRK and even possibly Russia for progress on its long-range ballistic missiles (International Institute for Strategic Studies, 2005, 95). However, reports do note that 2,000 kms range *Sejjil* has been operationalised and is deployed. It is the longest-range missile in Iran's arsenal, followed by the 1,000 kms range Shahab-3 (*Arms Control Today*, 2019).

Iran's missile testing activities in the aftermath of the JCPOA have been a significant bone of contention with its key interlocutors, as can be seen in the reactions of countries like the US and the United Kingdom (UK). While the JCPOA's purpose was to deal with Iranian nuclear concerns, one of the main criticisms against the July 2015 agreement by the Trump administration has been that the agreement did not constrain Iran's ballistic missiles capabilities. Further, while the JCPOA does not put any restrictions on Iran's ballistic missile programmes, the UNSC resolution 2231 of July 2015, which ended UNSC sanctions, urges Iran not to undertake ballistic missile activities, "designed to be capable of delivering nuclear weapons", till the time that the International Atomic Energy Agency (IAEA) gives a 'broader conclusion' that all of Iran's nuclear activities are for peaceful purposes (United Nations Security Council, 2015, 99). Iran on its part contends that it does not have either nuclear weapons or delivery systems like missiles that can carry such weapons (*Tehran Times*, 2020).

### *Israel*

While Israel's first rocket, Shavit-II, was tested in July 1961, the country was facing problems in producing reliable guidance systems. Reports noted that Israel entered into an agreement in January 1966 with France, which enabled that country's engineers to be part of Israeli science and technology programmes that were geared towards producing medium range ballistic missiles (MRBMs). The Jericho-I missile was the product of such collaboration, which was inducted in 1973 (Jabber, 1971, 96; Nolan and Wheelon, 1990, 35). Apart from missiles, Israel also obtained significant conventional hardware like fighter jets from the US, in the face of Soviet arming of its regional allies, specifically, Egypt. By February 1966, Israel, for instance, obtained nearly 50 F-4E fighter jets from the US, and the number of such jets in Israel's inventory doubled by the end of the decade (Jabber, 1971, 97-98).

As noted in Chapter 1, Franco-Israeli cooperation was not just limited to cooperation in the missile sphere but in the nuclear sphere as well, with a bilateral cooperation agreement dating back to 1953. During the 1960s, Israel was especially worried about the possibility of a surprise attack launched by the Egyptian Air Force which had the latest Soviet-supplied fighter jets like the Mig-19s in its arsenal. Israel, therefore, wanted potent surface-to-air missiles like the American Hawk to be able to maintain deterrence vis-à-vis Cairo (Tal, 2000, 308). The US State Department, however, initially rejected the Israeli request, insisting that the sale could possibly lead to a regional arms race (Ibid, 312). The ground-to-air missiles, which the Israeli

leadership insisted were vital to protect Israel's air fields from a surprise Egyptian air attack using its Soviet-supplied fighters, were eventually supplied in 1965.

During the 1970s, the US also supplied battle field Lance missiles with a range of 100 kms. Israel wanted Pershing missiles which had a range of more than 500 kms but Washington did not oblige its regional ally (Nolan and Wheelon, 1990, 35; Kemp, 1991, 451). Later, the Jericho-II with a range of nearly 1,500 kms bringing the entire West Asian region within its ambit, developed indigenously, was inducted in the late 1980s. The longest-range missile in Israel's inventory currently is the more than 6,500 kms range Jericho-III (*Arms Control Today*, 2019). Israel also has reportedly helped in the ballistic missile programmes of other states, including Taiwan (the Hsiung Feng surface-to-surface missile) and South Africa (Nolan, 1991b, 65; Nolan, 1989, 11). The Taiwanese missile was based on the Israeli Gabriel anti-ship missile with a range of about 40 kms.

Israeli policy outlook on the proliferation of ballistic missiles in the region is conditioned by the country's limited geography and extremely limited reaction times in case of a ballistic missile attack (Kemp, 1991, 452). Israeli officials emphasise that if Israel is subjected to a missile attack, it has to assume that any incoming missile could possibly carry a WMD warhead, especially so since many countries in the region have pursued robust chemical and biological weapon programmes, as seen in Chapter Four. There was also the concern that these states will carry out their oft repeated threats to destroy the Jewish state, by using their WMD capabilities (Chubin, 2006, 47).

Iraq under Saddam Hussein targeted Israel with ballistic missiles during the Kuwait War. Over 40 Scuds were fired at Israeli targets, primarily on the city of Tel Aviv, causing some damage to property. At least one person lost his life and over 50 people were injured in building collapses in the initial attacks (Ministry of Foreign Affairs, 1991). Given that Saddam had threatened to "burn half of Israel" ahead of the conflict if Israel intervened militarily, the Israeli fears were real (Feldman, 1997, 139; Nashif, 1996, 41). Israel has also vehemently opposed the Iranian nuclear programme, on the fears that such a programme, if successful, along with its ballistic missiles capabilities, would enable Tehran to carry out its oft repeated threats to destroy the Jewish state.

Israel meanwhile has developed potent anti-missile defence systems like the 'Iron Dome' and 'David's Sling', effective against short range and medium range missiles. The Iron Dome has particularly been useful against the rocket attacks launched by the Palestinian terror groups

from the Gaza Strip while David's Sling was operationally used for the first time in July 2018 against Syrian SS-21 short range missiles. As for the threat posed by longer range missiles, such as those in Iran's arsenal, Israel has co-developed the Arrow missile defence shield with the US, which was made operational in 2017. The latest version of the system, Arow-3, was tested over Alaska in July 2019 (Williams, 2019).

### ***Saudi Arabia***

Saudi Arabia obtained the 2,500 kms range DF-3/CSS-2 missiles from the Peoples Republic of China in March 1988. The accuracy of these missiles was in fact improved with Israeli assistance during the time Beijing and Tel Aviv carried on a robust covert relationship primarily relating to arms transfers (Kumaraswamy, 1995, 240-241). Analysts note that Riyadh secured these missiles from Beijing after Washington refused its request for the Lance missiles and additional F-15 fighter jets (Harvey and Rubin, 1992, 15).

Harvey and Rubin though note that the CSS-2 missiles did not quite serve any significant strategic purpose for Riyadh, and that the Saudi decision to acquire them was more to do with issues of prestige after the US denial and their desire to be seen as the region's pre-eminent military power. China has also subsequently supplied the solid-fuelled DF-21/CSS-5 missiles with a range of more than 2,000 kms to Saudi Arabia, reportedly in 2007 (*Arms Control Today*, 2019).

### ***Egypt***

Egypt's missile collaboration with German scientists in the 1960s generated concern in the Israeli military establishment (Aronson, 1992, 86). Egypt also launched rockets against Israel in the late 1960s, which led Israeli leaders to view the Egyptian efforts in this field seriously (Sirrs, 2006, 57). While Egypt's Nasser recruited German scientists to help the country in its missile quest, Israel sabotaged the collaboration, through letter bombs and threatening letters to the families of those involved in the Egyptian effort (Feldman, 1997, 130).

Israeli leaders were not in doubt that Cairo's missile efforts were designed solely to deliver WMD warheads on Israeli cities. Given that the Egyptian Air Force would find it difficult to penetrate Israeli air defences, missiles were viewed by Egyptian leaders as a very attractive option to inflict damage and gain military advantage in the event of a war with Israel (Sirrs, 2006, 78). Given the fact that Egypt was Israel's main enemy till the peace treaty of 1979, any effort by Egypt in the WMD sphere was viewed with alarm in Israel. Israeli military leaders

have often emphasised the country's vulnerability to a surprise missile strike, in the light of the constraints imposed by its limited geography, extremely limited reaction times — which lowers decision-making response times, and an inability to absorb a punitive WMD strike on population centres or on its military (Steinberg, 1989, 36).

Egypt in 1988 collaborated with Argentina and Iraq (with Cairo and Baghdad providing financial resources to Buenos Aires' technical teams) to develop the 1,000 kms range Condor missile. The project, however, was scrapped in August 1991 by the Argentinian government, due to the prohibitive cost of development and supplier constraints. The pressure from the newly established MTCR (in 1987) was also a significant factor, apart from the Kuwait War, which forced the hands of the three countries in wrapping up the project (Nolan, 1991b, 65; Wolfsthal, 1993b, 24). The maximum range missile that Egypt has currently in its inventory is the Scud-C, with a range of 550 kms (*Arms Control Today*, 2019).

### ***Syria***

Syria entered into a 'Treaty of Friendship and Co-operation' with the Soviet Union on 8 October 1980, as part of which, in Article Six, they pledged to come to the aid of each other in case peace and security of either was threatened (*Survival*, 1981, 43; Feldman, 1997, 130). Moscow also supplied Damascus with short range (100 kms) SS-21 missiles, which pose a significant tactical threat to Israel, given the limited reaction times. As recently as in July 2018, two SS-21's were fired by Syrian forces as part of their conflict with rebels fighting the Assad government, which Israel misinterpreted as being directed against it. Interceptors from the 'David's Sling' anti-missile defence system were fired in response.

Reports note that one of the SS-21 landed within Syrian territory but very close to the Israeli border (without being intercepted) while there was no information about the second missile. The Israel Defence Force (IDF) acknowledged that the interceptors were deliberately steered away from the Syrian missiles after it was realised that they were not aimed at any Israeli targets. The IDF firing the interceptors though was the first operational use of the 'David's Sling' missile defence system (*The Times of Israel*, 2018). The longest-range missile that Syria has in its arsenal is the Scud-C, with a range of 700 kms (*Arms Control Today*, 2019). Beijing in 1990 denied reports that it had supplied about 150 M-9 missiles to Syria, which have a range of about 500 kms (Donovan, 1990, 30).

**Table 5.1**

**West Asia and North Africa Ballistic Missile Inventories**

Country	Missile	Whether deployed	Range (Kms)	Propellant
<b>Bahrain</b>	ATACMS Block 1 (MGM-140)	Operational	165	Solid
<b>Egypt</b>	R-300 (SS-1-C Scud-B)	Operational	300	Liquid
	Project-T (Scud B-100)	Operational	450	Liquid
	Scud-C	Operational	550	Liquid
	R-70 Luna M (Frog-7B)	Operational	70	Solid
	Sakr 80	Operational	80+	Solid
<b>Iran</b>	Mushak-120	Operational	130	Solid
	Mushak-160	Operational	160	Solid
	Qiam-I	Operational	500-1000	Liquid
	Fateh-110	Operational	200-300	Solid
	Fateh-313	Operational	500	Solid
	Tondar-69 (CSS-8)	Operational	150	Solid
	Scud-B (Shahab 1)	Operational	300	Liquid
	Scud-C (Shahab 2)	Operational	500	Liquid
	Zolfaghar	Operational	700	Solid
	Shahab-3 (Zelzal-3)	Operational	800-1000	Liquid
	Ghadr 1/Modified Shahab-3/Kadr Ghadr 110	Tested/Under development	1000-2000	Liquid
	Ashura/Sejjil/Sejjil-2	Operational	1500-2500	Solid
	BM-25/Musudan (Suspected)	Suspected under development	2500+	Liquid
	Khoramshahr	Tested/Under development	2500	Liquid
	Emad-1	Tested/Under development	1750-2000	Liquid
<b>Iraq</b>	Al Fat'h (Ababil-100)	Operational	160	Solid
	Al Samoud II	Operational	180-200	Liquid
<b>Israel</b>	LORA	Operational	280	Solid
	Jericho-2	Operational	1500-3500	Solid
	Jericho-3	Operational	4800-6500	Solid
<b>Libya</b>	Frog-7	Operational	70	Solid
	Al Fatah (Itislat)	Tested (development on hold)	1300-1500	Solid
	Scud-B	Operational	300	Liquid
<b>Saudi Arabia Syria</b>	DF-3 (CSS-2)	Operational	2600	Liquid
	DF-21 East Wind (CSS-5)	Operational	2100+	Solid
	SS-21-B (Scarab-B)	Operational	120	Solid
	SS-1-C (Scud-B)	Operational	300	Liquid
	SS-1-D (Scud-C)	Operational	500-700	Liquid
	SS-1-E (Scud-D)	Tested/Development	700	Liquid
	CSS-8 (Fateh 110A)	Operational	210-250	Solid
	Frog-7	Operational	70	Solid

<b>Turkey</b>	ATACMS Block 1 (MGM-140)	Operational	165	Solid
	J-600T Yildirim I and II	Operational	150-300	Solid
<b>UAE</b>	Scud-B	Operational	300	Liquid
	ATACMS Block 1A	Operational	300	Solid
<b>Yemen</b>	Scud-B	Operational	300	Liquid
	SS-21 (Scarab)	Operational	70-120	Solid
	Scud C variant	Operational	300	Liquid
	Frog-7	Operational	70	Solid

**Source:** *Arms Control Today* (2017), “Worldwide ballistic missile inventories”, December 2017, [Online: Web], Accessed 1 October 2020, URL: <https://www.armscontrol.org/factsheets/missiles>

### ***US Responses to the West Asia Missile Threat***

The linkage between ballistic missiles and WMD in the West Asian context has often been viewed as a destabilising combination, not just by their regional antagonists but also by external powers like the US. The possession of WMD capabilities was viewed as endowing West Asian states with the wherewithal to carry out their regional hegemonic ambitions. This was held to be valid for countries like Iran, Iraq and Libya specifically.

President George W. Bush clubbing these three countries as part of the “axis of evil” in his 2002 State of the Union speech to the US Congress is pertinent in this regard. Bush charged that when these states develop WMD capabilities along with ballistic missile technologies, they “attain catastrophic power to strike great nations” (George Bush White House, 2002a). In the September 2002 National Security Strategy (NSS) document, Bush warned that states like Libya and Iran were determined to acquire WMD capabilities, and that there was a “greater likelihood” that these states will use those capabilities against America and its allies (US State Department, 2002a).

A blue ribbon commission headed by Donald Rumsfeld, a former Defence Secretary under President Gerald Ford, was established in 1998 to assess the ballistic missile threat to the US. The Commission pointed out that countries like North Korea and Iran were deploying large resources to develop ballistic missile capabilities, which posed a danger to US interests and those of its regional allies (Federation of American Scientists, 1998). The Commission stated that Iran already possessed a substantial medium range missile inventory made up of Scud’s sourced from the former Soviet Union or North Korea, which it could scale up to build an ICBM, within a period of five years. While such alarming estimates did not come to pass, it does indicate the thinking in official US government circles about the purported missile threat posed by countries like Iran.



In order to protect itself from such purported threats, President Bill Clinton signed the National Missile Defence Act (NMDA) on 22 July 1999. The Act stated that the US should deploy an effective national missile defence (NMD) system, “as soon as technologically feasible” (US Congress, 1999). Critics, however, insisted that such a system would be inherently flawed as it may not be able to stop each and every possible missile directed against the continental US, and that US enemies could possibly develop effective counter-measures. It was also pointed out that deploying such systems could hurt US arms control and non-proliferation efforts, particularly so with the Russians (Lewis et al, 1999; Cherian, 2000). In September 2000, President Clinton admitted that even if the Pentagon’s development of such a nation-wide system was still at an “early stage”, his administration would continue to fund the developmental process (Clinton White House, 2000).

In the aftermath of the September 2001 terror strikes, the US quit the Anti-Ballistic Missile (ABM) Treaty in December 2001. The Treaty was signed on 26 May 1972 and entered into force on 3 October 1972. President Bush insisted that the Cold War era treaty with the Soviet Union had a different strategic context and that the threat matrix had changed dramatically. He noted that ‘rogue’ states and terrorists with access to WMD posed the greatest danger to the US and that the ABM treaty prevented the development of effective defences against threats posed by these new dangers (*Arms Control Today*, 2002c).

The Bush administration’s solution to effectively tackle WMD threats posed by states like Iran involved ‘pro-active counter-proliferation’; as well as active and passive defences (US State Department, 2002a). The September 2002 National Security Strategy document affirmed that ‘rogue’ states cannot be deterred, as WMD for them are not the weapons of last resort but ‘weapons of choice’ (Ibid, 15). In December 2002, the National Strategy to Combat Weapons of Mass Destruction was released, which put forth ‘three pillars’ of US strategy to confront the threat. These included counter-proliferation (interdicting cargoes destined for WMD programmes of states like Iran and Libya and deterring WMD use), strengthening non-proliferation efforts — relating to the NPT, the Biological and Toxins Weapons Convention (BWC) and the Chemical Weapons Convention (CWC), and consequence management (to effectively react to WMD use) (Federation of American Scientists, 2002a).

President Bush in December 2002 directed his Secretary of Defence to put in place missile defence capabilities, to include ground-based interceptors and sea-based interceptors. He affirmed that these capabilities would be operational by 2004-2005 (George Bush White

House, 2002e). US efforts however had to face some setbacks as developmental tests of the Patriot missile systems as well as missile defence systems suffered significant failures. For instance, analysts noted that less than half of the Patriot operational tests during 2002 were deemed successful (Boese, 2003). Bush administration officials however insisted that successes and failures were an essential part of the developmental process of any new technological system and that the US was developing such systems to counter new kinds of threat, which were not similar to those faced during the Cold War (US State Department, 2001c; King, 2002).

The National Security Presidential Directive (NSPD) – 23, titled ‘National Policy on Ballistic Missile Defence’ was issued on 16 December 2002. The Directive highlighted the fact that deterring threats posed by non-state armed groups or ‘rogue’ states would be difficult, as they operate on a different strategic logic, as compared to a major state actor like the Soviet Union during the Cold War. The Directive called for developing three layers of responses — missile defences, long range conventional and nuclear strike capabilities and building up of research and development infrastructure pertaining to these two objectives.

The document termed these three elements the new ‘triad’ of US strategic policy, as against the nuclear triad denoting air-, sea- and land-based nuclear forces. The NSPD, therefore, echoed the elements first put forth in the January 2002 Nuclear Posture Review (NPR), which brought to public attention the new categorisation pertaining to the ‘triad’, held together by advances in communications and command and control (Federation of American Scientists, 2002b; Federation of American Scientists, 2002c). Building on the NSPD, the May 2003 National Policy on Ballistic Missile Defence Fact Sheet asserted that cooperation with America’s regional allies was an important facet of the approach being pursued by the administration (George Bush White House, 2003). After Operation Iraqi Freedom in March 2003 and the Libyan leader Qadhafi declaring his intent to give up WMDs in December 2003, the focus of the US administrations shifted solely to the so-called threat posed by the Islamic Republic.

The Bush administration put in place plans to protect Europe from the Iranian intermediate range ballistic missile (IRBM) threat and the North Korean long range missile threat, which entailed the deployment of interceptors in places like Poland and supporting radar architecture in the Czech Republic. (US State Department, 2004b). The Czech Republic eventually opted out of hosting US missile defence assets on its territory in June 2011, after the Obama

administration in September 2009 overturned much of the Bush administration's framework on regional missile defence architecture and offered to place an early warning radar on Czech soil rather than missile interceptors (*Associated Press*, 2011; Harding and Traynor, 2009).

The February 2006 National Military Strategy to Combat WMD warned of severe consequences to US enemies who threatened to use or employ WMD against the US or its allies and vowed to build capacities, bilaterally and multilaterally, to increase America's capability to combat WMD. The document identified eight 'mission' areas for the US armed forces, of which active and passive defences against WMD were an essential part. While ballistic and cruise missile defences were an important part of the former, passive defences included measures that reduced vulnerabilities to enemy WMD use or minimised the impact of such use (Global Security.org, 2006).

The May 2009 US Congress report on 'America's strategic posture' affirmed that regional missile defences are a "valuable component" of US defence framework. It is important to note that this report was produced by a bipartisan commission made up of the members of the US Congress and was headed by William Perry and James Schlesinger (United States Institute of Peace, 2009)

After the coming to power of the Barack Obama administration, the focus shifted from the threat posed by Iran's IRBMs (or DPRK's long-range missiles) to the threat posed by short range missiles and cruise missiles from Iran. Bush for instance in October 2007 contended that Iran was developing capabilities that could mature, with relevant foreign assistance, for Tehran to be able to build an ICBM by 2015 (George Bush White House, 2007). As against such alarming speculations, Obama contended that the Bush administration's missile defence plans did not adequately address the growing Iranian capabilities in short- and medium- range missiles and that his administration would instead follow an approach that is 'phased' and 'adaptive', hence called the Phased Adaptive Approach (PAA) (Obama White House, 2009).

The Ballistic Missile Defence Review Report of February 2010 insisted that the US had sufficient capabilities to defend the US homeland against possible ICBM threats from countries like DPRK or Iran but that the US capability to defend against short and medium range threats, especially to deployed US forces and regional allies, was lacking (US Department of Defense, 2010). As for the strategic consequences of US missile defence efforts ostensibly geared towards ensuring protection against purported threats from West Asian states like Iran or Libya, Russia and China did not take kindly to US efforts to field increasingly capable missile defence

assets in Europe and at sea that could potentially be scaled up in the future to counter these two countries' missile and nuclear forces. Chinese concerns were especially stark given the limited numbers of nuclear weapons in its inventory, as compared to the US and Russian nuclear forces. The US strategic policy documents, however, continued to highlight the rapid growth and sophistication of Chinese nuclear forces (Yuan, 2003; Fravel and Madeiros, 2010; US Department of Defense, 2012a)

Russia meanwhile strongly objected to the US moves to strengthen its missile defence architecture, including unilaterally withdrawing from the ABM treaty. Russian Foreign Minister Igor Ivanov, in an article in *Foreign Affairs* in September 2000, even prior to the US withdrawal, pointed out that the ABM treaty was a significant constraint on global strategic stability. Ivanov noted that the alleged threat from the so-called 'rogue' states was grossly over-estimated as these states are not likely to acquire missile capabilities that could threaten the US. Ivanov instead called for the development of a 'non-strategic missile defence system' for Europe (Ivanov, 2000).

Russia released a White Paper on WMD non-proliferation in July 2006, the first time it did so in over a decade, in which it warned that US missile defence efforts could lead to the development of dangerous class of weapons like anti-satellite weapons, among others (Sokov, 2006). President Vladimir Putin at the Munich Security Conference in February 2007 warned that an inevitable consequence of continued US missile defence efforts in Europe, ostensibly to counter the missile threat posed by West Asian states, would be an "inevitable arms race" between the two nuclear powers (President of Russia, 2007). Putin also reminded his audience that Iran did not have missiles in its possession that could threaten Europe or the US (Ibid).

The Russians even warned that cooperation on new arms control measures like the New Strategic Arms Reduction Treaty (START), which was signed in April 2010, would only be viable if the US did not go ahead with developing its missile defence architecture. While New START did not limit US missile defence programmes, it did have provisions that banned the conversion of long range missile launchers as missile defence interceptors (US State Department, 2010; Congressional Research Service, 2019a).

The US officials on their part dismissed such Russian and Chinese fears as unfounded and noted that the US deployments, amounting to a few interceptors, would hardly make a negative impact on strategic stability with either of these two countries (US State Department, 2007a; US State Department, 2007b). President Putin however dismissed such US assurances as

“childish” and wanted legally binding agreements to enshrine such US commitments (Nuclear Threat Initiative, 2012a). US analysts on their part noted that instead of such legal guarantees, Washington could reassure Moscow by providing an annual declaration of its missile interceptors and their specific locations in Europe as well as future possible deployments among other measures (Pifer, 2012).

### **Arms Transfers**

The West Asian region has been the recipient of significant amount of arms from major arms exporting countries like China, France, Russia, the United States and the United Kingdom. One study noted that Israel and Arab states imported more than US\$10 billion worth of arms during 1973-75, up from about US\$4.6 billion during 1970-72 (Klare and Volman, 1978, 19). During 1981-85, another study pointed out that Saudi Arabia, Iraq, Iran, Syria and Egypt imported nearly US\$65 billion worth of equipment, with nearly 60 per cent of the total accounted for by imports by Saudi Arabia and Iraq (Ehteshami, 1989, 106). There was thus a massive 500 per cent increase in arms inflow into the region, within the space of a decade.

Such massive arms transfers have more often than not tilted regional military balances and spurred the acquisition of equivalent or counter systems by antagonists. The US, France and the UK in their Tri-Partite Declaration of May 1950 recognised that Arab states and Israel need arms for maintaining legitimate self-defence needs and internal security (Jewish Virtual Library, 2020). The aim of this Declaration was to ensure that these powers did not provide arms to either of the antagonists that could tilt the military balance in the other’s favour. The three Western powers issued the Declaration after Israel expressed concern over the possible sale of arms from the UK to Egypt, which Cairo was negotiating in lieu of continued British presence in the Suez Canal area (Slonim, 1987, 138).

Israel’s own request for arms in early 1950 from the US was rebuffed after US intelligence reported that Israel was militarily better off than its neighbours (Tal, 2000b, 305) When Egypt entered into an arms deal with Czechoslovakia in 1955, however, it tilted the military balance against Israel (Ibid). Israel on its part entered into significant arms deals from the US, which gradually became its primary strategic benefactor, as well as France (Ibid; Klare and Volman, 1978, 18). A massive arms supply by the US saved Israel during the 1973 October War for instance and helped it reverse initial setbacks on the battlefield.

The link between arms transfers and non-proliferation dynamics is fairly well acknowledged in the West Asian context. For instance, the US at varying times has tried to influence Israeli

non-proliferation behaviour by providing the Jewish state with significant conventional military heft. Washington gave 50 F-4E Phantom fighter jets ahead of the NPT coming into existence in 1968, in the hope that Israel would give up its nuclear option and sign the global non-proliferation treaty. Another 24 were delivered in 1970. Analysts, however, note that significant radar systems that were part of the American fighter planes were not included in the planes that were delivered to Israel (Spector, 1984, 184; Jabber, 1971, 98). In recent times, the US has bolstered the conventional military might of its regional allies, Israel and Saudi Arabia primarily and even the UAE and Qatar, by providing them sophisticated military equipment like fighter jets and anti-missile defence systems, to face the purported threat from an allegedly hegemonic Iran.

As for regional arms control initiatives, the only significant multi-lateral effort at regional confidence building — the meetings of the Working Group on Arms Control and Regional Security (ACRS) that began in 1991 and which ended in 1995 involving most of the regional countries, tried hard to come to an understanding on maintaining the regional conventional military balances. While Israel continued to be worried about the combined conventional military might of Syria, Iraq and Egypt even after the end of the Cold War, the ACRS process, however, failed in its attempts to achieve a comprehensive weapons limitation agreement (Steinberg, 1998, 204-205).

The Bush administration spearheaded a Middle East Arms Control Initiative (MEACI) in 1991, as part of which the five major arms suppliers to the region — China, France, Russia, the US, and the UK, agreed to exercise restraint in their arms sales as well as to exchange information about such arms sales (*Arms Control Today*, 1992). Analysts note that the failure of such arms control initiatives is due to a combination of factors including those related to widespread regional instability and competition, conventional asymmetries and security dilemmas — one country's efforts to secure itself may lead to another country viewing those efforts as fundamentally directed to seek military advantage against it, and even cultural factors like miscommunications and misinterpretations (Steinberg, 2005).

In the aftermath of the Kuwait War, US Secretary of State James Baker told the US Congress that preventing arms proliferation to the West Asian region would be one of the major challenges for the administration. A few months down the line, however, the Bush administration notified the US Congress that it was planning to sell five West Asian states — Saudi Arabia, the United Arab Emirates (UAE), Bahrain, Turkey, and Egypt, over US\$20

billion worth of arms, including cutting edge equipment like air borne warning and control systems (AWACS), main battle tanks (MBT) and Patriot missiles. These five countries had played a critical role in the American-led international coalition that dislodged Saddam Hussein's forces from Kuwait (Pfeiffer, 1991, 20). Earlier in September 1990, after the Iraqi invasion of Kuwait, the Bush administration authorised a more than US\$20 billion arms package to Saudi Arabia, the largest ever arms deal to any single country. Analysts noted that the US was providing such arms in order for its regional allies to better face threats and not to be too dependent on US forces (Ibid, 25).

Such massive arms sales have not witnessed a slowdown but have only registered an upward trend, especially after the US invasion of Iraq in 2003. During 2008 for instance, over 70 per cent of US worldwide arms sales amounting to US\$75 billion were to the countries of the region (for a total of more than US\$53 billion). Significant recipients included Israel (US\$20 billion), Iraq (US\$18 billion), UAE (US\$9 billion), and Saudi Arabia (US\$3 billion) (Abramson, 2009, 38). The Obama administration authorised the sale of arms worth more than US\$110 billion to Saudi Arabia, including air defence systems, fighter aircraft and main battle tanks (Niarchos, 2018).

The December 2011 US\$30 billion deal for F-15 strike aircraft, announced in the light of increased regional tensions over Iranian nuclear concerns, was one of the biggest US arms deals ever (Landler and Myers, 2011). Between 2014 and 2018, West Asia accounted for over 50 per cent of all US arms exports. Saudi Arabia during this time period was the world's largest arms importer, importing nearly 200 per cent more than the previous five year period (2009-13). Imports by Egypt and Qatar rose by more than 200 per cent, Israel's by over 350 per cent, and Iraq's by over 140 per cent during the corresponding time periods (Stockholm International Peace Research Institute, 2019).

The defining feature of the West Asian regional security environment in recent decades has been the Iran nuclear threat. The US has significantly bolstered the security profile of its regional allies to better face down the purported threat. US Secretary of State John Kerry in September 2015, in response to the Israeli criticism of the Iran nuclear deal, pointed out that the Obama administration had provided over US\$20 billion in foreign military financing (FMF) to Israel since 2009 (US State Department, 2015). As noted earlier, the US also provided significant help in co-developing critical anti-missile defence systems like the Iron Dome, the David's Sling and the Arrow system. The US-Israel ten year defence agreement worth US\$38

billion (US\$33 billion in FMF and US\$5 billion for missile defence purposes) was renewed in 2016, covering the period 2019-2028. The previous 10 year agreement which expired in 2018 was worth US\$30 billion.

Analysts note that Israel received the largest amount of US foreign assistance, amounting to US\$142 billion, most of it related to military assistance, since World War II (Congressional Research Service, 2019b). The US provided over US\$84 billion in bilateral foreign aid to Egypt in contrast, since 1946, including US\$51 billion in military assistance, beginning from 1978 (Sharp, 2020, 29-31). Egypt is said to have received nearly US\$8 billion of Soviet military equipment from 1955 to 1973 (Efrat, 1983, 448).

The US arms sales to Saudi Arabia and countries like the UAE and Kuwait have also spiked in the wake of such regional issues as heightened US-Iran tensions and insurgent attacks from Yemen on Saudi infrastructure. Kuwait for instance signed a contract worth US\$1.5 billion for F/A-18 Super Hornet fighter aircraft from the US in 2018. The Trump administration in May 2019 notified the US Congress of immediate foreign military sales (FMS) worth over US\$8 billion to Saudi Arabia and the UAE, made up of sale of precision-guided missiles, anti-tank missiles and Patriot missiles (Sharp et al, 2019). Earlier in March 2017, the Trump administration reversed an Obama administration suspending the sale of more than \$500 million of precision-guided munitions.

Apart from the US, the UK and France have also continued their historically robust arms exports to the West Asian region. UK exported more than GBP 10 billion in 2018 (the latest available figures) to Saudi Arabia, the UAE, and Qatar among others. The UK was the second largest global arms exporter after the US, in the past decade (2008-2018), with nearly 20 per cent share of the world market. Russia with 14 per cent of the world's arms export market and France with 9 per cent share were in the third and fourth positions respectively (Stockholm International Peace Research Institute, 2019).

Significant UK exports to the West Asian region included Typhoon aircraft to Qatar, Saudi Arabia and Kuwait, and Brimstone (air launched ground attack) missiles to Qatar. France sold Euros 1 billion worth of arms to Saudi Arabia in 2018, including naval patrol boats and Euros 2.4 billion worth Rafale fighter jets to Qatar (Irish, 2019). From 2010-2019, five countries out of the top 10 among France's principal arms importers were in West Asia. These included Qatar (2), Saudi Arabia (3), Egypt (4), UAE (5), and Kuwait (9) (Ministry of the Armed Forces,



2020, 110). France sold nearly Euros 34 billion of arms to West Asia during this period (Ibid, 64-66).

The arms transfers' database of the Stockholm International Peace Research Institute (SIPRI) indicates that the major arms exporters in the world transferred significant amounts of sophisticated equipment to most of the countries in West Asia and North Africa (WANA). Tables 5.2-5.6 show the exports of major platforms and missile systems to WANA countries, during the past two decades, for purposes of illustration. The major platforms that have been sold include combat aircrafts, main battle tanks, anti-tank missiles, anti-ballistic missile systems, and a whole range of short-range air-to-air missiles, beyond visual range air-to-air missiles, naval surface-to-air missiles, and un-manned aerial vehicles, among others.

**Table 5.2**  
**China's Arms Exports to West Asia and Egypt 2000-19**  
**(Major platforms and missiles)**

<b>Country</b>	<b>Weapon</b>	<b>Year delivered</b>	<b>Number</b>
<b>Egypt</b>	K-8 trainer/combat aircraft	2001-05	80
	ASN-209 UAVs	2012-14	18
	Wing Loong-I armed UAV	2017-18	10
	Wing Loong-II armed UAV	2018	32
<b>Iran</b>	C-802/CSS-N-8 anti-ship missile	1994-2010	380
	FL-6 ASM	1999-2010	260
	FL-8 ASM	2004-15	150
	QW-1 portable SAM	1996-2006	1100
	QW-6 ASM	2006-10	650
	C-704 ASM	2010-11	50
	C-801 ASM	2006-10	50
	Crotale SAM	1999-2004	250
<b>Iraq</b>	AR-I ASM	2015-16	100
	CH-4 armed UAV	2015-16	12
<b>Jordan</b>	CH-4 armed UAV	2016	6
	QW-2 portable SAM	2014	20
<b>Qatar</b>	BP-12 A SSM	2017-18	48
<b>Saudi Arabia</b>	CH-4 armed UAV	2015	5
	Wing Loong-I armed UAV	2015-17	15
	Wing Loong-II armed UAV	2017-19	25
<b>Syria</b>	Red Arrow anti-tank missile	2014	500
	JYL-1 and Type-120 air search radar	2008	5
<b>UAE</b>	Wing Loong-I armed UAV	2013-17	25
	Wing Loong-II armed UAV	2017-18	15
	Blue Arrow-7 anti-tank missile	2017-19	350

**Table 5.3**  
**France's Arms Exports to West Asia and Egypt 2000-19**  
**(Major platforms and missiles)**

<b>Country</b>	<b>Weapon</b>	<b>Year delivered</b>	<b>Number</b>
<b>Bahrain</b>	MM-40 Exocet ASM	2010	17
<b>Egypt</b>	Gowind-2500 frigate	2017	1
	Super 530 D BVR AAM	1998-2000	16
	MM-40-3 Exocet ASM	2015-17	25
	Rafale combat aircraft	2015-19	24
	MICA BVRAAM	2015-18	175
	Storm Shadow SCALP ASM	To be delivered	50
	Aster 15 SAM	2015	25
<b>Iraq</b>	SA-342 Gazelle light helicopter	2010	6
<b>Jordan</b>	Mirage F1-E combat aircraft	2006	1
<b>Kuwait</b>	Panther helicopter	2005	2
	Super Cougar transport helicopter	2019	2
<b>Lebanon</b>	Milan anti-tank helicopter	2015	48
	HOT-2 anti-tank missile	2017-19	600
<b>Oman</b>	Mistral portable SAM	2001-03	230
	MM-40-3 Exocet ASM	2013-15	50
	Fennec light helicopter	2006	3
	MICA BVRAAM	2012-14	110
<b>Qatar</b>	Apache ASM	1999-2003	50
	Mistral portable SAM	2010-13	35
	MM-40-3 Exocet ASM	2012-16	150
	Milan anti-tank missile	2015	500
	AM-39 Exocet anti-ship missile	2019	40
	Meteor BVRAAM	2019	135
	MICA BVRAAM	2019	200
	Rafale combat aircraft	2017-19	33
	Fennec light helicopter	2018-19	9
<b>Saudi Arabia</b>	F-3000S frigate	2002-04	3
	MM-40 Exocet	2000-05	50
	Aster-15 SAM	2002-04	75
	Panther helicopter	2010-11	6
	Mistral portable SAM	2007-10; 2013-15; 2016-17	1000; 800; 130
	Mica BVRAAM	2018-19	250
	Milan anti-tank missile	2014	100
<b>UAE</b>	Leclerc MBT	1994-2006	390
	Panther ASW helicopter	1999-2004	7

AS-15 TT anti-ship missile	1999-2002	90
Mica BVRAAM	2003-07; 2013	500; 20
Mirage 2005-Mk 2 combat aircraft	2003-07	62
R-550 Magic 2 SRAAM	2003-07	500
Scalp ASM	2003-08	600
Fennec light helicopter	2001-02	14
AM-39 Exocet ASM	2003	30
MM-40-3 Exocet ASM	2010-17; 2019	150; 30
Baynunah corvette	2011-17	6
Helios-2 reconnaissance satellite	2015	2
Gowind-2500 frigate	2019	2
HSI-32 patrol craft	2019	3

**Table 5.4**  
**Russia's Arms Exports to West Asia and Egypt 2000-19**  
**(Major platforms and missiles)**

<b>Country</b>	<b>Weapon</b>	<b>Year Delivered</b>	<b>Number</b>
<b>Bahrain</b>	AT-14 anti-tank missile	2016	250
	SA-24 portable SAM	2018	264
<b>Egypt</b>	Pechora 2M SAM	2002-06	10
	SA-15 SAM	2005-11	200
	SA-17 SAM	2011	100
	SA-24 portable SAM	2009-10	600
	Mi-17 transport helicopter	2010-11; 2012-13	10; 14
	EgyptSat-2 dual-use satellite	2014	1
	SA-17 SAM	2014	1
	SA-23A SAM	2016-17	40
	SA-23B SAM	2016-17	150
	AT-16 anti-tank missile	2017-19	1000
	AT-9 anti-tank missile	2017-19	1000
	EgyptSat-2 dual-use satellite	2019	1
	Ka-52 combat helicopter	2017-19	46
	Mig-29M combat aircraft	2017-19	39
	SS-N-22 SAM	2015-16	10
	Project-1241 frigate	2016	1
	AA-11 SRAAM	2017-19	225
Su-35 combat aircraft	2019	24	
<b>Iran</b>	T-72 MBT	1993-2001	422
	AT-4 anti-tank missile	1993-2019	5400
	AT-3 anti-tank missile	1996-2019	4950
	AT-5 anti-tank missile	1999-2019	3250
	AT-5 anti-tank missile	2000-03	500
	Mi-17 transport helicopter	2000-03	44
	AA-8 SRAAM	2006	40
	Su-25 combat aircraft	2006	6
	SA-15 SAM	2006-07	780
	SA-10 SAM	2016	150
	SA-20B SAM	2016	4
<b>Iraq</b>	Mi-17 transport helicopter	2006; 2007-08; 2010-11	10; 18; 22
	Pantsyr mobile AD system	2014-18	48
	SA-24 portable SAM	2014-16	500
	Mi-28N combat helicopter	2014-16	19
	AT-6 anti-tank missile	2013-16	2000

	Mi-35 M combat helicopter	2013-16	24
	AT-14 anti-tank missile	2014	300
	Mi-17 transport helicopter	2014-16	7
	Su-25 combat aircraft	2014; 2015; 2016	5; 1; 3
	AT-10 anti-tank missile	2018-19	1000
	T-90S MBT	2018-19	73
<b>Jordan</b>	SA-18 portable SAM	2001	100
	SA-24 portable SAM	2009-12	1800
	AT-14 anti-tank missile	2009-10	2000
	Mi-26 transport helicopter	2018-19	4
<b>Qatar</b>	SA-24 portable SAM	2017-19	150
<b>Syria</b>	AT-11 anti-tank missile	2000-05	1500
	AT-14 anti-tank missile	2002-06	1250
	SA-18 portable SAM	2006	200
	Pantsyr S1 mobile air defence system	2008-13	36
	SA-17 SAM	2010-13	800
	Pechora 2 M	2011-13	12
	SS-N-26 Yakhont ASM	2011-13	12
	SA-24 SAM	2008-10	200
	AS-17 ASM	2009-10	87
	AA-12 Adder BVRAAM	2012-13	50
	T-90S MBT	2015	10
	T-62 tank	2017	25
	SA-10 SAM	2018	200
	SA-20A	2018	3
<b>UAE</b>	57E6 SAM	2009-13	1200
	Pantsyr S1 mobile air defence system	2009-13	50
	AT-4 anti-tank missile	2008-09	200
	AT-14 anti-tank missile	2018-19	3000
<b>Yemen</b>	T-72B MBT	2000-01	39
	Mig-29 AMT combat aircraft	2002; 2004-05	14; 6
	AA-10 BVRAAM	2002	100
	AA-11 SRAAM	2002-05	150
	AA-12 BVRAAM	2004-05	100
	AS-14 ASM	2004-05	50
	AS-17 ASM	2003-05	60

**Table 5.5**  
**United Kingdom's Arms Exports to West Asia and Egypt 2000-19**  
**(Major platforms and missiles)**

<b>Country</b>	<b>Weapon</b>	<b>Year Delivered</b>	<b>Number</b>
<b>Bahrain</b>	BAE-146 transport aircraft	2001	1
	T-67 Firefly trainer aircraft	2003	3
	Hawk-100 trainer/combat aircraft	2006	6
	C-130J Hercules transport aircraft	2018	2
<b>Jordan</b>	Challenger MBT	1999-2004	392
	T-67 Firefly trainer aircraft	2002; 2015	16; 8
<b>Kuwait</b>	Sea Skua ASM	1997-2000	80
<b>Oman</b>	Challenger-2 MBT	1997-2000	20
	Super Lynx helicopter	2004-05	16
	Al-Shamikh frigate	2013-14	3
	Hawk-100 trainer/combat aircraft	2017	8
	Typhoon Block 20 combat aircraft	2017-18	12
<b>Qatar</b>	Typhoon Block 20 combat aircraft	Delivery from 2022	24
	Hawk-100 trainer/combat aircraft	Delivery from 2021	9
<b>Saudi Arabia</b>	Typhoon Block 20 combat aircraft	2015-17	24
	Typhoon Block 8 combat aircraft	2009-15	48
	Scalp ASM	2011-13	350
	Brimstone ASM	2016-19	1000
	Hawk-100 trainer/combat aircraft	2019	9
	Meteor BVRAAM	2018	20
<b>UAE</b>	AS-5 signals intelligence system	2018-19	2
	Seaspray aircraft radar	2015-17	3

**Table 5.6**

**United States' Arms Exports to West Asia and Egypt 2000-19**

**(Major platforms and missiles)**

<b>Country</b>	<b>Weapon</b>	<b>Year Delivered</b>	<b>Number</b>
<b>Bahrain</b>	AIM-120B BVRAAM	2002	26
	BGM-71 anti-tank missile	2001-02	270
	MGM-140A SSM	2002	30
	AH-1F Cobra combat helicopter	2005-07	12
	FGM-148 Javelin anti-tank missile	2007-08	180
	S-70 helicopter	2010	8
	AIM-120C BVRAAM	2015	25
	MGM-140B SSM	2013	30
	BGM-71 F anti-tank missile	2018	221
	F-16V combat aircraft	Delivery in 2022	16
	AGM-114L anti-tank missile	2018	14
	AH-1Z Viper combat helicopter	2020	12
	MGM-140A SSM	2019	110
	PAC-2 SAM	2019	36
PAC-3 ABM	2019	60	
<b>Egypt</b>	M1A1 Abrams MBT	2001-18	596
	F-16C combat aircraft	1999-2002	43
	I-Hawk SAM system	1999-2001	8
	MIM-23B Hawk SAM	1998-2001; 2005-06	180; 500
	RGM-84 Harpoon ASM	2000-02	42
	AH-64D Apache helicopter	2003-06	35
	Avenger AD system	2001; 2008	25; 25
	Stinger SAM	2001; 2007-08; 2012	600; 600; 164
	M-60 Patton 2 MBT	2001-02	34
	E2C Hawkeye AEW&C aircraft	2003	1
	RGM-84L Harpoon 2 ASM	2013-15	25
	C-130 H Hercules	2003	3
	Ambassador-4 Corvettes	2013-15	3
	BGM-71 anti-tank missile	2008-12	9,000
	E2C Hawkeye AEW&C aircraft	2010	1
	AH-64D Apache helicopter	2014	10
	F-16C Block-50/52	2013-15	20
	Beech-1900 SIGINT aircraft	2012	2
	MIM-72C SAM	2014	200
	AGM-114K	2016-17	356
RGM-84L Harpoon-2	2017	10	
<b>Iraq</b>	C-130E Hercules transport aircraft	2005	1
	UH-1 Huey-2 Helicopter	2007	16



	AGM-114A anti-tank missile	2009; 2012-13	20; 200
	C-130J-30 Hercules transport aircraft	2012-13	6
	AGM-65 Maverick ASM	2015	50
	AIM-7M Sparrow BVRAAM	2015-16	150
	AIM-9L Sidewinder SRAAM	2015	100
	F-16 C Block 50	2014-15	18
	Stinger SAM	2013-14	200
	AGM-114L anti-tank missile	2013-14; 2015-17	175; 5,000
	AGM-65 ASM	2016	50
	AIM-7M Sparrow BVRAAM	2016-17	150
	AIM-9L Sidewinder SRAAM	2016-17	100
	Scan Eagle UAV	2014	10
	M1A1 Abrams MBT	2015	6
	WGU-59 ASM	2016-18	2,000
<b>Israel</b>	AIM-120B BVRAAM	1998-2002	106
	RGM-84 ASM	2001-02	16
	AGM-114L anti-tank missile	2005-06	480
	AGM-142A ASM	2002-03	40
	AH-1F Cobra combat helicopter	2002-05; 2006	30; 42
	AH-64D Apache combat helicopter	2005-06	12
	AIM-120C BVRAAM	2004-05	48
	BGM-71F anti-tank missile	2003-04	2430
	F-16I combat aircraft	2004-06	102
	G-550 AEW&C aircraft	2007	2
	AGM-114K anti-tank missile	2006	200
	AIM-9X Sidewinder SRAAM	2016-19	20
	F-15C Eagle combat aircraft	2016	9
	SH-60B Seahawk	2017	8
	F-35 JSF	2016-19	38
<b>Jordan</b>	AH-1F Cobra combat helicopter	2000-01	9
	BGM-71 anti-tank missile	2001-04; 2016-18	1132; 300
	RG-8 Condor Reconnaissance aircraft	2002	2
	FGM-148 Javelin anti-tank missile	2004	116
	F-16(ADF) combat aircraft	2003-07	17
	UH-60L helicopter	2007; 2017	8; 12
	AIM-120C BVRAAM	2007-08; 2013-16	50; 85
	MIM-23B SAM	2006-07	150
	MD-500E light helicopter	2008	6
	C-130E Hercules transport aircraft	2011-12	3
	FGM-148 Javelin anti-tank missile	2014	100
	AGM-114K anti-tank missile	2014-15; 2018-19	150; 100
	AH-1F Cobra Combat helicopter	2016	3
	AT-802U combat aircraft	2016	4
	UH-60A helicopter	2015-16	8

<b>Kuwait</b>	AGM-114K Anti-tank missile	2007	188
	AGM-114L Anti-tank missile	2007	96
	RGM-84 Harpoon ASM	2003	21
	AH-64D Apache Combat helicopter	2007	16
	BGM-71F anti-tank missile	2010-12	1418
	BGM-71 anti-tank missile	2009-11	2127
	Patriot PAC-3 ABM system	2014-16	6
	AIM-120C BVRAAM	2010-14	120
	KC-130J Hercules Tanker/transport aircraft	2014	3
	PAC-2 SAM	2014-15	209
	AGM-114L anti-tank missile	2015	300
	AIM-9X Sidewinder SRAAM	2014-15	80
	C-17A Globemaster-3 Heavy transport aircraft	2014	1
	PAC-3 ABM system	2015-16	60
	AIM-9X Sidewinder SRAAM	2016	1
	PAC-3 SAM/ABM system	2017-18	2
	M-1A2S MBT	2016	218
	F/A-18E Super Hornet combat aircraft	2018	28
	AIM-120C BVRAAM	2019	6
<b>Lebanon</b>	R-44 Light helicopter	2005	2
	AGM-114K anti-tank missile	2009	20
	UH-1 Helicopter	2012; 2016-17	6; 6
	AGM-114K anti-tank missile	2014-15	150
	BGM-71 anti-tank missile	2015; 2017; 2018-19	239; 350; 1000
	WGU-59 ASM	2019	500
	Scan Eagle UAV	2019	6
<b>Oman</b>	BGM-71 anti-tank missile	2002-03; 2016	562; 100
	AGM-65 ASM	2006	80
	AIM-120C BVRAAM	2006	50
	AIM-9M Sidewinder	2006	100
	F-16C Block-50/52 combat aircraft	2005-08	12
	RGM-84 Harpoon	2006	20
	FGM-148 Javelin anti-tank missile	2009	100
	FGM-148 Javelin anti-tank missile	2010	100
	C-130J-30 Hercules transport aircraft	2009-14	3
	F-16C Block-50/52 combat aircraft	2014	12
	AIM-120C BVRAAM	2016-17	290
	AIM-9X Sidewinder SRAAM	2014	50
	FGM-148 Javelin Anti-tank missile	2014	100
	FIM-92 Stinger Portable SAM	2016	266

<b>Qatar</b>	C-130J-30 Hercules Transport aircraft	2011	4
	C-17A Globemaster-3 Heavy transport aircraft	2009; 2012	2; 2
	AGM-114K anti-tank missile	2019	300
	AH-64E Apache Guardian combat helicopter	2019	16
	FGM-148 Javelin anti-tank missile	2016-17	500
	PAC-2 SAM	2015-17	248
	PAC-3 ABM system	2015-19	10
	C-17A Globemaster-3 heavy transport aircraft	2015-16	4
	FIM-92 Stinger Portable SAM	2019	180
	F-15 Advanced Eagle combat aircraft	2017	36
	FGM-148 Javelin anti-tank missile	2018	50
	RIM-116A SAM system	2018	125
	PAC-3	2019	2
<b>Saudi Arabia</b>	RE-3 SIGINT aircraft	2004	2
	AIM-120C BVRAAM	2003-06; 2008	500; 14
	BGM-71 Anti-tank missile	2001-02; 2002-03	1827; 562
	M-60A3 Patton-2 MBT	2001	27
	AIM-9M Sidewinder	2007	75
	H-92 Transport helicopter	2008-10	16
	AIM-9X Sidewinder SRAAM	2010	150
	AH-64D Apache Combat helicopter	2011	12
	UH-60 L helicopter	2012-14	14
	M-1A2S MBT	2012-14	59
	UH-60L helicopter	2010-11	22
	AH-64E Apache combat helicopter	2014-15	12
	AIM-9X SRAAM	2010	150
	M-1A2S MBT	2012-17	314
	BGM-71 anti-tank missile	2011-13	2742
	UH-60L helicopter	2011-13; 2014-15; 2018-19	16; 24; 20
	AIM-9X SRAAM	2012-19	300
	AGM-84H ASM	2013	650
	AGM-114L Anti-tank missile	2013-14	2592
	PAC-3 ABM system	2014-17	21
	AH-64E Apache Combat helicopter	2015-16	24
	AGM-114L anti-tank missile	2015-16	2176
	RGM-84L Harpoon-2 ASM	2016-18	220
	F-15 Advanced Eagle combat aircraft	2016-19	84
	MMSC Frigate	2017	4
	PAC-3 ABM system	2017-19	3
	AGM-88 HARM ARM	2018-19	200

	MH-60R Seahawk ASW helicopter	2018-19	10
	M-1A2S MBT	2018-19	140
	THAAD ABM system	2018	7
<b>UAE</b>	RGM-84 Harpoon anti-ship missile	1998-2001	24
	F-16E combat aircraft	2004-08	80
	AGM-88 ARM	2006-07	159
	AGM-114K anti-tank missile	2005; 2018	300; 1000
	AGM-65 ASM	2003-07	1163
	AIM-9M Sidewinder	2004-06	267
	AIM-120B BVRAAM	2004-07	491
	RGM-84 Harpoon ASM	2005	12
	UH-60L helicopter	2008	10
	RIM-162 ESSM SAM for corvettes	2015	96
	FGM-148 anti-tank missile	2009-10	1000
	PAC-2 SAM	2012-14; 2019	216; 100
	PAC-3 ABM system	2012-14	9
	UH-60L Helicopter	2009-10; 2011-12	10;
	AGM-65 ASM	2011-13	500
	CH-47F Chinook Transport helicopter	2012-15	12
	C-17A Globemaster-3 Heavy transport ac	2015	2
	THAAD ABM system	2015-16	2
	Talon ASM	2015-18	2000
	RQ-1 Predator UAV	2017	10
	RIM-116A SAM for corvettes	2018	25
	AH-64E Apache Combat helicopter	2018	17
AIM-9X Sidewinder SRAAM	2019	300	
PAC-3 ABM system	2019	60	
Mk-48 GMVLS Naval SAM system	2019	2	

**Notes:** **ABM system:** anti-ballistic missile system; **AEW&C aircraft:** Airborne Early Warning and Control aircraft; **ARM:** Anti-Radiation Missile; **ASM:** anti-ship missile; **BVRAAM:** Beyond Visual Range Air-to-Air Missile; **JSF:** Joint Strike Fighter; **MBT:** Main Battle Tank; **SAM:** Surface-to-Air Missiles; **SIGINT Aircraft:** Signals Intelligence aircraft; **SRAAM:** Short Range Air-to-Air Missile; **SSM:** Surface-to-Surface Missile; **UAV:** Unmanned Aerial Vehicles

**Source:** Stockholm International Peace Research Institute (2020), "SIPRI arms transfers database", [Online: Web], Accessed 25 November 2020, URL: [https://armstrade.sipri.org/armstrade/page/trade\\_register.php](https://armstrade.sipri.org/armstrade/page/trade_register.php)

SIPRI in March 2020 noted that arms imports by West Asian states during 2015-19 were more than 61 per cent higher than during the previous five year period (2010-14) (Stockholm International Peace Research Institute, 2020). Saudi Arabia and the UAE accounted for over 32 per cent of US arms exports during 2015-19. Saudi Arabia and Oman meanwhile accounted for over 55 per cent of the UK's arms exports while Egypt and Qatar accounted for 40 per cent of France's arms exports during the same time period (Ibid). Saudi Arabia, Egypt, Algeria, UAE, Iraq and Qatar occupied six out of the top ten largest arms importers in the world during 2015-19 (Ibid). Qatar was in SIPRI's Top 10 list for the first time ever, indicating its focus on rapidly building up its conventional force profile through arms imports. Qatar (at Euros 11 billion) in fact bought more arms from France than even Saudi Arabia (Euros 10.7 billion) during 2010-19 (Ministry of the Armed Forces, 2020, 64-66).

The large-scale arms imports by regional countries not only encourage regional instabilities and prolong existing conflicts but also lead to significant loss of life and property, when used indiscriminately by the recipients. Human Rights Watch (HRW) for instance has pointed out that within one year of the start of coalition air strikes by the Saudi-led coalition in 2015, 60 per cent of civilian deaths (close to 2,000 civilians) were due to air strikes (Human Rights Watch, 2016). Investigative reports have also pointed out that US arms sold to Saudi Arabia have in fact ended up in the hands of al-Qaeda backed fighters in the Yemen War, and have even made their way to rebels supported by Iran, potentially exposing US military secrets to Tehran (Elbagir et al, 2019). Reports have also pointed out that US-supplied combat planes and helicopters have been used by the Egyptian authorities in the Sinai against civilian populations, just as Russian equipment is being indiscriminately in civil wars in Syria and Libya (Hartung and Draper, 2020).

Arms exports by the US, the UK or France invariably strengthen Iran's regional antagonists like Saudi Arabia. When Iran was criticised by the US, the UK and France for its ballistic missile launches, Foreign Minister Javad Zarif in July 2019 pointed out that Saudi Arabia spent US\$67 billion on arms imports in 2018, mostly from the US, while the UAE spent over US\$22 billion. Zarif contended that such arms imports make the region more combustible and asked these Western powers to stop selling sophisticated weapons (*Al Jazeera*, 2019),

### **External Military Presence**

The presence of external great powers in West Asia has often been a source of tension, even if these powers justify their presence as required to ensure regional peace and stability. The US

presence in Saudi Arabia in the run up to the Kuwait War and its aftermath (till 2019), to a large extent, fed the Al Qaeda narrative of the presence of ‘infidels’ on Arab lands, which helped it to recruit new followers to its cause. The US naval operations concept (NOC) 2010, for instance, affirms that US overseas naval presence is essential to limit regional conflict and deter major power war. Towards this end, it privileges maintaining cooperative partnerships with international partners and notes that ‘forward posture’ are a cost-effective means of proactively influencing events and responding to crises (Federation of American Scientists, 2010, 10).

The US Fifth Fleet is headquartered in Bahrain, with reports noting that the US has spent more than US\$2 billion in maintaining that base since it was established in 1971. The US and Kuwait signed the Defence Cooperation Agreement (DCA) in September 1991, valid for a period of 10 years but it still remains in effect. Kuwait is also a major non-NATO ally (MNNA) of the US. The US has a bilateral military agreement with Oman, dating back to 1980, which was renewed in 2010. During US military operations in Afghanistan in the aftermath of 9/11, Omani air bases were used frequently. Qatar’s Al Udeid air base hosts more than 10,000 service personnel and has expanded significantly after the US decided to ramp down its operations inside Saudi Arabia, after the second Iraq War. The UAE hosts over 5,000 personnel at the Al Dhafra air base. The US military presence in the Horn of Africa began with a military base in Djibouti in 2003 (Wallin, 2018).

The US Central Command (CENTCOM), one of the nine unified combatant commands, deals with the West Asia and North Africa region and is headquartered out of Florida. The Command grew out of a joint task force which was established to deal with the US hostage crisis in the aftermath of the Islamic revolution (Garamone, 2019). CENTCOM has been active in regional hotspots from Iraq (executing the Kuwait War as well as the 2003 US invasion of Iraq followed by the disastrous occupation), Libya, Afghanistan and the fight against the Islamic State in Syria and Iraq (ISIS).

Such US bases and military presence essentially encircle Iran, a country with which the US and its regional allies have been at logger heads in recent decades. The fact that the US looms large over Iranian security concerns, and as a corollary, its WMD pursuits to face up to the US challenge, is also acknowledged by US policy makers. Robert Gates, at the time of his confirmation hearings before the US Senate in December 2006, prior to assuming the office of US Secretary of State, pointed out that Iran was surrounded with nuclear weapons powers in

all four directions. It was significant to note that the US Defence Secretary included Israel as one of the nuclear weapons power in his list, apart from Pakistan, Russia and the Americans (*The Washington Post*, 2006).

President Donald Trump has vowed to reduce overseas US military commitments, particularly so in the West Asian region. His decision to withdraw the limited number of US forces from Syria in 2019 has led to criticism that the US was abandoning its international commitments to allies like the Kurds who had fought against ISIS. Trump's policy vis-à-vis West Asia has been called 'hawkish isolationism', which is a product of trying to balance his own leadership style against Republican neo-conservative impulses, which prescribe interventionism and regime change policies in the region (Bennett, 2018).

But it is also a fact that despite the Obama administration announcing its pivot to Asia-Pacific region with much fanfare, US West Asian military presence continues to be substantial as noted in earlier sections. In the aftermath of announcing the pivot/re-balancing strategy in 2011, the US Defence Department's 2012 *Defence Strategic Guidance* document affirmed that the US would continue to "place a premium" on its regional military presence (US Department of Defense, 2012b).

Even as Trump has expressed intent to reduce military footprint, an important consequence of his policy decisions has been an increase in regional tensions and concomitant increase in US military forces presence. After the Trump administration's withdrawal from the JCPOA in May 2018, US-Iran tensions have spiked. In May 2019 for instance, US intelligence reportedly viewed an imminent threat from Iranian missile boats targeted at US assets deployed in the region (Barnes, Schmitt, Fandos, Wong, 2019). The US decided to immediately enhance its naval profile with the additional deployment of aircraft carrier *Abraham Lincoln* and its support ships and submarines.

The commander-in-chief of CENTCOM, Gen. Frank McKenzie insisted that the decision to deploy additional naval assets was his and that the White House was not involved and that such US deployment led to Iranian forces backing down from carrying out any punitive action (Burns, 2019). Even so, it is pertinent to flag that an increase in regional tensions consequent to the Trump administration's policy decisions led to an increased US military profile, contrary to the administration's stated goal. Gen. McKenzie told the Senate Armed Services Committee (SASC) in March 2020 that since the middle of 2019, when there was an increase in Iranian 'provocations', the US deployed 14,000 additional troops to the region (US Central Command,

2020). These alleged Iranian actions that prompted the increase in US troop presence included the attacks on oil tankers in May 2019, downing of an American drone in June 2019 and the attack on the Saudi oil refinery in September 2019. Even if the US does reduce its military footprint, its arms exports to the region could see further increases going forward given that it could expect its regional allies to be better equipped to face purported threats.

Apart from the US, Russia has returned to its overseas naval base in Syria at Tartous (which dates back to the 1970s) and has emerged as a key supporter of the Bashar al-Assad regime. Russia has not only played an important diplomatic role in trying to find a solution to the Syrian crisis (through the Astana Process), but has directly participated in military operations, siding with the Assad regime. Russian air strikes started in September 2015, four years after the start of the civil conflict. Reports note that over 18,000 Syrians have been killed as a result of these air strikes (*AFP*, 2018). As noted in Chapter Four, Russia's role in the September 2013 agreement to ensure Syrian chemical weapons disarmament was significant.

Even as Syria declared its stockpile of chemical weapons amounting to 1,300 tonnes to the Organisation for the Prohibition of Chemical Weapons (OPCW), the Syrian regime has been accused of continuing to use horrendous chemical weapons like chlorine gas on civilian populations, including in Khan Sheykoun in April 2017 (*BBC*, 2018b). Russia has however diligently stood by the Assad government and has defended its conduct (*Deutsch*, 2017; *Friedman*, 2018).

Analysts have called Russia the “indispensable nation” in West Asia, not just for its role in Syria but point out that Israel and Turkey have come to accept Russian troop presence on their borders (*Rumer*, 2019). President Trump also publicly acknowledged the Russian role in helping the US military operation that killed the leader of Islamic State in Iraq and Syria (ISIS), Abu Bakr al Baghdadi, in October 2019. Russian forces, have, however, been caught in the cross fire. In September 2018 for instance, 15 Russian personnel lost their lives after their transport plane was caught in the cross fire between Israeli fighter jets and Syrian air defence systems (*BBC*, 2018c).

As for Russia's larger strategic goals, analysts note that Russia is trying to re-establish its presence as a robust arms supplier to the region, and that its short term goals include the need to gain political or military advantage in a region which is seen as critical to the interests of its adversaries like the US (*Sladden et al*, 2017).



## **Conclusion**

Apart from the WMD pursuits and capabilities of regional countries, this chapter has shown that West Asian countries have pursued niche, conventional capabilities to offset their perceived security deficits. Iran, for instance, pursued ballistic missile capabilities in order to offset its conventional inferiority in the aftermath of the devastating eight year war. Just as its nuclear pursuits have generated significant international and regional concerns, Iran's ballistic missile capabilities generated significant responses. These included a re-orientation of US missile defence efforts after the September 2001 terror attacks, with Iran increasingly seen as a significant threat in US strategic assessments.

While Iran's capabilities to target the US homeland have not matured — assuming it had those ambitions as alleged by critics in the US and Israel, it did build-up a significant inventory of short-range and intermediate range ballistic missile capabilities. These capabilities, along with its continued ballistic missile testing activities in the aftermath of the JCPOA, have raised the angst of its key interlocutors, including France and the UK, apart from the US. Russia and China on their part accept the Iranian contention that such testing activities are essential for its security profile. Whether the Biden administration insists on restrictions on such ballistic missile testing activities, remains to be seen.

Apart from ballistic missile capabilities, the chapter has shown that the region is a significant recipient of the global arms trade, encompassing sophisticated and cutting-edge equipment like main battle tanks, ABM systems, unmanned aerials vehicles (UAVs), fighter aircraft, and all manner of missiles. Iran has criticised such arms imports by its regional antagonists as responsible for causing regional instability, even as it has been the subject of stringent UNSC sanctions prohibiting arms exports, till October 2020. The JCPOA promised that the arms ban imposed by various UNSC resolutions, specifically 1747 of March 2007, would be lifted five years after the agreement begins to be implemented. The UN arms embargo ended on 18 October 2020, despite strong US opposition that it should not be lifted. Iran, therefore, is now eligible to imports arms and ammunition from Russia or China. As shown in Tables Two and Four, China and Russia exported significant arms to Iran, including main battle tanks, combat aircraft and missiles, prior to 2010/11.

The military presence of external powers has more often than not exacerbated regional instabilities. The 2003 US invasion of Iraq as well as a substantial enhancement of US and Russian military presence in the CENTCOM area of responsibility (AOR) and in Syria is

testament to this fact. As noted above, after Trump's unilateral withdrawal from the JCPOA in May 2018, there has been an increase in Iranian military responses, which has in turn led to an additional deployment of nearly 15,000 American troops since mid-2019 in the West Asian region. Iran's nuclear issue meanwhile has relegated to the background all other regional WMD concerns. The next chapter will examine the various facets of the Iranian nuclear imbroglio, the most consequential regional security issue of the past two decades.

## **CHAPTER SIX**

### **Iran Nuclear Issue**

The chapter traces the historical roots of nuclear concerns emanating from Iran's nuclear programme. These concerns led the United Nations Security Council (UNSC) and the United States (US) as well as the European Union (EU) to impose punitive sanctions measures to pressure Iran to make concessions on its nuclear programme. It then highlights US threat assessments which played an important role in how the Iranian nuclear file was viewed. Next, the nature of the disagreements that Iran had with the International Atomic Energy Agency (IAEA) are examined, and the negotiations process that culminated in the Joint Comprehensive Plan of Action (JCPOA) is delineated. The key developments in the aftermath of the Trump administration's withdrawal from the JCPOA in May 2018 are highlighted. The chapter ends with an assessment of regional reactions to the Iran nuclear concerns, primarily focussed on Israel, Saudi Arabia and Turkey and highlights the implications the issue had on efforts to establish the West Asia nuclear weapon free zone (NWFZ).

#### **Introduction**

Prior to the 1979 Islamic revolution, Iran's nuclear ambitions were supported by the US. The country's civilian nuclear programme began under Shah Reza Pahlavi. In 1967, the US supplied 5-megawatt electric (MWe) Tehran Research Reactor (TRR) went critical (Congressional Research Service, 2019c, 1). Analysts note that because of Tehran's importance in the US's West Asia strategy, the Shah's nuclear ambitions were nurtured by successive US presidents (Kibaroglu, 2007). The Atomic Energy Organisation of Iran (AEOI) was created in 1973, with ambitious plans to generate more than 20,000 MWe of nuclear energy by 1994 (Congressional Research Service, 2019c). Tehran also entered into agreements with European countries for stakes in companies involved in uranium enrichment technology and to build nuclear power reactors inside Iran. Iran also entered into agreements with apartheid South Africa to buy uranium. After the Islamic revolution, these agreements, estimated to be worth a total cumulative value of more than US\$10 billion when they were signed, were not pursued (Nuclear Threat Initiative, 2018; Iran Watch, 2016; International Atomic Energy Agency, 2007b, 2).

Iran signed the Nuclear Non-Proliferation Treaty (NPT) in 1968 and ratified in 1970, the year that the treaty entered into force. Iran signed its comprehensive safeguards agreement (CSA),

as contained in Information Circular (INFCIRC) 214, with the IAEA, on 19 June 1973, which entered into force on 15 May 1974 (International Atomic Energy Agency, 1974). Given that Iran is a major energy producer, the pursuit of nuclear power could be seen as an anathema to its requirements. However, analysts note that nuclear technology for Iran was viewed as providing domestic legitimacy to the regime in power, an important instrument for fostering nationalism and a tool for regional influence (Chubin, 2006, 12).

The Pakistani nuclear programme has been cited by Iranian officials and/or lawmakers as a justification for its own pursuit of nuclear capabilities, with that country's eventual overt status seen as legitimizing its past covert proliferation activities (Cordesman, 2001, 46). Pakistan has indeed played an important role in the Iranian nuclear saga, with the IAEA in its reports, as will be shown in subsequent sections, specifically highlighting Iran's acquisition of the P-1 centrifuges as well as acquiring purported bomb designs, ostensibly through the Abdul Qadeer (A.Q.) Khan network (Warrick, 2003; Smith and Warrick, 2010)

### **Rising Concerns**

The Iran nuclear issue has been the defining regional security problem facing the West Asian region since 2002. In public perception, the issue first came into international prominence when the Peoples Mojaheddin Organisation of Iran/the Mojaheddin-e-Khalq (MEK), an Iranian opposition group, disclosed the existence of nuclear facilities at Natanz and Arak, at a press conference in Washington D.C., in August 2002 (Iran Watch, 2002). However, analysts have pointed out that the MEK only revealed second hand information regarding the Natanz and Arak facilities, information which was already shared with the IAEA by the US intelligence community even prior to the press conference (Lewis, 2006). Once the information was placed in the public domain by the MEK, it led to international concerns, as detailed in sections below, about Iranian compliance with its non-proliferation commitments.

An NPT non-nuclear weapon state with nuclear facilities is required to sign comprehensive safeguards agreements (CSA) with the IAEA, in order for the world nuclear body to verify that all activities are being carried out for peaceful purposes. As per Article 42 of Iran's CSA (INFCIRC 214), Iran has to furnish design information on any new facility "as early as possible", prior to the introduction of nuclear material into that facility (International Atomic Energy Agency, 1974, 11). Information that has to be provided to the Agency includes the purpose for which the facility was being built, its capacity, procedures to be established

between a particular country's nuclear authority and the IAEA for nuclear material accountancy, among others.

In the aftermath of the Natanz revelations, the Director-General of IAEA, Mohammed El Baradei, visited Iran on 21-22 February 2003. An initial visit scheduled for October 2002, in the immediate aftermath of the concerns being revealed, could not take place. During the February 2003 visit, Iran for the first time formally declared that it intended to construct a heavy water reactor at Arak, and that the facility at Natanz was a pilot fuel enrichment plant (PFEP) (International Atomic Energy Agency, 2003c, 2).

Iran insisted that it was justified in not sharing the information about these facilities with the IAEA. It pointed out that as per its Subsidiary Arrangements (SA) with the IAEA, which lays down the procedures and framework for the country's interactions with the nuclear regulatory authority, it was required to inform it six months prior to introducing nuclear material into any facility (International Atomic Energy Agency, 2003c, 4). Since it had not introduced any nuclear material into the facilities being constructed at Natanz or Arak, it argued that it was under no obligation to inform the IAEA about these facilities.

Iran's explanation, however, was not accepted by the IAEA given that the relevant text of the SA pertaining to information sharing (Code 3.1) was changed in 1992 (applicable to all countries) incorporating language specifying that any country should inform the IAEA about its decision to construct any new nuclear facility (International Atomic Energy Agency, 2016b, 24). Iran in February 2003 during the DG's visit accepted that it would abide by the changed requirement of Code 3.1. The SA requirement was changed in the context of Iraq's nuclear behaviour, which ran a clandestine nuclear programme under Saddam Hussein (more details in Chapter Four).

Director-General El-Baradei in June 2003 gave a list of Iran's nuclear activities that caused concern to the IAEA. These included its failure to declare that it had imported natural uranium in 1991, and the subsequent processing of that imported uranium in facilities that were not declared to the IAEA. Iran also failed to provide updated design information on facilities like the Tehran Research Reactor (TRR) or nuclear waste storage facilities at Esfahan, among others (International Atomic Energy Agency, 2003c, 7).

In order to address these concerns, Iran allowed access to the IAEA and entered into diplomatic negotiations with the European Union 3 (EU-3; the United Kingdom, Germany and France), who offered to mediate with Iran to resolve the contentions. These negotiations bore fruit in

October 2003, when Iran agreed to sign the IAEA Additional Protocol (AP). It did so on 18 December 2003. The AP has more stringent accounting and reporting requirements than a standard CSA, including short notice inspections and inspections at facilities other than those declared to the IAEA which may be under suspicion of having any nuclear-related activities, among others (Macaskill, De Luce and Borger, 2003; International Atomic Energy Agency, 1997b).

Later in November 2004, the Paris Agreement was signed with the EU-3. Iran re-affirmed that it will not develop nuclear weapons while the EU-3 acknowledged that Iran as a member of the NPT had the right to pursue peaceful nuclear activities. As a voluntary confidence building measure, Iran agreed to continue to suspend its enrichment activities (reached as part of the October 2003 agreement with the EU), as well as not to manufacture or import centrifuges. In return, the EU-3 promised guarantees for peaceful nuclear cooperation. Pertinently, it is interesting to note that both sides agreed to jointly fight ‘terrorist’ groups like the Al Qaeda and the MEK, the latter interestingly being the first organisation that revealed Iran’s covert activities to the world in 2002 (International Atomic Energy Agency, 2004h).

### **UNSC Sanctions**

Iran, however, in August 2005 re-started uranium enrichment activities at the Esfahan uranium conversion facility (UCF). Expressing concern at the development, el-Baradei in his report of 2 September 2005 requested Iran to rescind its decision and to provide access to documentation, individuals involved in procuring nuclear equipment (specifically related to the P-1 and P-2 centrifuges) and access to research and development (R&D) facilities and military establishments, among others (International Atomic Energy Agency, 2005d, 11). Despite noting unresolved concerns on aspects of Iran’s nuclear history relating to procurement or import of nuclear material, he admitted that all of Iran’s ‘declared’ nuclear material has been accounted for. However, despite Iran’s on-going cooperation, el-Baradei noted that the IAEA could not substantively prove that there were no ‘undeclared’ activities (Ibid, 12).

On 24 September 2005, given that Iran did not heed the request from the IAEA to stop its re-started uranium enrichment activities at Esfahan, the IAEA BOG in a resolution stated that the issues arising out of the Iranian nuclear contentions were within the competence of the UNSC as there was an “absence of confidence” as regards whether Iran’s nuclear programme was peaceful (International Atomic Energy Agency, 2005e, 2).

Iran, instead of backing down, ramped up its activities by re-starting enrichment activities at Natanz on 10 January 2006. In another resolution adopted on 4 February 2006, the IAEA BOG requested el-Baradei to report to the UNSC all activities relating to safeguards implementation in Iran, especially in the light of the fact that Agency came across a document that dealt with the machining of uranium metal into hemispheres, potentially related to nuclear weapons-related experiments (International Atomic Energy Agency, 2006b, 3).

The UNSC passed its first sanctions resolution in December 2006 (Resolution 1737). Ahead of imposing sanctions for the first time, a UNSC presidential statement on 29 March noted with serious concern the IAEA's description of activities with potentially military applications (United Nations Security Council, 2006a). Resolution 1737 meanwhile was adopted unanimously, urging the IAEA to provide information within 60 days whether Iran has complied with the UNSC's stipulations requiring greater transparency and access. Iran, however, charged that despite providing access to IAEA inspectors and providing explanations on questions that were posed, it was being subjected to sanctions, while a country like Israel with nuclear weapons was not being questioned (United Nations Security Council, 2006b).<sup>1</sup>

The December 2003 UNSC resolution affirmed the necessity of continued diplomatic engagement to address Iranian nuclear contentions. It nevertheless was adopted under Article 41 of Chapter VII, requiring member states to not provide Iran with nuclear-related equipment or technology, called on them to be vigilant about the movement of individuals associated with its nuclear programme within their territories, and imposed travel bans and asset freezes with respect to 12 Iranian citizens and 10 entities known to be involved in its nuclear and ballistic missile programmes (Ibid).

The UNSC subsequently adopted resolutions 1747 (March 2007), 1803 (March 2008), and 1929 (June 2010). All of these resolutions, as with 1737, were adopted under Article 41 of Chapter VII, making it mandatory for all UN member states to implement strict provisions. More than 100 Iranian individuals and entities were targeted under these resolutions, involving travel bans and asset freezes. A comprehensive arms embargo was imposed as part of Resolution 1747, relating to battle tanks, artillery systems, combat aircraft, attack helicopters,

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<sup>1</sup> While China and Russia voted in favour of this resolution, they emphasised that sanctions were reversible if Iran begins to cooperate with the IAEA. The IAEA's role as the sole responsibility to determine whether Iran was in compliance with its commitments, was stressed (United Nations Security Council, 2006b).

warships and missile systems, in order to prevent what the UNSC called a “destabilising accumulation of arms” (United Nations Security Council, 2007).

Resolution 1747 also urged member states not to provide grants or concessional loans to the Islamic Republic, other than for humanitarian needs. Resolution 1747, as indeed 1737, and the subsequent UNSC resolutions, supported the June 2006 proposals of the EU-3 which promised comprehensive economic and nuclear engagement with Iran, including at the World Trade Organisation and in sectors spanning aviation, telecommunications, agriculture, and other aspects of high technology cooperation, provided Iran agreed to stipulations of the IAEA and the UNSC to stop its enrichment activities and provided credible explanations on outstanding issues (Ibid).

Resolution 1803 adopted on 3 March 2008 urged member states to be vigilant as regards the export of dual-use items to Iran, as defined by the Nuclear Suppliers Group (NSG) (International Atomic Energy Agency, 2019d). It further called upon member states to exercise caution vis-à-vis Iranian financial institutions and their activities, and required the inspection of Iranian-flagged vessels or aircraft operated by Iran Air cargo and Islamic Republic of Iran Shipping Lines (IRISL) (United Nations Security Council, 2008).

The June 2010 UNSC Resolution 1929, in its preamble, for the first time, flagged the possibility that Iran could use revenues from its energy exports to fund its proliferation-related activities (United Nations Security Council, 2010b). Previous UNSC resolutions did not specifically target Iranian financial institutions though they did urge member states to exercise caution while extending to Iran credit lines or grants, other than those for humanitarian purposes. Subsequently, the US cited Resolution 1929’s preamble to justify a slew of very restrictive financial measures targeting Iran’s oil exports.

The June 2010 UNSC sanctions resolution was in the context of heightened concerns regarding the Iranian nuclear programme after the existence of the Qom enrichment facility was revealed in 2009 (Crail, 2009). The efforts by Brazil and Turkey earlier in May 2010 to find fuel supplies to the Tehran Research Reactor (TRR), in return for the transfer of 1200 kgs of Iran’s low enriched uranium (LEU) to Turkey, also did not succeed (*Al Jazeera*, 2010a). These fuel rods were to be provided by the Vienna Group — made up of France, Russia, the US and the IAEA.

The May 2010 deal that Iran agreed to was not agreeable to the US or the members of the Vienna Group, given that it was almost similar to the terms of the agreement that the group itself had reached with Iran in October 2009. As part of the earlier deal, Iran was supposed to



have transferred a similar amount of uranium to Russia, which would then have been enriched in France before being supplied to the TRR. The October 2009 agreement was reached with the Vienna Group as a confidence building measure (CBM) a few weeks after Iran declared the existence of the Qom enrichment plant.

Iran though did not keep its end of the bargain as part of the October 2009 deal and did not transfer the uranium to Russia. El-Baradei in his November 2009 report to the BOG stated that Iran had in its possession about 1,700 kgs of LEU (International Atomic Energy Agency, 2009, 2). Iran therefore had agreed to transfer nearly 75 per cent of its then stockpile of uranium to Russia. By May 2010 however, Iran's production of LEU had increased to more than 2,400 kgs (International Atomic Energy Agency, 2010a, 2). The Vienna Group, therefore, did not agree to the terms of the Brazil-Turkey negotiated nuclear swap agreement of May 2010 given that Iran would be left with more than half of its stockpile of LEU, which it felt Iran could potentially use for malafide intentions if it so desired (Sanger and Slackman, 2010). Further, the US was especially concerned that Iran insisted that it would continue with its uranium enrichment activities, even after the deal (C-Span, 2010).

It is pertinent to note that the failure of the two nuclear swap deal agreements and Iran not following through the requirements of the UNSC sanctions resolutions, led to the imposition of more punitive unilateral sanctions, from the US specifically as well as from the EU. The period 2010-2015 also coincided with an increased politicisation of IAEA safeguards application in Iran, leading to greater uncertainty and tensions, even as Iran continued its defiant nuclear march.

### **US Sanctions**

Iran was under US unilateral sanctions even before concerns about its nuclear programme came into prominence. Iran was termed a country that sponsored terrorism in 1984, as part of the US State Department's watch list, after the 1983 Beirut bombings, blamed on Hezbollah. President Bill Clinton, through Executive Order 12597 of March 1995, declared that the US will maintain a "State of Emergency" with respect to Iran, a designation that has been renewed every year since then (Govinfo.gov, 1995). This designation restricts commercial interactions by US citizens with Iran, and requires the Secretary of the Treasury, as well as other US government agencies, to enforce it.

The Iran and Libya Sanctions Act (ILSA), passed by the Clinton administration in 1996, later became the Iran Sanctions Act (ISA) in 2006. The Act sanctioned individuals or entities that

were involved in developing Iran's energy resources, the contention being Iran could potentially use its energy revenues to fund its WMD activities. The provisions of the Act were triggered if any investment beyond US\$40 million was made in the Iranian energy sector. Some of the sanctions included denying of US EXIM Bank loans, denial of US government contracts, among others.

ILSA was designed to discourage investment decisions by not just US but their Europe-based affiliates and also European oil majors. A year before the ILSA was passed, for instance, the French energy giant, Total, agreed to develop Iran's Sirri island oil field, after the US energy company Conoco's European affiliate withdrew on account of pressure from the Clinton administration (Zedalis, 1998). Total's investment decision was the first such decision by a major European energy company in Iran since the Islamic revolution. The implementation of the legislation was, however, not immune from geo-political considerations. Total was found to be violation of the ILSA for its 1997 agreement (along with the Russians and the Malaysians) on the South Pars gas field. The Clinton administration, however, gave a waiver to Total from sanctions provisions on account of political pressure from the European Union (Katzman, 2005, 3).

US-Iran relations meanwhile took a turn for the worse under the Bush administration, with President Mahmoud Ahmadinejad at the helm in Tehran concurrently. President George W. Bush characterised Iran, North Korea and Libya as an 'axis of evil' in his January 2002 State of the Union address (George Bush White House, 2002a). After President Barack Obama took over the presidency, his administration initially held out the olive branch to the Iranians, and tried to 'soften' the extremely inimical framework that had enveloped the US-Iran relationship. Obama, for instance, began issuing Nowruz greetings and acknowledged Iranian importance to resolve Afghan contentions by inviting Iran to the March 2009 conference on Afghanistan at The Hague.

Critics held that the Obama administration was indulging in such overtures without getting anything in return in terms of a change in Iranian behaviour regionally or on its nuclear programme (Pletka, 2009). The Obama administration officials and even Republican supporters of the administration's policy (like Nicholas Burns, of Harvard University, who was Undersecretary in the State Department in the George W. Bush administration), insisted that such a course was important to follow in order to mould international public opinion in favour of the US and its policies. If Iran did not respond to US overtures, the blame could then be laid

on the Iranian government and the stage could be set for the possible ramping up of military or economic pressure (Steinberg, 2009; Burns, 2009). With Tehran not agreeing to the IAEA or the UNSC resolutions urging it to stop its uranium enrichment activities, among other requirements, pressure on the Obama administration began to grow for a change in tactics from a policy of engagement to stricter and punitive pressure tactics.

The US deployed additional assets like aircraft-carrier battle groups (in addition to those present with the Fifth Fleet), mine sweepers and advanced aircraft like the F-22s to Abu Dhabi. The Obama administration's policy of 'dual-track' engagement with sanctions and constructive engagement constituting the two tracks was still pursued. As part of the punitive measures, even as its military profile near Iran was increased, the sanctions pressure was also ramped up. The administration for instance in November 2011 designated the whole country as a "primary money laundering concern," only the second time that the US Treasury Department categorised a country, after Myanmar in 2003 (US Treasury Department, 2011).

President Obama signed the Comprehensive Iran Sanctions, Accountability and Divestment Act (CISADA) into law in July 2010. CISADA further reduced the amount of investment energy companies could invest in Iran from the earlier limit of US\$40 million (which was as part of the 1997 ILSA and 2006 ISA) to US\$20 million (US Treasury Department, 2010, 7). The Act also imposed restrictions on the selling of refined petroleum products to Iran (with a limit of US\$5 million per year), as a result of which even Indian companies like Reliance had to stop their export of refined petroleum products. Reliance confirmed to the US State Department in October 2010 that it was no longer selling refined petroleum products to Iran (PTI, 2010).

Other firms which were also processing Iranian oil like the French company Total, the Japanese major Inpex and Royal Dutch Shell had to stop their businesses in Iran. Chinese and Singaporean oil companies which did not abide by the CISADA limits and sold over US\$5 million of refined petroleum products were slapped sanctions by the Obama administration (Sherman, 2011). Further, the Act imposed travel bans and asset freezes on alleged human rights violators and urged the president to impose sanctions on the Central Bank of Iran (CBI).

The National Defence Authorisation Act (NDAA) of 2012 eventually imposed sanctions on the CBI, striking at the heart of the Iranian financial ecosystem (Govinfo.gov, 2012). The CBI was charged with helping Iranian banks already under UNSC and US sanctions (like Bank Melli) for evading US sanctions by misrepresenting or not reporting such transactions. Any

foreign financial institution (FFI) that conducted significant financial transactions with the CBI was threatened with ISA sanctions, that is, the threat of denying access to US EXIM Bank loans, among other provisions.

Exemptions from sanctions threats were in-built into the NDAA for countries or financial institutions that ‘significantly’ reduced the volume of such interactions with the CBI. This was generally meant to imply at least a 20 per cent reduction of oil imports and concomitant payment for such imports. Iranian oil importing countries began to get such periodic exemptions. By end June 2012, nearly 20 countries, primarily from Europe and Asia, got such exemptions. More than 10 European countries meanwhile completely stopped their Iranian oil purchases when the EU ban on such purchases kicked in from July 2012 (more on this in later sections). After the EU ban, only China, India, Japan, South Korea, Taiwan and Turkey were importing Iranian oil, though in reduced quantities (Davenport, 2012).

Iran’s oil exports and revenues from such exports, therefore, began to fall drastically as a result of US and EU sanctions. India’s oil imports for instance reduced from over US\$10 billion in 2009-10 to about US\$4 billion by 2015-16 (Ministry of Commerce and Industry, 2019a). India though made up for loss in volumes from Iran by increasing its imports from countries like Saudi Arabia, Iraq, Nigeria and even South American countries like Venezuela. India for instance was importing about US\$3 billion worth of crude from Venezuela in 2009-10, which dramatically increased to over US\$14 billion in 2012-13 (Ibid).

Even as countries like India and China were importing reduced quantities of Iranian oil, they were facing difficulties in paying for such imports, as a result of provisions of the 2012 Iran Threat Reduction and Syria Human Rights Act (ITRSHRA) (US Treasury Department, 2012). One of the critical provisions of the Act mandated that if the FFI repatriated funds owed to Iran through the CBI, they would be subject to sanctions. Further, the ITRSHRA mandated that the ‘significant exemptions’ provision of the NDAA 2012 would only be issued every 180 days if such funds are not repatriated but held in accounts within the jurisdiction of the country where the FFI is based. This provision drastically impacted Iran’s foreign exchange reserves, as Iran was almost solely dependent on its oil exports for such reserves.

Given that the transfer of Iran’s oil revenues through the CBI would attract US sanctions provisions, it led to the creation of ‘escrow’ accounts within the countries importing Iranian oil. Iran’s oil revenues fell from a high of more than US\$100 billion in 2011 to less than a third by 2013 as a result of such punitive secondary sanctions (Olster, 2013). Apart from such very

tough sanctions legislations, US administrations also used a wide number of Executive Orders (EOs) to target the Iranian regime and entities/individuals allegedly associated with its nuclear and military programmes. These EOs targeted the Iranian Revolutionary Guard Corps (IRGC), Iran Air, among others. The pertinent thing about such EOs is that administrations did not have to be dependent on the US Congress to pass legislations but the White House could issue such EOs as required.

### **EU Sanctions**

Apart from the US sanctions measures, EU sanctions were effective in piling pressure on the Iranian government. The EU on 23 January 2012, for instance, flagged the preamble of UNSC Resolution 1929 regarding the possible connection between Iran's oil revenues and its proliferation-related activities and imposed restrictions on Iranian crude oil and petro-chemical products (Council of the European Union, 2012). The EU gave six months before the decision came into effect. By July 2012, nearly 10 European countries that were importing Iranian energy had to completely stop their imports. These included Belgium, the Czech Republic, France, Germany, Greece, Italy, the Netherlands, Poland, Spain, and the United Kingdom (Katzman, 2020, 19; *DW*, 2012). The EU was sometimes more robust than the US in applying pressure on Iran. The global financial messaging service, SWIFT (headquartered in Belgium), for instance, prevented Iranian banks on the EU sanctions list from accessing its services, in March 2012. The US only authorised sanctions against such centralised financial messaging services for provision of services to Iranian entities, as part of the ITRSHRA, signed into law by Obama five months later in August 2012.

The EU decisions of October 2010 (Regulation 961/2010), which imposed restrictions on providing insurance services to ships transporting Iranian oil, negatively impacted its oil exports (Council of the European Union, 2010). This was especially so since most of the protection and indemnity (P&I) insurance providers were located in London, an EU jurisdiction. EU sanctions legislations also negatively affected the routing of payments due for the Iranian oil imports. India, for instance, was paying for the oil it imported through the Asian Clearing Union (ACU) mechanism, prior to 2010.

The ACU was a grouping of mostly South Asian states through which Iranian oil transactions were channelled through European banks. The EU decision of July 2010 requiring prior authorisation for such transactions led to the downfall of the ACU mechanism, as the multi-lateral clearing mechanism did not have provisions for such authorisation. This decision, along

with the November 2008 decision of the US Treasury Department banning ‘U-turn’ transactions involving Iranian banks — denominated in US dollars, which implied that they had to transit through the US financial hubs in New York, severely impacted the Iranian oil payments (US Treasury Department, 2008).

Countries importing Iranian oil had to creatively put in place new schemes to pay for the same. India and Iran, for instance, in August 2011 negotiated an alternate payment mechanism, as part of which 45 per cent of the money owed to Iran as a result of oil imports was being paid for in Indian rupees, while the remaining was held in Iranian accounts in Indian banks least exposed to the US financial system. Iranian entities could use the Iranian oil money in such banks, as the UCO Bank, to pay for goods imported from India, like basmati rice, among others.

Given the trade imbalance between Tehran and New Delhi however, Iranian oil money in the UCO Bank ballooned to nearly US\$3 billion by March 2015 while Indian oil companies owed nearly \$9 billion to Iranian oil companies (Mukul and Basu, 2015). This money could only be returned to Iran in the aftermath of progress in negotiations between Iran and its negotiators (discussed in later sections).

### **US Threat Assessments**

Iran’s WMD programmes, specifically its ballistic missile programmes, have been considered as ominous threats by successive US administrations. In 1998 for instance, the US Congress constituted a commission headed by Donald Rumsfeld, which affirmed that countries like North Korea and Iran posed a threat to the US, on account of their ballistic missile programmes (Federation of American Scientists, 1998). The report affirmed that Iran had the technical capability to build an ICBM, based on the infrastructure it already possessed, on account of its Scud missile inventory, within five years of deciding to do so. The Rumsfeld Commission, however, admitted it was not sure whether Iran had indeed made such a decision or would do so in the near future.

Iran started developing its missile capabilities in the face of the missile onslaught it had to face in the closing stages of the Iran-Iraq War (Chubin, 1994, 21-22). Given the economic and military setbacks it received during that year, it found it difficult to build up robust conventional capabilities. Also, the fact that it was under American sanctions precluded the possibility of upgrading or maintaining its US-sourced fighter aircraft fleet (sourced during the time of the Shah) (Eisenstadt, 1994, 126-127).

Iran also found missile capability a more economical way to ensure regime security, as it was surrounded by a strong US force presence in the region, on top of rampant spending on defence indulged by its regional competitors. The Gulf Cooperation Council (GCC) member countries, for instance, spent over US\$400 billion on defence, in the two decades after the end of the Iran-Iraq War. In comparison, Iran could only spend about US\$50 billion (Cordesman and Seitz, 2009, 38). Iran's pursuit of missile capabilities was an essential part of its overall military strategy of pursuing non-conventional and asymmetric warfare capabilities.

Iran obtained significant help from countries like China, Soviet Union/Russia and the Democratic Peoples' Republic of Korea (DPRK). As noted earlier, both DPRK and Iran had in their possession Soviet-origin Scud family of missiles, which they have both upgraded. Russia provided Iran with guidance technology for its missiles while the DPRK and China built facilities for production of liquid and solid fuels to power Iran's missiles (Katzman, 2003, 81; Venter, 2005, 210). In March 2000, the Clinton administration enacted the Iran Non-Proliferation Act (INA) to constrict Iran's access to WMD or dual-use technologies.

Even as Clinton's successor, President Bush, termed Iran as part of the 'axis of evil' in 2002, his administration took measures to better protect the US and its regional allies, from the purported missile threat from Iran. The Bush administration for instance withdrew from the Anti-Ballistic Missile (ABM) treaty in 2001. The US pursued robust missile defence measures regionally, both in West Asia and Europe. With Israel for instance, the US co-developed the Arrow ballistic missile defence (BMD) system and deployed Patriot missile batteries in places like Qatar and Saudi Arabia, as well as on BMD systems on ships in the Mediterranean Sea and the Persian Gulf.

The Bush administration released the US National Security Strategy (NSS) document in September 2002 — pertinently after the August 2002 Natanz revelations, which affirmed that when 'rogue' states pursue WMD programmes, they are more likely to use such destructive capabilities against the US and its allies (US State Department, 2002a). As detailed in Chapter Four, the Bush administration continued to flag Iran's 'threats' to destroy its regional allies like Israel, its antipathy towards the US and its regional policies, pursuit of capabilities like a space launch vehicle, coupled with its unresolved nuclear contentions, as constituting grave threats to US national security interests.

In February 2010, the US released a Ballistic Missile Defence review, the first such review by an administration, which noted that Iran's MRBM capabilities, particularly Shahab-3,

constituted a significant threat (US Department of Defense, 2010). The report pointed out that the Shahab-3 was based on the North Korean solid-propelled Nodong missile (which was also a derivative of the Scud family of missiles) and that Iran was trying to improve the accuracy of its missile inventories (Ibid. 6). The report also highlighted the strong links between Iran and non-state armed groups like the Hezbollah and stated the possibility that Iran sharing its missile technologies with such groups could not be ruled out.

Such assessments about Iran's ballistic missile capabilities got accentuated when combined with concerns over its nuclear programme since 2002. The US administration officials, in the light of unresolved contentions that Iran had with the international nuclear regulatory body, affirmed that there was no doubt that Iran was seeking nuclear weapons capabilities. John Bolton, a US nuclear policy official at the State Department, affirmed as such in a testimony in the US Congress in June 2004. Bolton asserted that the US cannot allow an international state sponsor of terrorism get its hands on nuclear weapons (US State Department, 2004b).

It is significant to note that the National Intelligence Estimate (NIE) of 2005 stated that Iran was pursuing a nuclear weapons capability (Director of National Intelligence, 2007). However, two years down the line, in November 2007, the NIE affirmed with "high confidence" that Iran in mid-2003 had stopped its nuclear weapons pursuit (Ibid). The report, prepared by the office of the DNI with inputs from nearly 20 different government agencies, received expected reviews from the key stakeholders. While Iran welcomed the acknowledgement that there was no weapons-related activities at the time of the release of the NIE, Israel dismissed the NIE's findings. Then Defence Minister Ehud Barak asserted that even though Iran might have stopped its nuclear weapons programmes for a few months in 2003, it has since re-started that programme (Migdalovitz, 2008, 16). Even if the US agencies had come to the conclusion that based on available intelligence, Iran has not re-started its nuclear weapons activities, President Bush asserted that "Iran was dangerous ... is dangerous ... will be dangerous" if it develops nuclear weapons (Tran and Jeffrey, 2007).

After President Obama assumed office in 2009, his administration prepared another NIE in February 2011, which was not released to the public. Reports though noted that the 2011 NIE came to the conclusion that Iran was still keeping its option open to develop a nuclear weapon (Crail, 2011b). The NIEs are prepared by the office of the DNI, who in their annual threat assessments to the US Congress stated that missile delivery systems would be the preferred method for Iran to deliver a WMD warhead. Successive DNIs though acknowledged that even



if Iran did keep its options open to develop a nuclear weapon, and was pursuing policies inimical to the US and its allies, it may not carry out any precipitating action that would put it in direct confrontation with the US, given that such a course of action could put the stability of the government at stake (Clapper, 2013, 5). DNI Clapper, however, informed the US Senate that Iran was pursuing its WMD capabilities for reasons of prestige and regional influence and that it had the technical expertise (covering the arenas of uranium enrichment and ballistic missiles) to achieve weapons capability, as and when it makes the political decision to do so (Ibid., 7).

Even as Iran developed a potent range of short-range missiles to deter its enemies in the waters of the Gulf, in 2012, the US Department of Defense (DoD) speculated that Iran could potentially flight-test an ICBM-range missile by 2015 itself, though it added the caveat, “with sufficient foreign assistance” (Federation of American Scientists, 2012). Such stark assessments by US agencies on Iran’s WMD capabilities got tempered after the Joint Plan of Action (JPOA) was negotiated in November 2013. DNI Clapper in 2015 stated that Iran’s implementation of that agreement temporarily stopped its nuclear march and that there has been greater transparency regarding its nuclear activities (Clapper, 2015, 6). Prior to the culmination of the JPOA however, Iran’s unresolved contentions with the IAEA increased dramatically.

### **Iran-IAEA Disagreements**

As Iran came under increasing pressure from the IAEA and the UNSC, it also hardened its positions rather than agree to make compromises. After the February 2006 IAEA resolution bringing to the attention of the UNSC its non-cooperation, Iran stopped following the Additional Protocol (AP). Iran was voluntarily following the AP since December 2003 as a confidence building measure. After the February 2006 IAEA resolution, President Ahmadinejad even stated that Iran would reconsider its policies towards the NPT if the country faces increasing pressure on its nuclear programme (BBC, 2006a).

After Resolution 1747 was passed in March 2007, Iran decided that it was not bound to inform the IAEA about any decision to construct a new nuclear facility, as long as it did not introduce nuclear material into that facility. This became a major bone of contention between Iran and the IAEA, with the latter insisting that a country cannot unilaterally decide which provisions it can or would not follow, after having agreed to do so.

Iran and the IAEA agreed on a Work Plan in August 2007 in order to address outstanding concerns (International Atomic Energy Agency, 2007b). As part of the Plan, Iran agreed to

cooperate with the IAEA to address issues related to alleged plutonium experiments, access of safeguards inspectors to the Natanz enrichment plant, provision of multiple entry visas to safeguards inspectors, addressing issues relating to the acquisition of P1 and P2 centrifuges, among others. The two sides agreed that after Iran addressed these concerns, there would be no other issue that will be pending with the IAEA (Ibid).

El-Baradei in his report to the BOG in mid-November 2007, while being appreciative of Iran's cooperation, did however add that Tehran's cooperation was "reactive" (International Atomic Energy Agency, 2007c, 8). Further, he noted that since Iran was not following the AP since February 2006, the Agency's knowledge about the full extent of Iran's nuclear programme was "diminishing" (Ibid, 7). El Baradei though continued to state that there has been no diversion of declared nuclear material, even as Iran continued to enrich uranium, despite IAEA and UNSC requirements not to do so.

The international pressure on Iran resumed after the UNSC passed Resolution 1803 in March 2008. The May 2008 report of the IAEA DG to the BOG for the first time had the separate sub-heading, 'Possible Military Dimensions' (PMD), which has been present in all subsequent reports, at least till the implementation of the JCPOA in January 2016.<sup>2</sup> Reports prior to May 2008 also had information related to such activities though there was no separate sub-heading specifically mentioning PMD.

Essentially, the IAEA required greater transparency and information on Iran's activities relating to the experiments involving uranium metal, research and development activities — including testing of high explosive detonators, as well as procurement activities related to nuclear material and equipment by organisations with links to the Iranian military (International Atomic Energy Agency, 2008c, 3-5). In November 2011, the IAEA DG, Yukiya Amano, asserted that the information on which the Agency was basing its PMD charges was "overall, credible" and that it had sourced the relevant information from over ten IAEA member countries (International Atomic Energy Agency, 2011c, 8). When the IAEA did not share the information with even two years after making the accusations, Iran insisted that it would not be in a position to provide effective explanations unless and until that material was shared with it (International Atomic Energy Agency, 2013a).

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<sup>2</sup> The JCPOA would not have begun to be implemented unless and until PMD issues were resolved to the IAEA's satisfaction.

Iran was not forthcoming in providing information to the IAEA related to activities at its military sites, insisting that such activities were outside the purview of the world nuclear regulatory body. In 2011 for instance, the IAEA requested access to the Parchin military facility, suspecting that there was a possibility that nuclear-related experiments could have taken place there. The IAEA charged that the only purpose of the large explosives containment vessel at Parchin was to conduct high explosives testing, which could potentially involve nuclear material. Further, there were allegations that this explosives chamber was built with expertise provided by a Russian expert, who had worked in the Russia nuclear industry previously (Albright and Avagyan, 2012).

Iran, in its defence, stated that it had allowed access to Parchin in 2005, when the IAEA's environmental samples did not indicate the presence of nuclear material (International Atomic Energy Agency, 2005d, 10). The Agency, however, subsequently insisted that satellite imagery showed that significant activities had taken place at the site during 2012, after the site was identified in 2011. Iran meanwhile had allowed the IAEA access to other military sites like Kolehdoz, Lavisian-Shian and Shahid Kazemi in 2003 and 2004, apart from Parchin in 2005, and the IAEA could not continue to make new and additional requests regarding military facilities. Iran not providing access to the Parchin site was cited by critics as exemplifying activities similar to countries that have gone on to test nuclear explosives like the DPRK (Goldschmidt, 2010; Albright, Heinonen and Kittrie, 2012).

Iran, however, pointed out that when the IAEA visited Kolehdoz in October 2003, it was not even implementing the AP (which it did from December 2003). The AP has provisions which allow the IAEA the freedom to request access to non-nuclear facilities to dispel concerns about possible undeclared activities. Iran, therefore, contented that even as it was cooperating with the IAEA, it cannot be forced to open sensitive military sites like Parchin to international inspectors, especially since visiting such sites was beyond the IAEA's nuclear issues-specific mandate (International Atomic Energy Agency, 2013a, 7).

Apart from PMD contentions, another critical disagreement between Iran and the IAEA related to the Qom enrichment facility. Iran declared the existence of the Qom enrichment facility in September 2009, its third such facility after the two operating enrichment plants at Natanz -- the pilot fuel enrichment plant (PFEP) and the fuel enrichment plant (FEP). Iran stated that it began constructing the facility in the second half of 2007, in order not to set back its ability to enrich uranium for domestic purposes, in case the threat of military strikes against its facilities

at Natanz materialises (International Atomic Energy Agency, 2009, 3). The IAEA, however, countered Iran's submissions by pointing out that satellite images indicated that actual construction started in 2002 (Ibid, 3-4).

The IAEA was not convinced about the rationale for the plant either, given that Iran already had two operational enrichment plants. Iran in December 2009 further indicated that it wanted to construct ten more such enrichment plants, to have adequate fuel supplies for its future needs. The IAEA charged that Iran's failure to report the start of the plant's construction for two years (even if its explanation held true) till September 2009 was not consistent with its obligations to the IAEA.

Among analysts, there have been competing interpretations as to the nature of Iran's obligations in informing the IAEA about the Qom enrichment facility. Some held that Iran violated its agreements with the IAEA (Acton, 2009). Others pointed out that the Subsidiary Arrangements, negotiated pursuant to a state's CSA, are not exactly legal agreements but only denote the nature of the interaction of that state with the IAEA; As such, Iran was not legally bound to inform the IAEA about this facility (Joyner, 2010). Iran's interactions with the IAEA also took a nose dive after the Japanese diplomat, Yukiya Amano, took over as the head of the organisation in 2009. Iran accused Amano of following the diktats of the major powers like the US and not being objective in his interactions with the country (International Atomic Energy Agency, 2013a, 11).

## **JCPOA**

Iran's interactions with the IAEA only began to turn for the better after a change in the Iranian domestic and international strategic environments. President Hassan Rouhani came to power in August 2013 promising to engage with the US and other interlocutors to resolve Iranian nuclear contentions (Dehghan, 2013). Rouhani was well versed with the nuances of Iran's nuclear issues, since he was headed the country's National Security Council for over two decades till 2005, and he was also the country's chief interlocutor with the EU-3 when Iran engaged with them after the 2002 Natanz revelations.

In a historic shift in US-Iran interactions, President Obama and President Rouhani had a telephonic conversation at the UN General Assembly (UNGA) side lines in September 2013. Director-General Amano visited Tehran in November 2013 and Iran and the IAEA signed a cooperation agreement, to resolve differences over six key issues. These included clarifications

related to laser enrichment technologies and the Arak heavy water production plant (International Atomic Energy Agency, 2013d).

In November 2013, Iran and its interlocutors agreed to the JPOA, as a part of which both sides agreed to take “reciprocal measures” over a period of six months. Iran, on its part, agreed that it would not enrich uranium beyond 5 per cent and dilute to less than 5 per cent its then available stock of uranium hexa fluoride (UF<sub>6</sub>) enriched to 20 per cent (which stood at nearly 200 kgs). Iran agreed to provide enhanced transparency regarding its nuclear programme by granting greater access to IAEA safeguards inspectors, including daily access to its enrichment facilities at Natanz and Fordow.

The P5+1 agreed to temporarily stop measures that prevented Iran from accessing its oil revenues, suspend sanctions on its energy exports, and promised not to impose new nuclear related sanctions, during the six months that the JPOA would be in operation. The EU also agreed to establish a financial channel to assist in the transfer of Iran’s oil revenues held abroad, to be used exclusively for humanitarian purposes (*Arms Control Today*, 2014; The White House, 2013). Both sides affirmed that a “comprehensive solution” would be negotiated within six months, given the positive environment created on account of the suspension of the punitive measures and increased transparency from Iran.

At the time of the JPOA, Iran had in its possession more than 7,000 kgs of UF<sub>6</sub> enriched to over 5 per cent, close to 200 kgs UF<sub>6</sub> enriched to 20 per cent and nearly 20,000 centrifuges. The JPOA, therefore, was an immediate CBM and a significant restriction on Iran’s nuclear capabilities, which had grown exponentially even as its disagreements with the IAEA remained unresolved over the past decade. Daily inspector access at Natanz was a significant CBM, given that the IAEA had access to these enrichment facilities only once a week, prior to the JPOA (Slavin, 2013). Iran agreeing to provide updated information about the purpose of the Arak heavy water reactor was also significant, given that it had previously provided such information way back in 2007.

Even after the JPOA, Iran and its interlocutors had differing interpretations regarding Iran’s right to enrich uranium. Iran insisted that the JPOA explicitly recognised Iran’s right as a NPT member state to enrich uranium (*Fars News*, 2013; President.Ir, 2013). US Secretary of State John Kerry, however, insisted that no NPT member state had an inherent right to enrich uranium and Iran could only possibly do so with mutual agreement (Blake, 2013). More

importantly, Iran and its interlocutors could not agree on a “comprehensive solution” within the six months deadline and the JPOA had to be extended twice.

After the JPOA was agreed to in November 2013, it was implemented from January 2014. US officials indicated that Iran secured relief from sanctions in excess of US\$15 billion, as part of the JPOA (Blinken, 2015). Iran and the IAEA also entered into agreements during the period of the JPOA to address the IAEA’s concerns. Some of the issues that were addressed included those related to PMD concerns. By April 2015, when the Lausanne Framework was agreed upon, Iran had only about 6000 IR-1 centrifuges in operation. The critical consideration for American officials in the run up to the JPOA was to ensure that Iran’s ability to ‘break-out’ of the NPT and race to the bomb, if it so decided, should be extended till at least an year as a result of the JPOA implementation (US Senate, 2014, 20-21). Earlier, in 2013, given Iran’s enormous quantities of low enriched uranium amounting to over 7,000 kgs, the US was worried that Iran’s break-out time would be less than 2 months.

In April 2015, the Lausanne Framework was agreed upon. The two sides announced that they came to an agreement on “solution on key parameters for a joint comprehensive plan of action.” The statement by Federica Mogherini, the head of the EU Foreign Policy division, announcing the Framework, indicated that Fordow uranium enrichment plant would be converted into a research and development centre and enrichment would only take place at Natanz. The Arak heavy water reactor would be redesigned. All nuclear-related sanctions would be “terminated” by the Europeans while the Americans pledged to “suspend” implementation of nuclear-related sanctions. There was much speculation on the meaning of the terms “suspend” and “terminate”, with Iran insisting that all sanctions would be “automatically annulled” as soon as Iran begin to implement its nuclear commitments as part of the final agreement (Obama White House, 2015; Mohseni, 2015).

Eventually, on 14 July, 2015, the JCPOA was agreed upon (European Council, 2015). At the time of the JCPOA, Iran had in its possession more than 8700 kgs of UF<sub>6</sub>, enriched to 5 per cent (as against the 7,000 kgs it had in November 2013 at the time of the JPOA). Iran agreed that the JCPOA would only begin to be implemented as and when its total stockpile reduces to below 300 kgs, enriched to 3.67 per cent. Iran, therefore, agreed to either sell or down blend more than 95 per cent of its stockpile of uranium. Further, it agreed to only carry out enrichment activities at Natanz PFEP while pledged not to undertake such activities at the Natanz FEP or at Fordow. As revealed in the Lausanne Framework, Iran agreed to completely destroy the

calandria of the Arak reactor while its interlocutors agreed to help modernise the remaining facility with international collaboration. Iran agreed to only use about 5,000 IR-1 centrifuges for a decade. While R&D on more advanced centrifuges was permitted, it pledged not to use such advanced centrifuges for uranium enrichment.

In order to confirm that it would carry out its commitments, Iran agreed to follow enhanced transparency measures. To begin with, Iran agreed to again implement the AP and the modified Code 3.1 of the Subsidiary Arrangements. While Iran agreed to implement the AP provisionally, Iran committed to only ratify the AP eight years after the JCPOA would begin to be implemented or when the IAEA reaches the “broader conclusion” that all nuclear activities inside Iran are for peaceful purposes. The IAEA provides such a conclusion when it is satisfied that there is no diversion of nuclear material from “declared” activities and there no “undeclared” activities involving nuclear material.

The first country which got this “broader conclusion” determination for the first time in 2000 was Australia. Since then, Japan (2003), Canada (2005), Germany (2008), and South Africa (2010), among other countries, have got the same determination. The South African example is pertinent given that the country got the IAEA determination, eight years after it signed the AP, and almost 15 years after its 1993 declaration that it had nuclear weapons (International Atomic Energy Agency, 2010b, 6).

The JCPOA also has an in-built mechanism for addressing issues that may arise out of Iran’s refusal to grant access to specific locations. The JCPOA’s Joint Commission (made up of senior officials of all the P5+1 interlocutors and Iran) would meet after two weeks of Iran’s refusal to grant access and come to a majority decision, within seven days thereafter. Iran would have no choice but to abide by the majority decision, and would have to implement the decision within three days. Iran would, therefore, not have much time to possibly erase evidence pertaining to a site, as was alleged with regard to Parchin, after the IAEA seeks access to a particular site.

The JCPOA also ensures the long-term presence of IAEA inspectors inside Iran, with daily access permitted at the Natanz PFEP, the only facility where Iran is allowed to enrich uranium. While it was agreed that the JCPOA would be implemented for a decade, Iran agreed for further restrictions beyond a decade in order to generate international confidence in the peaceful nature of its nuclear programme. Iran, for instance, agreed to let the IAEA maintain surveillance on its uranium ore concentration plants for 25 years; on plants manufacturing centrifuge rotors for 20 years; and to only enrich uranium till 3.67 per cent for 15 years at Natanz. More importantly,

in a commitment unique to Iran and not followed by any other NPT member state, Iran agreed not to indulge in uranium metal machining or engage in R&D related to plutonium.

As for PMD issues, Iran and the IAEA agreed to a “Road Map” designed to clarify outstanding issues, a euphemism for PMD concerns. It was decided that all the PMD issues would be resolved before 15 December 2015 (International Atomic Energy Agency, 2015b). A “separate arrangement” on Parchin was agreed (Ibid). Given that there were no details as to the nature of such arrangements in the public domain, there was criticism from the Republicans in the US and from Israel, if the IAEA decided to ‘go soft’ on critical issues of concern in order for the JCPOA to be implemented (Nasralla, 2015).

In return for Iran’s broad-ranging and sweeping commitments, all UNSC nuclear-related sanctions would be removed, while the implementation of US nuclear sanctions as part of sanctions legislations like the NDAA 2012 or ITRSHRA 2013 would be suspended and EU pledged to remove its nuclear-related sanctions, in tune with the implementation of Iran’s nuclear commitments, as verified by the IAEA.

The JCPOA was endorsed by UNSC Resolution 2231 of 20 July 2015, which also terminated all UNSC sanctions (United Nations Security Council, 2015). JCPOA Adoption Day was ninety days after the UNSC resolution acknowledging the JCPOA was passed; 18 October 2015, therefore, was Adoption Day. After the IAEA gave a ‘clean chit’ to Iran as regards PMD issues in December 2015, the JCPOA began to be implemented from January 2016. The IAEA DG since gave periodic reports to the BoG stating that Iran was complying with the deal in full measure, till May 2019. Iran, however, informed the IAEA on 9 May 2019 that it would stop implementing some of its commitments as part of the JCPOA, a year after the withdrawal of the Trump administration from the multi-lateral agreement (International Atomic Energy Agency, 2019e, 2). Iran’s oil exports, which had risen after the JCPOA began to be implemented, again began to be affected as the Trump administration refused to grant continued sanctions waivers for such measures.

### **President Trump and the JCPOA**

Even as the deal was being implemented in full earnest, changes in the US domestic political dynamics began to dramatically impinge on the JCPOA’s prospects. The Republican Party candidate, real estate billionaire Donald trump not only secured the nomination against all expectations but also won the presidency against the Democratic Party heavy weight Hillary Clinton. Trump came to office with a well-known hatred regarding nuclear negotiations with



Iran and specifically so with regard to the JCPOA. During campaigning, Trump asserted that one of his first foreign policy tasks would be to repeal the JCPOA, which he termed as a “bad” deal (*Time*, 2016).

After assuming office in January 2017, Trump certified twice in April and July of 2017 that Iran was indeed keeping up its commitments as part of the deal and that continued US sanctions waivers was in America’s national security interests (Baker, 2017). These certifications were mandated as per the May 2015 Iran Nuclear Agreement Review Act (INARA). The Act mandated that any nuclear deal with Iran had to be submitted to the US Congress by the administration, which further had to provide a certification that the deal in fact fulfilled US non-proliferation objectives. The administration also had to certify that the IAEA was fully equipped to implement the nuclear agreement. Further, the White House was required to certify that Iran was not engaging in covert nuclear activities, and that providing sanctions waivers was in US national security interests.

In October 2017, however, Trump refused to provide the required certification. Announcing a new strategy with respect to Iran on 13 October 2017, Trump asserted that after a “clear-eyed” assessment of Iran’s de-stabilising regional policies, coupled with the nature of the regime and its history of activities supporting terrorist actions, his administration would no longer certify that Iran was implementing the JCPOA. He announced new sanctions specifically targeting the Islamic Republican Guard Corps (IRGC) and urged the European allies to take strong action to curb Iran’s ballistic missile activities (The White House, 2017).

Trump’s charge that the JCPOA did nothing to constrain Iran’s so-called de-stabilising activities regionally did not carry much weight though as the JCPOA was primarily an agreement related to Iran’s nuclear programme and did not directly address Iran’s regional policies. Further, in its Preface, the parties to the JCPOA explicitly state that the “full implementation” of the agreement would lead to regional peace (United Nations Security Council, 2015, 8). Trump’s charge, therefore, that the deal did not achieve regional peace and stability within the first two years of its implementation, did not hold much water.

Even as Trump refused to certify that providing continued sanctions waivers was in US national security interests, senior administration officials held alternate positions. In September 2017, just a month prior to Trump’s de-certification, Rex Tillerson, US Secretary of State, stated that Iran was complying with the JCPOA. Earlier in August 2017, Tillerson admitted that his views on the JCPOA “differed” from that of Trump (Torbati, 2017).

In January 2018, in another policy intervention, Trump urged his European allies to take strong steps to confront what he termed Iran's "malign" activities. Trump insisted that the JCPOA has to be renegotiated and that US has to pass new legislation explicitly targeting Iran's ballistic missiles, fully acknowledging in law that ballistic missile programme and nuclear programmes were inseparable. He also wanted the deal to be renegotiated for restrictions on Iran's nuclear programme to be in place "forever" and not just for a decade, as under the JCPOA (The White House, 2018).

Iran's ballistic missile testing has been a major point of contention with the Trump administration. Trump insisted that Iran was carrying out such activities as part of its destabilising behaviour and that the JCPOA does not constrain such Iranian behaviour. To be sure, the main text of the JCPOA does not have any restrictions on Iran's ballistic missile programme. UNSC Resolution 2231, which approved of the JCPOA and removed UNSC sanctions, in its Appendix, carries a statement by the P5+1 which urges Iran not to undertake such activities, at least until the IAEA can give the determination that all of Iran's nuclear activities are for peaceful purposes, that is, until the "Broader Conclusion" determination is made (United Nations Security Council, 2015, 99).

The IAEA could be in a position to do so, eight years after Implementation Day, as per the JCPOA. After the IAEA gives such a determination, the underlying logic is that the international community would have confidence that Iran cannot have nuclear-tipped ballistic missiles. Iran insists that its ballistic missile programme is purely for its defence purposes and that the JCPOA is not meant to constrain Iran's legitimate military activities. Russia and China support Iran's position vis-à-vis ballistic missile testing and/or launch of space launch vehicles, insisting that Iran cannot be deprived of the peaceful uses of space technology (Lederer, 2020). The other permanent members of the UNSC, however, resolutely oppose Tehran's activities. When Iran launched the Simorgh space launch vehicle in July 2017 (which was most probably a failure), the US, UK, France and Germany condemned it as being inconsistent with Iran's obligations as part of the JCPOA (US State Department, 2017).

In April 2018, Tillerson was replaced by Mike Pompeo, a former Director of the Central Intelligence Agency (CIA), as Secretary of State. Just two weeks after Pompeo assumed office, on 8 May 2018, Trump announced the US withdrawal from the JCPOA. Trump insisted that the nuclear deal JCPOA only delayed Iran's efforts to acquire a nuclear weapons capability but would not prevent it. On the other hand, he contended that the JCPOA allows Iran to conduct

R&D on advanced centrifuges, and that Iran would be better placed to make a race to the bomb if it so desired, with no restrictions on its moves.

After the US withdrawal, the JCPOA has been plunged into uncertainty. The US refusal to give sanctions waivers once again placed Iran's oil importers like India in a tight corner, given that provisions of legislations like NDAA 20122 threatening secondary sanctions on Iran's oil importers, among others, again kicked in. New Delhi faced pressure to reduce its oil imports from Iran. During 2018-19, India bought over US\$12 billion worth of Iranian oil, \$3 billion more than during 2017-18. From April 2019-September 2019, India's oil imports from Iran were just over a \$1 billion (Ministry of Commerce and Industry, 2019b). Iran, which was the third biggest supplier of oil to India in January 2018, occupied the seventh position by January 2019 (Verma, 2019). In May 2019, the Indian Ambassador to the US, Harsh Vardhan Shringla asserted that India stopped importing Iranian oil (*Business Standard*, 2019).

Iran, on its part, has been urging its European interlocutors to step up and not only continue implementing the JCPOA but provide alternate payment mechanisms for its oil exports. France, along with the UK and Germany did create the Instrument for Trade Exchanges (INSTEX), after the Trump withdrawal but the US administration has been adamant that if such mechanisms are used for paying for Iranian oil, they would also be subject to US secondary sanctions (Martin, 2019). INSTEX, with more than 15 countries as members, conducted its first successful transaction in March 2020, which involved the transfer of medical devices to Iran (*DW*, 2020). Analysts though note that despite being of limited economical worth to Iran as long as it does not include oil transaction within its permit, the mechanism is surely a strong political message to the Trump administration of Europe's opposition to its policy decisions as regards the JCPOA (Dowling, 2019; Coppola, 2019).

Iran meanwhile is ramping up its protest moves against the Trump administration's policy positions by gradually flouting one or other rules of the JCPOA. In October 2019, Iran stated that it would restrict the access given to IAEA safeguards inspectors. At the same time, President Rouhani publicly stated that Iran was working on advanced IR-9 centrifuges. As per the JCPOA, Iran is permitted the testing and R&D of IR-4/5/6/7/8 centrifuges only and there is not even a single mention of IR-9 centrifuges in the entire document. On 5 November 2019, Rouhani further stated that Iran would start operating centrifuges at the Fordow FEP. As per the JCPOA, uranium enrichment is only permitted at the Natanz PFEP, for the decade that the deal was supposed to be in operation and even for five years after that.

The Trump administration's policy moves as regards the JCPOA have been accompanied by an overall deterioration of regional security situation. There have been instances of attacks on oil tankers transiting the Persian Gulf in May and June 2019 and a major military strike using drones and cruise missiles against Saudi Arabia's largest refinery, Abqaiq, in September 2019. The ingenious attack on Abqaiq led to severe disruption in the country's oil production capacities, with speculation still continuing as to whether Iran was behind the attack (Pant, 2019; Reid, 2019a). It took Saudi Arabia nearly two months to repair the damage caused to its energy infrastructure as a result of the drone strike.

### **Regional Reactions**

Regional countries like Israel and Saudi Arabia have been at the forefront of efforts opposing the Iranian nuclear programme. While Israel insists that the Iranian nuclear concerns are an existential threat, Saudi Arabia has been concerned about the impact of a successful nuclear programme on Iran's regional policies, which it sees as hegemonic and expansionist. The following sections briefly examine Israel's and Saudi Arabia's reactions, apart from that of Turkey, Iran's neighbour and a NATO member country.

#### ***Israel***

Prior to 1979 Islamic revolution, Israel, as indeed the US, was close to the regime of the Shah (Kaye, Nader and Roshan, 2011). After Israel's invasion of Lebanon in 1982, Hezbollah was a thorn in Israel's flesh till its withdrawal in 2000 (Early, 2006). Hezbollah carried out bombings against Israeli targets in places as far away as South America, when it attacked the Israeli Embassy and cultural centre in 1992 and 1994 respectively. In the 2006 Lebanon War, the IDF had to face strong opposition from the hybrid warfare tactics of the Hezbollah, a potent non-state armed group, which had more than 10,000 soldiers in its ranks and thousands of short-range and medium-range missiles, mainly sourced from Iran and Syria (Gaub, 2015; Piotrowski, 2015; Johnson, 2010). Given this history and Hezbollah's capabilities, bolstered by ideological, material and economic support from Iran, Israel strongly affirms that it is in fact confronting Iran on its northern borders, through its proxy, the Hezbollah.

Since the Iranian nuclear concerns came to international prominence, Israel has been a major champion of robust, punitive measures to set back Iranian capabilities. As Chapter Three has shown, military strikes on WMD/nuclear programmes of inimical states in its neighbourhood is very much part of the Israeli policy options to deal with such threats before they come to fruition. As noted in that chapter, Israel has used this policy of prevention against Iraq in 1981

and against Syria in 2007. When Iran continued on its nuclear march, without stopping its enrichment activities as required by IAEA or UNSC resolutions, Israel tried to mobilise international opinion in favour of a military strike against Iran.

Israel also carried out covert activities aimed at destabilising the Iranian nuclear programme. The Stuxnet virus, which began affecting Iranian P-1 centrifuges beginning mid-2009, is widely believed to be the result of collaboration between Israel and the US (Sanger, 2012; Zetter, 2014). Israel is also suspected of carrying out targeted assassinations of key Iranian nuclear scientists. The death of Mohsen Fakrizadeh, the head of Iran's Organisation of Defensive Innovation and Research, on 27 November 2020, is the latest in the series of such incidents targeting key scientists (*The Jerusalem Post*, 2015; Kleinman, 2020). Analysts note that tactics like cyberattacks on critical infrastructure and targeted assassinations, essential components of a hybrid warfare posture, are more effective in achieving limited but focused objectives — like crippling the most important element, a centrifuge, of Iran's nuclear infrastructure, than traditional military tactics like air strikes (Farwell and Rohizinski, 2011; Deshpande, 2018).

The Israeli clamour for punitive military strikes to set back Iran's capabilities grew louder under the Obama administration, given continued Iranian intransigence in its interactions with the IAEA. Iran-IAEA interactions hit a roadblock, for instance, during January 2011-April 2012, over issues relating to providing IAEA inspectors access to the Parchin facility. President Obama and his administration officials however, opposed the idea of military strikes. Obama in March 2012 insisted that the focus on military strikes was "loose talk" (Obama White House, 2012a). The 'pressure' component of the administration's strategy constituted imposing increasingly punitive economic sanctions and the maintenance of robust military presence in the waters of the Persian Gulf to deter any Iranian adventurism.

The government of Prime Minister Netanyahu meanwhile continued to express its displeasure with the engagement strategy, given that it was not leading to a change in Iranian behaviour but was in fact contributing to greater Iranian brinkmanship. Netanyahu in September 2012 gave his famous speech at the UN General Assembly, where he graphically represented Iran's nuclear progress in a cartoon. He asserted that Iran was using the pretext of negotiations to gain time and add to its already significant nuclear capabilities (Ministry of Foreign Affairs, 2012).

With the change of guard in Iran after the ascendance of President Rouhani, most world capitals and analysts believed there were increased prospects for nuclear negotiations to succeed with

Iran. For one, Rouhani campaigned on the promise of pledging to find mutually agreeable solutions to the nuclear contentions, which had begun to hurt the Iranian economy badly. Also, his predecessor Mahmoud Ahmadinejad's rhetoric was viewed as incendiary which vitiated Iran's already strained international environment, and Rouhani was viewed as the "moderate" who won the presidential elections (Hosseini and Torbati, 2013; Erdbrink, 2013).

As against this world view, Netanyahu insisted that the world cannot expect anything better even from Rouhani, and the talk of him being a 'moderate' was misplaced, especially so since Supreme Leader Ayatollah Khamenei was the ultimate authority without whose concurrence, a change in Iran's nuclear policy positions cannot be expected to occur. In an interview with the BBC's Persian language service in October 2013 soon after Rouhani took over power in August 2013, Netanyahu reminded his audience that the new Iran President had led his country's negotiating team as the head of the National Security Council and in that position, had "misled" the West regarding the contours of that programme (Prime Minister's Office, 2013).

In November 2013, when the JPOA was agreed upon between Iran and its interlocutors, the Israeli prime minister termed it a "historic mistake", especially so since world powers seemingly recognised Iran's right to enrich uranium (Ministry of Foreign Affairs, 2013b). After the JPOA was negotiated, apart from the multi-lateral negotiations involving the P5+1, US Secretary of State John Kerry also met bilaterally with his Iranian counterpart Javed Zarif in Muscat, in November 2014, signifying a new phase of engagement between Israel's closest ally and its sworn enemy. America's dual-track strategy of 'engagement' and 'pressure' finally bore fruit in June 2015, when the JCPOA was negotiated (Strobel, 2014).

Ahead of the JCPOA, in major speech to the US Congress in March 2015, Netanyahu again rubbished claims about the Rouhani government being moderate by alleging that it continued to oppress minorities and was persecuting journalists, similar to previous governments (Ministry of Foreign Affairs, 2015b). More specifically, apart from the JCPOA allowing Iran to enrich uranium, even if only till 3.67 per cent, Israel was unhappy with the deal's provisions allowing Iran to continue to conduct R&D on advanced centrifuges and the JCPOA's transparency provisions. Further, the fact that Iran's ballistic missile programme were outside the purview of the deal, were a major cause of worry to Israel. After the JCPOA was agreed upon, Netanyahu charged that Iran would indulge in terrorist activities as a result of the enhanced access to its oil revenues. While he had termed the November 2013 JPOA a "historic

mistake”, the Israeli prime minister termed the JCPOA a “stunning historic mistake” which would in fact hasten the Iranian race to the bomb (Ministry of Foreign Affairs, 2015a).

After the JCPOA was negotiated in July 2015, former Israeli Defence Minister Ehud Barak told an Israeli television channel in August 2015 that Prime Minister Netanyahu wanted to attack the Iranian nuclear infrastructure in 2010 and 2011 but was prevented from doing so by the then chief of the IDF, Gabi Ashkenazi and cabinet ministers like Moshe Yaalon and Yuval Steinitz (*The Times of Israel*, 2015). Ashkenazi reportedly flagged the IDF’s operational deficiencies to carry out the task (Ibid). It is significant to note that despite Netanyahu’s robust advocacy of a muscular approach to counter the Iranian nuclear concerns, he encountered opposition from his military advisers like the IDF chief and key cabinet colleagues. Netanyahu’s decision to address the US Congress in March 2015, a few months before the JCPOA was announced, was also criticised by members of the Israeli civil society organisations made up of former senior security officials (Azulay, 2015).

Prime Minister Netanyahu in April 2018 meanwhile dramatically announced to the world that Israel had succeeded in taking out from the heart of the Iranian capital a large trove of material relating to Iran’s nuclear activities, which further proved its covert nature (Ministry of Foreign Affairs, 2018; BBC, 2018d). While the documents did confirm that Iran put a stop to its nuclear weapons related experiments in 2003 — as was speculated in the NIE 2007, they also revealed that Iran conducted more of such experiments than was previously known (Sanger and Bergman, 2018).

Analysts pointed out that Iran set up an elaborate administrative and technical framework to carry out its nuclear activities in a systematic manner and that it could probably reconstitute the entire framework, if it should decide to do so in the future. Further, the material revealed that Iran was planning to build at least five nuclear weapons, when the work was halted in 2003, after the US invasion of Iraq (Arnold et al, 2019; Albright, Heinonen and Stricker, 2018).

Reports noted that the Israeli prime minister shared the information about the secret Iranian archives with the US President before revealing it to the world. A week later, Trump withdrew from the JCPOA. Netanyahu was one of the very few world leaders who welcomed the Trump administration’s decision in May 2018 to withdraw from the JCPOA. While the Israeli government patted itself on a major intelligence coup, which sources noted was in planning for over two years and was carried out in January 2018, other analysts have subsequently submitted

that the Netanyahu government's public revelation probably hurt Israel's intelligence operations inside Iran for the foreseeable future (Levinson, 2019).

In September 2019, Netanyahu further revealed that Iran had covered up a secret site near Isfahan and warned the “tyrants of Tehran: Israel knows what you're doing, Israel knows when you're doing it and Israel knows where you're doing it” (Ministry of Foreign Affairs, 2019). Subsequently, when Iran began to gradually undertake activities contravening the provisions of the JCPOA — like enriching uranium beyond 3.67 per cent, conducting R&D on advanced centrifuges like IR-8, Netanyahu charged that Iran “seeks to envelop Israel ... threaten Israel ... destroy Israel” and that Israel will never allow Iran to develop nuclear weapons (Prime Minister's Office, 2019).

### ***GCC and Saudi Arabia***

Among the countries of the region, Iran has had an equally difficult history with Saudi Arabia. Riyadh has been wary of Iran's intentions and regional ambitions, especially so since the rhetoric of the Islamic revolution — which overthrew the Iranian monarch, de-legitimises the Saudi monarchy (Heiden and Krijger, 2018, 13). After Iran's nuclear contentions came into international limelight in 2002, Saudi Arabia has not only been at the forefront demanding Iran to be more forthcoming on its nuclear programme but has also campaigned for more robust measures to deal with such concerns, including military strikes (Black and Tisdall, 2010).

Speculation that Saudi Arabia might seek nuclear weapons and/or technology from Pakistan, given that it had financially backed the Pakistani nuclear programme, has been aired. The Kingdom's then Defence Minister, Prince Sultan bin Abdul Aziz al Saud, visited the Kahuta enrichment facility in 1999. Feroz Hasan Khan, who wrote the definitive history of the Pakistani nuclear programme, while admitting that the visit did indeed take place and noting that it could have been the only time a foreign dignitary visited the extremely sensitive facility, however affirms that the visit was just an “opportunity” for Pakistan to showcase its expertise in the nuclear field (Khan, 2013, 489). Khan of course does not explain why other foreign dignitaries were not accorded the same privilege to witness the country's science and technology expertise related to the uranium enrichment programme.

Khan acknowledges that Saudi Arabia provided critical financial support to the Pakistani nuclear programme, when it was facing pressure at various times in its history on account of its difficult economic situation. However, despite such support, in his knowledge, there is no evidence of any agreement related to cooperation specifically related to nuclear weapons (Ibid,



383). Analysts have further speculated that Israel could be the perfect role model for Saudi Arabia, if it wanted to acquire nuclear weapons. Riyadh could ideally choose not to deny or acknowledge its nuclear capability, in order not to disturb regional stability (Russell, 2001). Russell's analysis, written prior to the 2002 Natanz revelations, could perhaps have made sense in the context of a unilateral Saudi decision to acquire nuclear weapons.

When Iran's intransigence grew in the face of UNSC sanctions and IAEA resolutions, the Saudi Ambassador to the US, Adel al-Jubeir in April 2008 reminded US Gen. David Petraeus of the Saudi King, Abdullah bin Abdul Aziz's frequent exhortation to the US to take military action and "cut off the head of the snake", referring to Iran (Wikileaks, 2008; Colvin, 2010). After the JCPOA, Crown Prince Mohammed bin Salman asserted that Saudi Arabia will get the nuclear weapons capability, if Iran succeeded in its efforts to do so (Wintour, 2018). Analysts note that Saudi concerns about Iran acquiring a nuclear capability primarily relate to the Islamic Republic pursuing an emboldened, regional hegemonic policy (US Government Printing Office, 2008, 11).

Other GCC countries like the UAE have expressed similar viewpoints as regards the Iranian nuclear capability, echoing Riyadh's policy preferences. The UAE's Ambassador to Washington in July 2010 was cited as stating that while a military attack on Iran's nuclear facilities could be a "disaster", the possibility of Iran acquiring nuclear weapons was an even "bigger disaster" (Birringer, 2010, 8-9). Birringer, for instance, notes that an Israeli attack on Iran's nuclear reactor, Bushehr, located in southern Iran, could pose a serious radiological threat to Saudi Arabia, Qatar and the UAE. In the light of rising contentions related to Iran, the GCC also urged the international community to speed up efforts to establish a West Asia NWFZ, failing which the region could witness a "dangerous nuclear arms race" (*The International Herald Tribune*, 2007).

As negotiations between Iran and its interlocutors witnessed a roller coaster ride, debates about there were competing opinions expressed as to the implications for further nuclear proliferation. Concerns about nuclear dominoes — one country acquiring nuclear capability resulting in other contiguous or neighbouring countries acquiring the same capability, were prominent. Analysts, however, noted that such concerns were, perhaps, overblown due to the difficulties inherent in such pursuits, the nature of the technological capabilities that need to be mastered, the certainty of massive international pressure — as Iran was facing, lack of human or economic or technical resources (as in countries like Jordan), lack of interest to acquire such

a capability (as in countries like Egypt) among other factors (Cook, 2012; Esfandiary and Tabatabai, 2015). Specifically, some even noted that Saudi Arabia pursuing nuclear weapons would go against the history of Saudi support to a West Asia NWFZ, would be in violation of its NPT commitments, and more pertinently, viewed as being against the Islamic injunctions pertaining to the use or possession of weapons of mass murder (Lippman, 2008; Mowatt-Larsen, 2011).

When the JPOA was agreed upon in November 2013, Saudi Arabia in a statement highlighted the need for “good intentions” which could possibly translate into a comprehensive agreement (Davenport, 2013). Riyadh also formally welcomed the conclusion of the JCPOA, stating that any agreement that can verify Iranian compliance through a “strict and sustainable inspection regime” can prevent Iran from acquiring nuclear weapons (Pasha, 2016, 392). Qatar’s Foreign Minister Khalid al-Attiyah was cited as stating that the JCPOA was the “best option among other options” (Einhorn and Nephew, 2016, 19).

The Saudi’s formal support to the JCPOA is in contrast with Israel’s open opposition to the negotiation process and the subsequent agreements. In fact, the Iran nuclear concerns have proved to be a major point of convergence of interest between Israel and the Gulf Arab states. Prime Minister Netanyahu, at the World Economic Forum in January 2018, for instance, acknowledged that there was alignment of interests with regional countries, given common concerns over radical Islam and Iran (Prime Minister’s Office, 2018).

Even as the JCPOA was being negotiated, Saudi Arabia began accelerating its civilian nuclear programme. It entered into deals with countries like South Korea for instance in March 2015 to build two nuclear power plants (Vick, 2015). Analysts note that there is a “coherent Saudi nuclear hedging strategy” relating to its nuclear build-up (Miller and Volpe, 2018, 27; Guzansky, 2015). Further, Bruce Reidel brings to attention that JCPOA coincided with a rise in regional sectarian tensions, especially with seminal events like the Houthi takeover of Sanaa in early 2015, which resulted in the Saudi-led military intervention in Yemen involving air strikes in March 2015, a few months ahead of the JCPOA (Reidel, 2016).

After the Trump administration withdrew from the JCPOA though, the Saudi Foreign Ministry welcomed the step alleging that Iran was using its oil revenues to further its divisive agenda regionally. It particularly highlighted Iranian support to the Hezbollah, the Houthis and to the Assad regime — all issues not related to the JCPOA. Echoing Washington and Tel Aviv, the Saudi Foreign Ministry therefore insisted that the international community should put in place

measures to deal with not just Iran's nuclear programme but its regional policies (Reuters, 2018; The Embassy of the Kingdom of Saudi Arabia, 2018).

After Iran began to gradually unfollow some of the provisions of the JCPOA after the US withdrawal, Saudi officials like Crown Prince Mohamed bin Salman and Foreign Minister Adel al Jubeir again reiterated that Riyadh would acquire nuclear weapons if Iran was successful in its attempts to do so (Wintour, 2018; Reif, 2018). It is pertinent to note that the US withdrawal from the JCPOA also coincided with increased Saudi-Iran tensions in the region, ranging from the ongoing conflict in Yemen to Syria. Riyadh has blamed Tehran for attacks on international oil tankers in the Gulf, while Iran, as noted earlier, has been accused of undertaking a massive drone and cruise missile strike on Saudi Arabia's largest refinery, Abqaiq, in September 2019.

### ***Turkey***

Turkey, Iran's northern neighbour, shares a complex and dynamic relationship with Tehran. Turkey is a member of the North Atlantic Treaty Organisation (NATO) as well as a key importer of Iranian oil. Ankara played an important role in the nuclear negotiations that Iran had with its interlocutors. The April 2012 Iran-P5+1 talks in Istanbul was in fact the first such interaction after more than 15 months between the two sides. Their previous interaction, in January 2011, was also in Istanbul. Turkey was also directly involved in trying to find solutions to such problem like the provision of nuclear fuel for the TRR in May 2010, which as noted earlier, did not materialise, as the Americans rejected the terms of that deal.

Turkey has been an integral part of US efforts to contain the purported missile threat from Iran, as detailed in US threat assessments (as pointed out in earlier sections). In September 2011, the US stationed powerful radar on Turkish soil, 700 kms from the Iranian border, designed to track Iranian missile activity and better protect US assets in Europe as well as the other NATO countries. The radar was an essential part of the Obama administration's regional missile defence framework. This led to strong reactions from Iran's military leaders, with Defence Minister terming it an "aggression" against Iran's national interests (Reuters, 2011). Then Turkish Prime Minister Recep Tayyip Erdogan, visiting Tehran in March 2012 assured his Iranian hosts that the system would not be used against its interests. Specifically, reports noted that one of the Turkish pre-conditions for the stationing of the radar was that any information that the radar picks up would not be shared with Iran's arch nemesis, Israel (Al Jazeera, 2010b).

Turkey played host to some of the meetings between Iran and its interlocutors, on the nuclear issue. It welcomed the JPOA and the JCPOA as a triumph of diplomacy and urged for the

proper implementation of the agreements. The Turkish Foreign Ministry specifically highlighted the role of the IAEA in ensuring that the JCPOA was verified effectively and with full transparency (Ministry of Foreign Affairs, Republic of Turkey, 2015). In May 2018, after the US withdrawal from the JCPOA however, which Turkey criticised, it had to stop importing Iranian oil (Sezer, 2019).

Turkey had to face the impact of unilateral US and EU sanctions measures and cut back on its Iranian oil imports. Turkey was one of the few countries, apart from China, India, Japan, South Korea, and Taiwan, which continued their imports from Iran after July 2012, when the EU ban on the such imports kicked in (which led to the stoppage of imports to nearly 10 European countries). Turkish-Iranian tensions over their respective Syria policies meanwhile add another layer of contention between the two sides.

### **Implications for West Asia NWFZ**

The chapter has examined the Iran nuclear issue in its major dimensions. It highlights the fact that for the past nearly two decades, from 2002 onwards, it has been the most dominant nuclear non-proliferation issue on the regional and international agenda. At the meetings of the GCC and the NPT Rev Con, greater attention was urged to be focussed on the establishment of the West Asia NWFZ to avoid not just an Iranian nuclear weapons capability but also to prevent further regional nuclear proliferation.

The GCC, as far back as in 2007, as noted in the chapter, urged for urgency to establish a regional NWFZ, in order to forestall Iranian nuclear weaponisation. Influential regional leaders like Prince Turki al-Faisal of Saudi Arabia called for the establishment of not just regional, but sub-regional, zones free of WMD (Al-Faisal, 2013). His calls for a Gulf NWFZ however did not have many takers.

Iran's nuclear concerns played an important role in the NPT Rev Con in 2010 calling for the convening of an international conference to discuss the issue of the West Asia NWFZ. The proposed conference, however, could not be held on account of the geo-political turmoil in the region due to the domestic instabilities of key regional countries, on account of the 'Arab Spring'.

Israel, on its part, continued to highlight the Iranian nuclear contentions as emblematic of the difficulties involved in establishing regional WMD free zones, when regional conflicts and security deficits are prevalent. The head of the Israel Atomic Energy Commission at the IAEA

in 2012 charged that regional countries like Iran and Syria were pursuing clandestine WMD capabilities. He asserted that establishing regional WMD free zones was only possible when peaceful relations are established between countries (Chorev, 2012).

Given the ascendance of Iranian nuclear contentions from 2002 till the time the JCPOA was negotiated, the issue of the reality of the Israeli nuclear arsenal — the prime motivating factor that led to calls for a West Asia NWFZ in the first place (in fact by the Shah and Egypt in 1974), receded to the background. Regional countries were forced to grapple with the implications of the Iranian nuclear progress for their own well-being and regional security. Saudi Arabia explicitly affirmed that it will pursue a nuclear weapons capability, if Iran acquired a similar capability. Saudi Arabia, along with Israel and others in the region like the UAE, continue to be wary of Iranian nuclear and regional intentions, despite the JCPOA.

While the next chapter examines the progress made by regional countries to establish civilian nuclear infrastructure, most of the countries of the region do not accept that they should not acquire sensitive technologies like re-processing facilities. The UAE, as will be shown in the next chapter, has agreed not to have such facilities on its soil. While Egypt or Saudi Arabia do not currently have such facilities, they do not foreclose the possibility of having such proliferation-assisting facilities in the future. The UAE's stance, therefore, has been called the 'gold standard' in the pursuit of civilian nuclear technology.

## **Conclusion**

Donald Trump came to power vowing to overturn the signature foreign policy achievement of his predecessor, Barack Obama. Trump carried out the threat, about 18 months after taking over the presidency. The May 2018 withdrawal from the Iran nuclear deal has led to complications for the other members of the multi-laterally negotiated agreement. Iran had to again grapple with the consequences of reduced oil exports, as the US stopped giving waivers from the provisions of its sanctions legislations. It even opposed the removal of the arms embargo on Iran in October 2020. The remaining members of the JCPOA, however, did not accept US opposition. Russia and China brought to the attention of the US that it was no longer a party to the agreement and could not dictate the terms of their engagement with Iran.

While the incoming Biden administration is expected to re-join the JCPOA, the mechanisms of such a process are not clear. Iran's Foreign Minister has even stated that it may not be required for the US to re-join the agreement but that Washington could provide the sanctions waivers, outside of the agreement. Iranian officials have also raised the issue of compensation

from the US for the damage the Iranian economy suffered after sanctions waivers were withheld, in case it re-joined.

Israel has cautioned against the Biden administration re-joining the agreement. The November 2020 assassination of Mohsen Fakhrizadeh is also being seen as an attempt by Israel to force an Iranian reaction that would make it difficult for the Biden administration to engage with Iran. Whether Iran can continue with its policy of ‘strategic patience’ remains to be seen. Prospects of negotiations for a follow-up agreement to the JCPOA or an additional agreement dealing with Iran’s ballistic missile testing or its regional policies, look slim at the moment.

The next chapter will examine issues relating to the regional pursuit of civilian nuclear energy, and their proliferation implications. Given the significant ballistic missile programmes of West Asian countries, the chapter will explore the possibility of CBMs associated with that field. Even as the JCPOA is facing an uncertain future, it did impose significant restrictions on the Iranian nuclear programme. The possibility of replicating these restrictions by other regional countries as a CBM is also examined. Finally, the chapter will bring to attention the impact of the evolving regional geo-political situation on Israel’s security choices, including its nuclear status.

## **CHAPTER SEVEN**

### **Preconditions for a Successful NWFZ in West Asia**

Chapters One to Six have examined in detail the dynamics associated with Israel's nuclear programme, regional non-conventional weapon pursuits and conventional weapon acquisitions, and the Iran nuclear issue — the most consequential regional security issue of the past two decades. These issues have cumulatively negatively impacted the efforts to establish region-wide arms control and non-proliferation confidence building initiatives. The chief among such initiatives as it pertained to the West Asian region was the nuclear weapon free zone (NWFZ).

This chapter examines the challenges associated with the pursuit of civilian nuclear energy by regional countries, possibility of confidence building measures (CBMs) relating to ballistic missiles, possibility of replicating the restrictions imposed on Iran as part of the Joint Comprehensive Plan of Action (JCPOA) by other regional countries as a CBM, and the impact of the evolving regional geo-political situation on Israel's security choices, including its nuclear status. The chapter brings to attention that positive movement on any of these issues can lead to the creation of conditions that could ensure forward movement on the West Asia WMDFFZ.

The chapter ends by highlighting the fact that arms control among the major nuclear weapon powers is facing a significant negative momentum. This is primarily due to the fact that nuclear weapon states (NWS) are overtly privileging the deterrent impact of their arsenals on their security postures. The impact of this trend on regional nuclear arms control measures like the nuclear weapon free zone (NWFZ) in West Asia will be examined.

#### **Regional Civil Nuclear Energy Pursuit**

Nuclear energy currently accounts for about 10 per cent of the world's energy production. Out of around 450 nuclear reactors, 155 reactors are present in the United States (US) – accounting for 97 and France – accounting for 58. The remaining 295 reactors are in 28 other countries, with a majority of them being in Russia, China and India. Around 50 nuclear power reactors are under construction worldwide, especially in China (13) and India (7) (World-Nuclear.org, 2019b). In West Asia, while only Iran currently has an operating nuclear power reactor (the Russian-built plant at Bushehr, which was connected to the grid in September 2011 and began commercial operations two years later), the region's civilian nuclear power ambitions threaten

to further add fuel to regional instabilities, if global non-proliferation and nuclear safety/security best practises are not adopted and followed scrupulously.

The Gulf Cooperation Council (GCC) — made up of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE) — announced plans in December 2006 to develop peaceful uses of nuclear energy (*BBC*, 2006b). Nuclear power was viewed not just as a means to bridge the scientific and technological divide of the Arab world but also as an essential element in their efforts to wean themselves away from dependency on fossil fuels and establish the foundations of an alternate, sustainable energy future. Later in March 2007, a 10-year plan for science and technology development was unveiled, with nuclear power as an important pillar.

The following sections give a brief overview of the civil nuclear energy plans of states in West Asia as well as important states in the extended region, like Turkey. The civil nuclear plans of countries like Turkey are also being highlighted as regional confidence in civil nuclear energy will only grow if all countries in the region and around the region follow international best practices and safety standards. The fall out of any unfortunate nuclear incident, for instance, transcends territorial boundaries of the country in which the plant is located. Chernobyl and Fukushima are pertinent examples of negative consequences of nuclear accidents impacting countries far away from the accident zones.

### ***UAE***

Among countries of the region, the UAE has made the most progress in realising its nuclear power dreams. The first unit of the UAE nuclear power plant at Barakah was completed in March 2018 (after construction began in 2012) and was connected to the national grid in August 2020. It was constructed with assistance provided by the South Korean company, the Korea Electric Power Corporation (KEPCO), which was selected as the lead agency in December 2009. The Emirates Nuclear Energy Corporation (ENEC), which was established in 2009, in a statement after the plant was connected to the electricity grid, stated that the four units of the plant, once operating at their full capacity of 1400-megawatt electric (MWe) each (for a cumulative total of 5,600 MWe) would provide up to a quarter of the country's electricity requirements (*BBC*, 2020).

The UAE entered into an agreement with Australia in July 2012 (with the agreement entering into force in April 2014) to procure the country's uranium to power its reactors. After Kazakhstan and Canada, Australia is the world's third biggest uranium exporter. The Australia-



UAE bilateral agreement is an important example of tough nuclear material supply arrangements that try to minimise the chances of nuclear proliferation. The agreement for instance has clauses that require the UAE to return Australia's uranium in case the Emirates breaches the terms of the agreement, relating to enrichment or safety and security or if there are any inadequacies relating to the country's cooperation with the IAEA (Australian Treaties, 2014).

The UAE earlier in April 2008 released a policy document on its nuclear energy policy, as part of which it affirmed that the country would follow the highest standards of non-proliferation and nuclear security in its civilian nuclear quest. The document affirmed that the country's fossil fuels were not adequate to sustain the future energy growth (which was largely natural gas-based), which was expected to rise to 40,000 MWe by 2020, from around 15,000 MWe in 2008 (UAE Embassy, 2008). As part of its national policy, the UAE gave up the right to enrich uranium or re-processing of spent nuclear fuel domestically, commonly termed as enrichment and re-processing (ENR) activities (Ibid, 9-10).

ENR activities are proliferation concern as they allow host nations undertaking such activities to accumulate higher grades of uranium, which they could potentially make use of in a bomb, if they made the political decision to acquire the bomb. In tune with international standards, the ENEC, the sole operator of the country's nuclear power plants, is also solely responsible for any liabilities that might arise out of accidents at the plants. The scrupulous following of such best international practices further increases the confidence of the international community in the commercial as well as safety and security aspects of UAE's civilian nuclear programme.

As part of its Energy Strategy 2050, the UAE intends to reduce its carbon footprint by at least 70 per cent as a result of its focus on nuclear energy. The ENEC affirms that once all the four plants are operational, it would help in the reduction of at least 20 million tonnes of carbon emissions that would have been released if the UAE still depended on coal or other non-renewable forms of electricity generation (Emirates Nuclear Energy Corporation, 2020). It is interesting to note that the ENEC employs professionals from more than 50 countries in running its nuclear enterprise, even if more than 60 per cent of them are Emiratis (Ibid).

The UAE's cumulative policy framework regarding civilian nuclear power has been termed by analysts as the 'gold standard' that other nations which want to pursue civilian nuclear power should ideally emulate (Nuclear Threat Initiative, 2012b). The UAE commitment as espoused

in the April 2008 policy document not to pursue domestic ENR activities was subsequently adopted as a legal standard in the January 2009 nuclear cooperation agreement with the US (US State Department, 2009b).

The example set by the UAE in its pursuit of civilian nuclear energy however has not been embraced whole-heartedly by other countries in the region desirous of following the same path. Jordan, for instance, insists that such ENR rights are guaranteed by the nuclear non-proliferation treaty (NPT) and that such policies were inconsistent with the NPT's objective of guaranteeing peaceful nuclear energy to member states (Solomon, 2010; Pelton, 2017).

The UAE, apart from establishing such benchmarks in the pursuit of civilian nuclear power, is also a member of a plethora of global nuclear non-proliferation and disarmament confidence building initiatives, including agreeing to most of the conventions relating to nuclear safety and security. The UAE has also participated in US-led non-proliferation initiatives like the Proliferation Security Initiative (PSI), among others.

Further, the UAE has provided financial support (to the tune of US\$10 million) towards establishing the IAEA Fuel Bank in Kazakhstan. The IAEA Board of Governors (BoG) decided in December 2010 to establish the fuel bank to ensure smooth supplies of the fuel to power the world's reactors. The fuel bank has a capacity to house up to 90 tonnes of low enriched uranium, the most common type of nuclear fuel that powers light water reactors, which make up the majority of the world's nuclear power reactors. The fuel bank received its first shipment of nuclear fuel in October 2019 from France. Apart from the UAE, Kuwait also provided an equal amount of funding to the fuel bank (US\$10 million), along with the US (US\$49 million), the European Union (Euros 24.4 million), Norway (US\$5 million), and international non-governmental organisations like the Nuclear Threat Initiative (US\$50 million), for a total of US\$150 million. The IAEA notes that this funding is sufficient to finance the operation of the fuel bank for more than two decades (International Atomic Energy Agency, 2019a; International Atomic Energy Agency, 2019b).

### ***Jordan***

Jordan meanwhile had plans to build two 1,000 MWe reactors intended to be operational by 2025. The Jordan Atomic Energy Commission (JAEC) was established in 2007. The JAEC set up a Committee for Nuclear Strategy in the same year which envisaged generating at least 30 per cent of the country's energy requirements from nuclear energy by 2030 (World Nuclear Association, 2019c). Jordan depends on imports, primarily natural gas, for meeting more than

95 per cent of its energy requirements, which in 2009 were more than US\$4 billion, accounting for 20 per cent of the country's GDP (Maayeh, 2011). The JAEC affirms that as a result of 'disruptions' in natural gas supply, the country had to face losses of nearly US\$7 billion since 2010 (Hajarat, 2019).

JAEC released a White Paper on Nuclear Energy in September 2011 in which it affirmed that the country was looking at nuclear power plants to meet its electricity requirements as well as for powering its water desalination requirements. The JAEC believed that the nuclear power plant construction would also provide jobs to thousands of Jordanians and give a boost to the country's gross domestic product (GDP). It estimated that at least US\$2 billion would be added to the country's labour income as a result of the construction of a nuclear power plant, typically lasting for about 8-10 years (Inform.gov.jo, 2011).

The Deputy Chairman of the JAEC in 2011 affirmed that nuclear energy for Jordan was a "strategic option" which could provide long-term solution to the country's perennial energy problems as well as plug the loss to the country's exchequer (Maayeh, 2011). Even after the 2011 Fukushima disaster in Japan, the head of the JAEC, Khaled Toukan, insisted that the fundamental factors driving his country's nuclear energy pursuit were still strong. These included the need to replace fossil fuels, climate change considerations, as well as rising energy demands (Toukan, 2012).

Analysts flagged issues relating to human resources, funding, issues relating to proliferation and environmental concerns, and the challenges involved in developing robust legal and regulatory frameworks to sustain the nuclear power ecosystem in such a small country (Seeley, 2014). Jordan, however, went ahead with its plans and entered into negotiations with Canadian, French, Japanese, South Korean and Russian nuclear entities (Banks, 2013).

This was also a time when Jordan had to face supply disruptions in its natural gas imports from Egypt, which largely supplied the majority of its power requirements. This was in the aftermath of the developments relating to the Arab Spring and internal social and political upheaval in the North African country as well as rising incidents of arson and terrorism. For instance, after the Arab Gas Pipeline was targeted by insurgents in 2011, Jordan was forced to turn to alternate fuels like diesel to power its electricity requirements. Between 2010 and 2014, the cost of generating electricity nearly doubled (from about US\$3.5 billion to US\$6.3 billion) (Power Technology.com, 2018)

JAEC eventually entered into an US\$10 billion agreement with Rosatom of Russia in March 2015 for building two reactors with a cumulative output of 2,000 MW reactors by 2025 (Al-Khalidi, 2015). Jordan however announced in June 2018 that it was scrapping the deal with Russia to build large reactors and was instead planning to build small modular reactors (SMRs), as they were more suitable for its requirements and economical to run as well (World Nuclear Association, 2019c; Hajarat, 2019).

Analysts pointed out that the US\$10 billion deal with Russia was problematic given that Russia had pledged to fund only 49 per cent of the project cost and Jordan would have found it difficult to provide finances for the remainder percentage, especially in case there was issues about Russian funding promises (Magid, 2016). Jordan hoped to fund its nuclear power dreams through the sale of domestic uranium resources. These resources were however found to be of less quality and a French company helping Jordan develop its uranium resources exited from the project subsequently. Uranium prices also fell sharply, declining from US\$135 a pound in 2007 when the JAEC announced its uranium deposit finds, to about US\$35 a pound in 2014. (Ibid).

In November 2019, Jordan signed a Letter of Intent (LOI) with an American nuclear fuel fabrication company, X-Energy, that specialises in small 75 MWe nuclear reactors and with the British company Rolls Royce (in the same month). X-Energy's product profile fits with Jordan's revised policy goals to pursue small and economical but advanced nuclear reactors. The US company hopes it would be able to establish a nuclear reactor in Jordan by 2030 (Proctor, 2020).

Earlier in January 2019, JAEC entered into a MoU with another American company, NuScale, to jointly examine the feasibility of establishing the company's 50 MWe SMR. The inherent strength of such modular plants is that multiple small reactors can be joined as part of a single plant to scale up power production capacities. NuScale's reactor design was being reviewed by the US Nuclear Regulatory Commission (NRC) (World Nuclear News, 2019a). Apart from nuclear, Jordan is also pursuing other forms of renewable energy like solar and wind. Jordan's energy ministry in 2014 for instance approved solar projects with a combined output of 200 MWe.

### ***Saudi Arabia***

Saudi Arabia, the region's economic and fossil fuel super power, plans to build large numbers of nuclear reactors to wean itself away from its fossil fuel dependency, with nearly one-third

of its oil production spent on domestic electricity generation, and to pursue ‘balanced economic development’ (King Abdullah City for Atomic and Renewable Energy, 2020). The construction of a small research reactor designed by Argentina began at the King Abdul Aziz City for Science and Technology in 2019, following a bilateral agreement signed in 2015 (Brumfiel, 2019).

The King Abdullah City for Atomic and Renewable Energy (KACARE), which is the country’s nuclear energy authority, hosted review teams from the IAEA in July 2018. The Integrated Nuclear Infrastructure Review (INIR) team submitted its report to the Saudi authorities in January 2019 which noted that the country had made significant progress in its quest to establish a civilian nuclear industry, including establishing a legislative framework. The IAEA team identified several aspects which the Kingdom should implement, including relating to the nuclear regulatory authority and nuclear operator (International Atomic Energy Agency, 2019c).

Saudi Arabia also says that it has uranium resources that it would develop for use in indigenous reactors (King Abdullah City for Atomic and Renewable Energy, 2020). In 2017, Saudi Arabia entered into an agreement with a Chinese nuclear major for prospecting for uranium in nine potential areas. The country has also a tie up with Jordan to prospect for uranium (World Nuclear Association, 2019d). More pertinently, Riyadh has been insisting in recent times that, unlike the UAE, it would not give up its right to enrich uranium (Togoh, 2019).

The Trump administration meanwhile has publicly required the Saudis to commit to the ‘gold standard’ requirement — not to have ENR facilities on its soil. This was clearly articulated by US Energy Secretary Rick Perry in an interview with CNBC on 26 October 2019 (Bugos, 2019; Gilinsky and Sokolski, 2019a). Then US Deputy Energy Secretary Dan Brouillette (and US Energy Secretary after the departure of Perry), in February 2019 affirmed that the US would insist on Riyadh abiding by the no-ENR facility rule (Reid, 2019b).

What’s interesting to note is that even as the US insists on the imperative need for the West Asian countries to implement the no-ENR facilities rule for them to be able to take advantage of nuclear cooperation with Washington, the US signed a nuclear cooperation agreement with Vietnam in 2014 — after it had signed the nuclear cooperation agreement with the UAE in 2009, allowing the South East Asian country to enrich uranium on its soil. While the UAE has not openly expressed its displeasure, it does indicate that the US has been applying different yardsticks to different countries vis-à-vis their respective nuclear cooperation agreements

(Carty, 2014). West Asia's unique history with regional instabilities flowing out of covert nuclear and WMD programmes could be a major driver behind such US policy decisions, to prevent further instabilities in a conflict-prone region.

Even groupings like the Non-Aligned Movement (NAM) point out that as members of the NPT, they are allowed to engage in nuclear science and technology and that no restrictions can be imposed primarily based on the so-called 'sensitivity' of some technologies to proliferation. This was pertinently at the 2010 NPT Review Conference (Rev Con), in the aftermath of the UAE-US 123 agreement. The NAM insists that full-scope IAEA safeguards are sufficient to ensure proper nuclear material accountancy and prevent proliferation behaviour (McGoldrick, 2010). However, it is also a fact that even with full-scope IAEA safeguards on 'declared facilities', the examples of Iran, Libya and Iraq — as pointed out in previous chapters, do indicate that nations can carry out covert activities out of the reach and purview of the IAEA.

As pointed out in Chapter Six on the Iran nuclear issue, Saudi Arabia has repeatedly threatened to acquire nuclear weapons, if Iran ever acquires the same capability. Saudi officials, while publicly welcoming the JCPOA ahead of the agreement being signed in July 2015, have also expressed concerns that the deal helps Iran consolidate its regional hegemonic ambitions (McDowall, 2015). Therefore, the Saudi insistence to have independent uranium enrichment facilities on its soil is a cause of concern for the international community and cannot build regional confidence in the exclusively peaceful nature of its nuclear programme.

Saudi Arabia and the IAEA meanwhile continue to be engaged in discussions to strengthen the IAEA's oversight of its civilian nuclear programme. Saudi Arabia for instance is still not following the updated version of the Small Quantities Protocol (SQP). The SQP was introduced by the IAEA in 1971 to manage nuclear material accountancy and reporting requirements of countries which did not have any nuclear reactors but which possessed nuclear equipment or facilities (for medical purposes for instance). The SQP text underwent revisions in 2005, requiring state parties to follow an increased number of reporting or accounting provisions to the IAEA (International Atomic Energy Agency, 2020).

As and when it introduces nuclear material in its nuclear reactor being built outside Saudi Arabia, the IAEA can be expected to insist on Riyadh's acceptance of the Additional Protocol (AP), especially so since Iran was provisionally following the AP requirements since the JCPOA began to be implemented in January 2016. It was no surprise therefore that reports in September 2020 noted that the head of the IAEA, Rafael Grossi, was cited as stating that the

Agency was in conversation with Saudi officials to upgrade their safeguards systems ahead of plans to introduce nuclear material in the small research reactor being built with Argentinian help (*Reuters*, 2020).

Recent reports have also highlighted concerns of US agencies with respect to Saudi cooperation with China in the nuclear field, specifically over the construction of possible undeclared nuclear sites that could be used to enrich uranium (Mazzetti, Sanger and Broad, 2020; Graham-Harrison et al, 2020; Tirone, 2020; Masterson and Bugos, 2020). Israeli officials expressed concern over covert Saudi-China links relating to uranium enrichment, even as they were cooperating closely with the Kingdom to counter Iran's regional ambitions (*The Times of Israel*, 2020).

While Riyadh is seemingly making all out efforts to match the nuclear capabilities of its regional bête noir, Iran, it seems odd that it is actively taking the help of countries like China, which have robust relationships with Tehran as well. Analysts note that China, unlike the US, may not insist on strict non-proliferation standards relating to enrichment, among other related capabilities, given that commercial considerations occupy paramount place in Chinese calculations (Ibid). Analysts, however, note that if reports of covert Saudi-China links on uranium enrichment indeed turn out to be true, then it would deal a serious blow to regional non-proliferation architecture, and could cause other countries like Turkey, Egypt or even the UAE, to pursue military nuclear capabilities (Chaziza, 2020).

Riyadh's alleged covert nuclear cooperation with China and geo-political congruence with Israel to take on Iran's regional ambitions are a clear indication of the extreme levels of concern at Tehran's regional intentions. This is especially stark in the backdrop of the Trump administration's repeated assertions that while it would help its regional allies militarily and economically, it would not get directly into conflicts that could lead to extended US military involvement and quagmires. Given the above renewed concerns about Saudi nuclear intentions, it was no surprise then that, Iran, at the IAEA General Conference on 20 September 2020, highlighted the issue of the Saudi nuclear programme (*Tasnim News Agency*, 2020).

### ***Egypt***

Egypt, meanwhile, has one 22 MWe nuclear research reactor (built by Argentina) that started operating in 1997. The country has ambitious nuclear energy plans, and intends to establish four large nuclear reactors with a cumulative power equivalent of 4,600 MWe, close to 50 per cent of the country's 2019 electricity generation capacity. The IAEA's INIR team completed

its first report in November 2019, which affirmed that Egypt had made substantial progress including in arenas of national legislation, among other aspects and was well placed to go ahead with the construction of its first big plant, the El Dabba plant, construction for which is expected to start in 2020 (World Nuclear News, 2019b).

Egypt signed a deal with Rosatom in 2018 to build four reactors that could cost at least US\$30 billion (Yurman, 2018). Even as the country embarks on its big nuclear journey, domestic and international voices have expressed caution urging the government to scrap its nuclear plans, given the huge costs involved and instead focus on renewable energy like solar. Critics have pointed out that even if Russia is providing loans to the tune of US\$25 billion, it could add to the country's already heavy debt burden (Zaher, 2019).

An eminent Egyptian space scientist working at the US National Aeronautics Space Administration (NASA), Farouk el-Baz, charged that Egypt's nuclear power ambition was an "unstudied political decision" whose primary motivating factor appeared to be Iran (Diab, 2016). Analysts have also cited the rapid strides Egypt was taking in the field of natural gas, coupled with the country's water deficit, as limiting factors that should force policy makers to not pursue nuclear energy (Ibid). Others have pointed out that Egypt's pursuit of nuclear energy was a solution for a non-existent problem, given that the country was in fact producing electricity beyond its requirements (40 GWe as against its requirements of 30 GWe in 2016) (Trager, 2016). In mid-2018, Egypt's generating capacity reached 55 GWe. Egyptian officials however affirm that the country was pursuing nuclear energy to cater to future demand.

Meanwhile, like Saudi Arabia, Egypt also maintains that the NPT (which it signed in 1968) gives the right to its member states to enrich uranium and do re-processing of spent fuel. This was also reiterated by former Egyptian Foreign Minister Nabil Fahmy and then Dean at the American University in Beirut, a couple of days after the JCPOA was negotiated in July 2015 (Fahmy, 2015). Even if Iran had agreed to limit its enrichment activities as part of the agreement (to 3.67 per cent), the fact the JCPOA recognises the Iranian right to enrich uranium was not lost on regional observers (Burkhard et al, 2017).

While accepting that all Arab countries may not require individual enrichment facilities on their soil, Fahmy in his speech in the aftermath of the JCPOA called for the establishment of a regional nuclear fuel bank, with Egypt as the host. Fahmy urged the Arab world to come together to work towards establishing a West Asia NWFZ, before the 10-year expiration of the JCPOA (Fahmy, 2015). With the coming to power of the Trump administration however in



2017 and the US withdrawal subsequently from the JCPOA in May 2018, the survival of the multi-laterally negotiated agreement itself was under jeopardy.

The victory of Joseph Biden in the November 2020 US elections, meanwhile, has opened up the possibility of the US re-joining the JCPOA — a signature foreign policy achievement of the previous Democratic administration, in which Biden served as the Vice President. Chapter Six has brought to attention Israel registering its opposition to such a move, while Iranian officials have also raised the demand of compensation, due to the damage the Iranian economy suffered as a result of the US leaving the agreement.

Egypt is a key part of like-minded countries fighting for nuclear non-proliferation and disarmament on the global stage, like the New Agenda Coalition (made up of Brazil, Ireland, Mexico, New Zealand, and South Africa). Egypt supports a legally binding, multi-laterally negotiated nuclear disarmament instrument, with specific deadlines to achieve the goals in a time-bound manner (Permanent Mission of Egypt to the United Nations, 2013). As noted in the chapter on ‘Historical Background’, while the original nuclear weapon free zone proposal for West Asia was mooted by Iran and Egypt in 1974, it was Egypt which in 1990 expanded the scope of the proposal to include WMD.

### ***Turkey***

Turkey’s civil nuclear ambitions also have implications for the West Asian region, given that it shares a border with Iran and Syria and is involved in geo-political hotspots in the region and beyond, as in Libya. Turkey entered into an inter-governmental agreement with Russia in 2010 to build a civil nuclear reactor complex at Akkuyu on its Mediterranean coast, which upon completion would generate 4,800 MWe (with each of the four reactors generating 1,200 MWe). An IAEA INIR team visited Turkey in 2013 and interacted with nearly 25 Turkish institutions to assess the country’s readiness to pursue nuclear power (Mutluer, 2015, 30). Construction of the first reactor commenced in April 2018 and is expected to begin operations in 2023. Construction of the second reactor commenced in June 2020. Turkey also has ambitious plans to build two more reactor complexes with Russian and Chinese help.

As for Turkish nuclear weapon ambitions, the country is already part of the North Atlantic Treaty Organisation (NATO) and houses US nuclear bombs on its soil. Turkey is a founding member of the IAEA (1957), has signed the NPT (in 1980) and has also ratified the Comprehensive Test Ban Treaty (CTBT) (in February 2000 after signing it in 1996 when it was opened for signature). Turkey is one of the 44 so-called Annex-2 states with significant

nuclear infrastructure or potential or scientific capabilities whose signature and ratification is essential for the CTBT to enter into force. Eight of the other Annex 2 states — US, China, Iran, Egypt, Israel, India, Pakistan and North Korea, have not yet signed/ratified the CTBT and hence it has not yet entered into force.

Turkey is also part of the Non-proliferation and Disarmament Initiative (NPDI), the twelve-nation grouping that was launched in 2010. The NPDI, made up of Germany, Poland, Netherlands, Canada, Chile, Mexico, UAE, Australia, Japan, Nigeria and the Philippines, was launched in the aftermath of the 2010 NPT Rev Con to take forward the agenda and goals of that Rev Con. At the ministerial meetings of the NPDI in 2013, Turkish Foreign Minister Ahmet Davutoglu flagged North Korea's nuclear tests, lack of progress in negotiations between Iran and its interlocutors and Syrian chemical weapons as “source of great concern” (Ministry of Foreign Affairs, Republic of Turkey, 2013). Turkey is also a part of all the four export control regimes – the Australia Group, the Missile Technology Control Regime (MTCR), the Nuclear Suppliers Group (NSG) and the Wassenaar Arrangement.

Despite Turkish signature and ratification of key nuclear non-proliferation and disarmament initiatives — which require it to formally forswear the pursuit of nuclear weapons, analysts however point out that Turkish President Recep Tayyip Erdogan is a strong critic of the NPT and has often complained that states which are party to the NPT continue to pursue their nuclear weapons ambitions (Gilinsky and Sokolski, 2019b).

At the United Nations General Assembly (UNGA) in September 2019, Erdogan asserted that the power difference between those who possessed nuclear weapons and those who did not have such capabilities undermined international balance of power (Ibid; Spacapan, 2020). Earlier in a speech to members of his ruling party in the same month (September 2019), Erdogan affirmed that it was unacceptable that some countries had both nuclear warheads and missiles in their possession and Turkey did not possess such capabilities. He also gave the example of Israel, stating that “no one can touch them” as they possess nuclear weapons (Reuters, 2019b).

West Asian states keeping up-to-date with global standards of transparency and nuclear material accountancy measures would help generate confidence in the peaceful nature of their respective nuclear programmes. All West Asian states concluding the IAEA AP to their standard safeguards agreements as well as being up to date with their relevant safeguards

agreements is an important CBM in this regard. As noted in earlier sections, Riyadh has not updated its SQP agreement with the IAEA.

### ***No-Attack Pledge on Nuclear Infrastructure***

As noted in Chapter Three ('Israel's Nuclear Arsenal') and Chapter Four ('Regional Non-Conventional Capabilities'), countries in the West Asian region have used pre-emptive military strikes to set back or damage the nuclear and WMD infrastructure of their antagonists. They have also carried out assassinations of key personalities involved in enemy WMD nuclear programmes. As a pre-requisite towards establishing a WMDFZ in the region, the West Asian countries should therefore come to an agreement on a no-attack pledge on each other's civilian nuclear facilities, as an essential CBM.

This is especially pertinent given the vibrant civilian nuclear energy programmes that countries like Saudi Arabia, Egypt and the UAE, as noted in previous sections, have embarked upon. A region-wide agreement on not attacking civilian nuclear facilities being built with full IAEA safeguards and transparency measures (with the AP an essential element of such a transparency framework) is therefore a critical first element of the framework that could support the efforts to establish the WMDFZ in West Asia.

In the South Asian context, India and Pakistan, despite their intense rivalry animated by four major wars, have come to a similar agreement dating back to 1998 (Nuclear Threat Initiative, 1988). Both countries exchange an updated list of nuclear infrastructures on each other's territory annually on January 1 every year. Analysts have also called upon both states to expand the scope of the 1988 agreement, to even include a non-attack pledge against each other's critical infrastructure, like large dams or communication networks (Dalton, 2017).

If such agreements between regional rivals who have fought multiple wars in the South Asian context could be achieved, exploring similar bilateral/multi-lateral arrangements in the West Asian context should be pursued earnestly. The August 2020 peace moves between Israel and Gulf Arab states like the UAE and Bahrain that have led to normalisation of diplomatic relations are a perfect springboard to explore such agreements between these countries, especially given the UAE's budding civilian nuclear programme as detailed in earlier sections of this chapter.

Egyptian analysts highlight the fact that the region has witnessed numerous attacks against nuclear power plants and that innovative attacks as those mounted against the Saudi Abqaiq

refinery in September 2019 are proof that critical energy infrastructure projects continue to be vulnerable (Ahmad and Bonometti, 2019). Egypt is Israel's next door neighbour with which the Jewish state has the oldest peace treaty signed in 1979. Given Egypt's own ambitious nuclear power plants and significant security (in the Sinai Peninsula) and energy (made up of gas imports and exports) cooperation between the North African state and Israel, a non-attack pledge on each other's nuclear plants would be a significant CBM indeed.

Israeli analysts on their part acknowledge that the nuclear ambitions of countries like Egypt, Saudi Arabia or the UAE are being primarily driven by concerns about the Iranian nuclear programme. They term it the Sunni reaction to the fear of a Shia nuclear bomb (Shay, 2018, 10). Nevertheless, they continue to express concern about these countries civilian nuclear pursuit, especially that of Saudi Arabia. As noted in earlier sections, reports of China helping build uranium production facilities in Saudi Arabia is being viewed with significant consternation and concern in Israel (*The Times of Israel*, 2020).

#### ***West Asian States and Nuclear Safety and Security Instruments***

The following tables indicate the membership status of regional states in West Asia, North Africa and southern Europe in nuclear safety and security instruments of the IAEA, as well as their adherence to major global non-proliferation and disarmament initiatives. As pointed out earlier, the implications and impact of nuclear safety and security CBMs transcend the territorial boundaries of the country in which the nuclear plant is located.

**Table 7.I**

**Major disarmament and non-proliferation agreements:  
Membership status of West Asian and North African countries with  
WMD concerns/civilian nuclear programmes**

<b>Treaty Name</b>	<b>Egypt</b>	<b>Iran</b>	<b>Iraq</b>	<b>Israel</b>	<b>Jordan</b>	<b>Libya</b>	<b>Saudi Arabia</b>	<b>Syria</b>	<b>Turkey</b>	<b>UAE</b>
<b>NPT (signature)</b>	1 July 1968	1 July 1968	1 July 1968	<b>Not signed</b>	10 July 1968	23 July 1968	3 October 1988	1 July 1968	Signed on 28 Jan 1969  Ratified on 17 April 1980	26 Sept 1995
<b>CTBT (signature and ratification)</b>	14 October 1996	24 Sept 1996 <b>(Not yet ratified)</b>	19 Aug 2008; Ratified on 26 Sept 2013	26 Sept 1996 <b>(Not yet ratified)</b>	26 Sept 1996; Ratified on 25 Aug 1998	14 Oct 1996 <b>(Not yet ratified)</b>	<b>Not signed</b>	<b>Not signed</b>	24 Sept 1996 (signed) 16 February 2000 (ratification)	25 Sept 1996; Ratified on 18 Sept 2000
<b>CWC (Entry into Force)</b>	<b>Not signed</b>	3 Dec 1997	12 Feb 2009	<b>Not signed</b>	28 Nov 1997	5 Feb 2004	29 Apr 1997	14 Oct 2013	11 June 1997	28 Oct 2000
<b>BWC (signature)</b>	10 Apr 1972	16 Nov 1972	11 May 1972	<b>Not signed</b>	17 Apr 1972	19 Jan 1982	12 Apr 1972	14 Apr 1972	10 April 1972	28 Sept 1972
<b>TPNW (signature)</b>	<b>Not signed</b>	<b>Not signed</b>	<b>Not signed</b>	<b>Not signed</b>	<b>Not signed</b>	20 Sept 2017	<b>Not signed</b>	<b>Not signed</b>	<b>Not signed</b>	<b>Not signed</b>

**Sources:** \*UN Office of Disarmament Affairs, "Treaty on the non-proliferation of nuclear weapons: Status of the treaty," URL: <http://disarmament.un.org/treaties/t/npt>; \*CTBTO, "Status of signature and ratification," URL: <https://www.ctbto.org/the-treaty/status-of-signature-and-ratification/>; \*OPCW, "Member states," URL: <https://www.opcw.org/about-us/member-states>; \*UNOG, "Membership of the Biological Weapons Convention," URL: [https://www.unog.ch/80256EE600585943/\(httpPages\)/7BE6CBBEA0477B52C12571860035FD5C?OpenDocument](https://www.unog.ch/80256EE600585943/(httpPages)/7BE6CBBEA0477B52C12571860035FD5C?OpenDocument)

**Table 7.2****West Asian and North African States and IAEA Safeguards Agreements**

	<b>Small Quantities Protocols</b>	<b>Safeguards Agreements</b>	<b>Additional Protocols</b>
<b>Bahrain</b>	In Force since 10 May 2009	In Force since 10 May 2009	In Force since 20 July 2011
<b>Egypt</b>		In Force since 30 June 1982	
<b>Iran</b>		In Force since 15 May 1974	Signed on 18 Dec 2003
<b>Iraq</b>		In Force since 29 Feb 1972	In Force since 10 Oct 2012
<b>Israel</b>		In Force since 4 April 1975	
<b>Jordan</b>		In Force since 21 Feb 1978	In Force since 28 July 1998
<b>Kuwait</b>	Amended 26 July 2013	In Force since 7 Mar 2002	In Force since 2 June 2003
<b>Lebanon</b>	Amended 5 Sep 2007	In Force since 5 Mar 1973	
<b>Libya</b>		In Force since 8 July 1980	In Force since 11 Aug 2006
<b>Oman</b>		5 individual safeguards agreements from 1962-2006	
<b>Qatar</b>	In Force since 24 Jan 2009	In Force since 24 Jan 2009	
<b>Saudi Arabia</b>		In Force since 13 Jan 2009	
<b>State of Palestine</b>	Signed on 14 June 2019	Signed on 14 June 2019	
<b>Syrian Arab Republic</b>		Signed on 18 May 1992	
<b>UAE</b>		In Force since 9 Oct 2003	In Force since 20 Dec 2010
<b>Yemen</b>		In Force since 14 Aug 2002	

**Source:** \*IAEA (2020), “Status List: Conclusion of Safeguards Agreements, Additional Protocols and Small Quantities Protocols”, Status as of 18 September 2020, [Online: Web], Accessed 28 September 2020, URL: <https://www.iaea.org/sites/default/files/20/01/sg-agreements-comprehensive-status.pdf>

**Table 7.3**

**West Asian and North African states and Nuclear Safety and Security Instruments**

<b>Instrument</b>	<b>Country</b>	<b>Signature</b>	<b>Entry into Force</b>
<b>Vienna Convention on Civil Liability for Nuclear Damage</b> (Adopted in 1963; EIF 1997)	<b>Egypt</b>	19 Aug 1965	<b>12 Nov 1977</b>
	<b>Israel</b>	19 Aug 1997	
	<b>Jordan</b> (Amended protocol which EIF in 2003)		27 Apr 2014
	<b>Lebanon</b>	19 Sep 1995	17 July 1997
	<b>Morocco</b>	30 Nov 1984	
	<b>Saudi Arabia</b> (Amended protocol which EIF in 2003)		17 June 2011
	<b>UAE</b> (Amended protocol which EIF in 2003)		29 Aug 2012
<b>Convention on the Physical Protection of Nuclear Material (CPPNM)</b> (Adopted 1979; EIF – 1987)	<b>Algeria</b>		30 May 2003
	<b>Bahrain</b>		9 June 2010
	<b>Iraq</b>		6 Aug 2014
	<b>Israel</b>	17 June 1983	21 Feb 2002
	<b>Jordan</b>		7 Oct 2009
	<b>Kuwait</b>		23 May 2004
	<b>Lebanon</b>		15 Jan 1998
	<b>Libya</b>		17 Nov 2000
	<b>Morocco</b>	25 July 1980	22 Sep 2002
	<b>Oman</b>		11 July 2003
	<b>Qatar</b>		8 Apr 2004
	<b>Saudi Arabia</b>		6 Feb 2009
	<b>State of Palestine</b>		10 Feb 2018
	<b>Syria</b>		4 Jan 2020
	<b>Tunisia</b>		8 May 1993
	<b>Turkey</b>		8 Feb 1987
<b>UAE</b>		15 Nov 2003	
<b>Yemen</b>		30 June 2007	

<b>Amendment to CPPNM</b> (Adopted 2005; EIF 2016)	<b>Algeria</b>		8 May 2016
	<b>Bahrain</b>		8 May 2016
	<b>Israel</b>		8 May 2016
	<b>Jordan</b>		8 May 2016
	<b>Kuwait</b>		8 May 2016
	<b>Libya</b>		8 May 2016
	<b>Morocco</b>		8 May 2016
	<b>Qatar</b>		
	<b>Saudi Arabia</b>		
	<b>State of Palestine</b>		10 Feb 2018
	<b>Syria</b>		4 Jan 2020
	<b>Tunisia</b>		8 May 2016
	<b>Turkey</b>		8 May 2016
<b>UAE</b>		8 May 2016	
<b>International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)</b> (In force since July 2007)	<b>Algeria</b>		3 Mar 2011
	<b>Bahrain</b>		4 May 2010
	<b>Egypt</b>	20 Sep 2005	
	<b>Iraq</b>		13 May 2013
	<b>Israel</b>	27 Dec 2006	
	<b>Jordan</b>	16 Nov 2005	29 Jan 2016
	<b>Kuwait</b>	16 Sep 2005	5 Sep 2013
	<b>Lebanon</b>	23 Sep 2005	13 Nov 2006
	<b>Libya</b>	16 Sep 2005	22 Dec 2008
	<b>Morocco</b>	19 Apr 2006	31 Mar 2010
	<b>Qatar</b>	16 Feb 2006	15 Jan 2014
	<b>Saudi Arabia</b>	26 Dec 2006	7 Dec 2007
	<b>State of Palestine</b>		29 Dec 2017
	<b>Syria</b>	14 Sep 2005	
	<b>Tunisia</b>		28 Sep 2010
	<b>Turkey</b>	14 Sep 2005	24 Sep 2012
<b>UAE</b>		10 Jan 2008	
	<b>Yemen</b>		13 Oct 2014

**Sources:** \*IAEA (2020), “Vienna Convention on Civil Liability for Nuclear Damage”, Status as on 30 July 2020, [Online: Web], Accessed 2 October 2020, URL: [https://www-legacy.iaea.org/Publications/Documents/Conventions/liability\\_status.pdf](https://www-legacy.iaea.org/Publications/Documents/Conventions/liability_status.pdf); \*IAEA (2020), “Convention on the physical protection of nuclear material”, Status as on 21 September 2020, [Online: Web], Accessed 2 October 2020, URL: [https://www-legacy.iaea.org/Publications/Documents/Conventions/cppnm\\_status.pdf](https://www-legacy.iaea.org/Publications/Documents/Conventions/cppnm_status.pdf); \*IAEA (2020), “Amendment to the Convention on the Physical Protection of Nuclear Material”, Status as on 21 September 2020, [Online: Web], Accessed 2 October 2020, URL: [https://www-legacy.iaea.org/Publications/Documents/Conventions/cppnm\\_amend\\_status.pdf](https://www-legacy.iaea.org/Publications/Documents/Conventions/cppnm_amend_status.pdf); \*UN Treaties (2020), “International Convention for the Suppression of Acts of Nuclear Terrorism”, Status as on 5 October 2010, [Online: Web], Accessed 2 October 2020, URL: <https://treaties.un.org/doc/Publication/MTDSG/Volume%20II/Chapter%20XVIII/XVIII-15.en.pdf>



As noted in Table 7.I, and as pointed out in Chapters Three and Four, Egypt has not yet signed the Chemical Weapons Convention (CWC), making its signature contingent on Israel signing the NPT. Saudi Arabia and Syria have also not yet signed or ratified the CTBT. Israel of course is a stand out as far as the NPT membership is concerned. Other than Libya, none of the countries in the region have signed the 2017 Treaty on the Prohibition of Nuclear Weapons (TPNW). As Table 7.2 indicates, only seven out of the 16 West Asian states (inclusive of Palestine) have signed the AP while the SQP is valid in five countries.

Table 7.3 meanwhile lists countries not just in West Asia but also in North Africa (WANA) that have signed or ratified important IAEA/UN nuclear safety and nuclear security conventions. IAEA nuclear safety and security conventions are legally binding instruments, unlike IAEA Codes of Conduct, which are non-legally binding. The 2004 IAEA Code of Conduct on the Safety and Security of Radioactive Source, for instance — to which most WANA countries accede to, is non-legally binding.

Nuclear safety and security have an impact not just on the countries which house civil nuclear projects and which may suffer potential catastrophic accidents but also significantly impact the well-being of the populations of regional countries. It is heartening to note that most of the WANA countries have accepted these tough IAEA instruments as well as amendments to those instruments.

It is interesting to note however that among countries with significant civil nuclear energy ambitions in the extended region, only Turkey has still not accepted the 1963 Vienna Convention on Civil Liability for Nuclear Damage, amended in 1997. The Vienna Convention establishes minimum accepted standards of financial protection in case of damages occurring due to a civil nuclear accident. The fact that Turkey has still not accepted these minimum standards could be an issue of concern to countries like Cyprus, just 150 kms across the Mediterranean from Turkey's Akkuyu nuclear power plant.

### **Possibility of Ballistic Missile CBMs**

As seen in Chapter Five, West Asian and North African states have significant ballistic missile inventories and they are continuously developing new capabilities as well as extending the range and sophistication of their missile systems. Ballistic missile proliferation has been a substantial factor that continues to generate regional instabilities, as can be seen in the reactions of Iran's interlocutors - primarily the United States (US), the United Kingdom (UK) and France, to Iran's missile testing activities in the aftermath of the JCPOA. Globally, to generate

confidence in ballistic missile programmes, various CBMs have been proposed and are being implemented as well. Those relating to advance notifications regarding missile testing activities, notice to airman (NOTAM) notifications, among others are widely employed.

As pointed out in Chapter Five, in the light of Russian concerns about US missile defence deployments in Eastern Europe to tackle the purported threat from Iran, the US even offered to inform Russia about the deployment numbers and locations of its missile defence interceptors in Europe, as a CBM. In the West Asian context, such proposals may not pass muster given the obvious deficit in trust and lack of diplomatic relations (between Israel and Iran and other Arab Gulf states most pertinently) or strains in relationships where they exist (between Saudi Arabia and Iran, for instance). However, unilateral CBMs like those relating to long range missile testing activities can perhaps be emulated in the West Asian context as well.

Analysts have put forward proposals requiring West Asian states to come to a mutual agreement on banning missiles that have ranges beyond 3,000 kms and payloads beyond 500 kgs (Elleman, 2012). They note that there is no strategic requirement or necessity for West Asian states for such long-range missiles — unless they explicitly acknowledge that states beyond such ranges are actually within their target list. Such an acknowledgement could however justify the missile defence activities of great powers like the US, which as noted in Chapter Five, have based their missile defence policies on the purported threat posed by such long-range missiles in the arsenals of countries like Iran. Among countries in the region, only Iran and Israel have such long-range missiles beyond 2,000 kms. Despite these two inimical countries already possessing missiles capable of reaching each other's territory, the prospect of them giving up their longer range missiles that can reach beyond their respective territories does not seem bright at the present juncture, in the light of the continuing regional security deficit and the presence of significant military presence within the region of external powers like the US and Russia.

The Trump administration was insistent that Iran has to curb its missile testing activities altogether and roll back its missile arsenal, as a precondition for the JCPOA to be re-negotiated. Whether the Biden administration will insist on a bilateral or multi-lateral understanding/agreement regarding such conventional defence activities as a pre-condition to reduce regional tensions, is a moot question. The Hague Code of Conduct (HCoC) Against Ballistic Missiles Proliferation, adopted in 2002, is an important voluntary measure that generates confidence in the missile activities of member states. It is the only multi-lateral CBM

in the sphere of ballistic missiles. Member states are required to provide pre-launch notifications of their missile launches and satellite tests and annual declarations of their space programmes and ballistic missile programmes.

Currently, nearly 140 countries have subscribed to the HCoC. The Code was adopted in 2002, in the aftermath of concerns generated by North Korea's missile activities. Only Iraq (August 2010), Jordan (November 2002) and Libya (November 2002) are member state of the HCoC in the West Asian region (Hague Code of Conduct, 2020). If other states in the region also subscribe to the HCoC, it could bridge the trust deficit to some extent. It is important to flag that HCoC has no legal obligation, and subscribing states are not impeded in pursuing their national space launch or ballistic missile programmes.

Subscribing to the HCoC could generate some confidence in Iran's ballistic missile testing activities at the very least, and convey willingness on the part of Iran to engage with some of the concerns being expressed by its own nuclear agreement interlocutors, like France, Germany and the United Kingdom, apart from the rabid opposition from the US and Israel. There should of course be no interference with peaceful activities related to satellite launch vehicles, especially if the civilian and military programmes are transparently separate, as in the case of India, for instance. The US and Israel meanwhile also have their own national technical means to verify any Iranian commitment relating to ballistic missiles.

Given the relatively shorter distances between the countries of the region, effective solutions for defences against short-range and medium range ballistic missiles could also perhaps be shared, even among antagonists, as a mutual CBM. West Asian nations have to adopt stringent national export control regulations on par with international standards. Countries like the UAE have done so in recent past. This would ensure that the technologies pertaining to the sophisticated equipment and arms and ammunition that these countries are receiving from their great power benefactors would not proliferate further.

While Turkey is not part of West Asia, it is the only country in the extended region that is a member of all the four export control regimes – the NSG, the MTCR, the Australia Group and the Wassenaar Arrangement. Given that a country needs to have a substantial scientific establishment that can produce equipment or components relating to these fields to become a member of any of the export control regimes, most West Asian states, which are largely recipients of such equipment or technologies, are at the receiving end of these technology denial regimes. Iran becoming a member of the MTCR, for instance, could be a game-changer

as a regional CSBM. Given the enormous pressure the Islamic Republic is facing over its nuclear and missile programmes, Iran, for the foreseeable future, would continue to be at the receiving end of the fence as far as these control regimes are concerned.

### **Regional Replication of JCPOA Restrictions**

Analysts have long pointed that establishing a regional nuclear verification system that is enforceable was very difficult in the region due to extant political and security deficit (Barnaby, 1987, 105). However, the nuclear verification regime that Iran has agreed to as part of the JCPOA is an important example of the intrusive and comprehensive verification measures that states can adopt vis-à-vis the IAEA to generate confidence in the exclusively peaceful nature of their nuclear programmes.

As noted in Chapter Six, Iran, for instance, has agreed for daily IAEA inspector access at facilities it designated as the sole facility for uranium enrichment, the Natanz Fuel Enrichment Plant (FEP). There are provisions facilitating long-term access of IAEA inspectors in the JCPOA, including such mundane things as providing long-term visas to them so that they can carry out their work uninterrupted. Technological solutions like high-tech seals are an essential part of the agreement, in places where human interactions can be kept to the minimum extent possible.

Iran is also provisionally implementing the Additional Protocol (AP) to its comprehensive safeguards agreement (CSA) and has pledged to ratify the AP eight years after the JCPOA began to be implemented (which was January 2016) or when the IAEA comes to the conclusion that all nuclear activities inside Iran were for peaceful purposes. The AP is a powerful tool that the IAEA uses to ensure the peaceful nature of a country's nuclear programme, including by virtue of an expanded menu of authority, in the form of short-notice inspections and inspections at sites other than those declared to the IAEA. As noted in the previous section examining regional civilian nuclear programme, if all states in the West Asian region sign and implement the AP in addition to their CSAs, it will build regional confidence.

Further, the JCPOA has unique restrictions that are normally applicable to a NPT member state; for instance, Iran has pledged not to undertake research activities relating to uranium metal, activities which could lead states to develop expertise in designing nuclear warheads. These were precisely activities that countries like Libya and Iraq indulged in covertly, in cooperation with trans-national proliferation networks running out of Islamabad. Such conditions could be made mandatory to other NPT member states also going forward.

The JCPOA allowing for uranium enrichment has been a significant issue of contention for the Trump administration as well as for regional countries like Saudi Arabia and Egypt. The Trump administration insisted that a re-negotiated JCPOA should not allow this right to Iran. The administration's Special representative on Iran, Brian Hook, insisted that the US standard of no enrichment was abandoned by the JCPOA and called for the same standard to be restored (Iran Watch, 2020). The Trump administration officials, however, ignore the fact that Iran's uranium enrichment right came with severe restrictions, in terms of the level to which it can enrich (qualitative) as well as the amount of enriched uranium it can possess (quantitative), as detailed in Chapter Six.

As pointed out in the section on the regional pursuit of civil nuclear energy, Cairo and Riyadh insist that there is no reason why they cannot be allowed to have similar capabilities domestically, if Iran was allowed to have this right in the JCPOA. Even prior to the JCPOA, analysts noted that a possible way to cater to the demands of regional countries for nuclear fuel was to allow them to have enrichment facilities, but limited to below 5 or 6 per cent (von Hippel et al, 2013, 18-19). This would ensure that these countries would not have access to bomb-grade nuclear material (enriched to 90 per cent and above).

The International Panel on Fissile Materials (IPFM) also advocate a West Asian regional ban on re-processing of spent nuclear fuel used in civilian nuclear power reactors. The Frank von Hippel et al expert group of the IPFM note that out of more than 30 countries that have civilian nuclear power plants on their territories, only six countries re-process nuclear fuel. These are China, France, Japan, Russia, United Kingdom and the United States, highlighting the unnecessary need for most countries to reprocess their spent nuclear fuel (Ibid, 15). Most nuclear cooperation agreements allow for the spent nuclear fuel to be transported back to the country which supplied the fuel, under IAEA safeguards.

### **Israel's Nuclear Status and the Evolving Regional Geo-Political Situation**

The African experience has many parallels to the West Asian situation. Like South Africa, Israel is the only nuclear weapon possessing country in the region. The apartheid regime famously gave up its nuclear weapons voluntarily, as noted in the introductory chapter. Either the rolling back of the Israeli nuclear programme or an Arab acquiescence of that capability seems to be an essential element that needs to be realised, if the proposal for a WMDFFZ has to make progress on the ground. Analysts note that Egyptian officials and academics understand

that Israel is unlikely ever to give up its nuclear weapons and that the only feasible option would be to cap/restrict the Israeli nuclear capability (Feldman, 1997, 234).

While the roll-back of the Israeli programme may sound utopian at the moment, it is important to flag that Libya did voluntarily give up its WMD programmes in December 2003 and Iran agreed for comprehensive restrictions on its nuclear programme in the JCPOA. These two positive developments in the past decade relating to the WMD programmes of West Asian states are indeed noteworthy. Israel's oft repeated concern about the need to establish stringent and reliable verification mechanisms in a region with massive trust deficit, if at all a NWFZ has to be established, is indeed appropriate. Iran's JCPOA restrictions, which Israel unfortunately does not accept as sufficient, are a significant barometer of the extent to which regional states can agree to such restrictions, either due to the pressure that is brought on them or due to the promise of greater economic benefit and political integration with the rest of the region.

An essential element meanwhile that would require Israel giving up its nuclear weapons capabilities would be the Arab acceptance of the presence and flourishing of the Jewish state in the region. The Abraham Accords, signed between Israel and the UAE, in the presence of the Bahraini Foreign Minister and President Trump in Washington on 15 September 2020, formally established diplomatic relations between UAE and the Jewish state. It is pertinent to note that Israel and the UAE had no territorial dispute between them. The UAE, in fact, came into being four years after the 1967 War and two years before the 1973 war. The diplomatic recognition of Israel by the UAE despite the 2002 Arab consensus which promised such recognition only after the establishment of the Palestinian state (to which the UAE and Bahrain were an essential part of), is, therefore, significant.

Various explanations have been provided for the rationale for these two Arab Gulf states to accept the extended hand of friendship of the Jewish state. These include common concerns over Iran (regional hegemonic ambitions and nuclear concerns) and Turkey (with the Muslim Brotherhood a key point of contention between the UAE and Turkey) and the importance of Israeli technology to help these Gulf States transcend their oil-based economies, among others (Inbar, 2020; Gibney, 2020).

How much of an effect would the diplomatic recognition of Israel by UAE and Bahrain have on the possibility of region-wide CBMs like the West Asia NWFZ, given that they are being touted as historic agreements that would pave the way for more Arab countries to enter into

peace deals with Israel? The answer probably unfortunately is not much. This is because Israel-Gulf states rapprochement essentially gives greater definition to a strategic divide that already exists in the region — between Israel, Saudi Arabia and the UAE on one side and the Islamic Republic of Iran on the other. As noted in earlier chapters, concerns about Iran's nuclear programme have played an important role in the convergence of interests between Israel, Saudi Arabia and the UAE. While Saudi Arabia formally welcomed the JCPOA in July 2015, it has continued to express concerns about Iran's regional role and involvement in regional conflicts.

As shown in earlier chapters, Israel has voiced strong opposition against the multi-laterally negotiated nuclear agreement, insisting that the agreement in fact smoothens the Iranian development of a nuclear bomb, as and when JCPOA restrictions would begin to be lifted, 10 years after the implementation of the agreement. As shown in Chapter Three, Israel has always held that a region such as West Asia characterised by conflict and tensions and political differences was not ripe to pursue regional NWFZ proposals. The coming together of Israel and UAE and Bahrain, therefore, may not hold much promise to boost efforts for the creation of a West Asia NWFZ.

The saga over the possible sale of the F-35 Joint Strike Fighter (JSF) to the UAE highlights Israel's concerns about maintaining its military edge, even after entering into peace agreements with regional countries. Sharp opinions were expressed domestically both within the US and Israel as to the appropriateness of the possible sale of the fifth-generation fighter jet to the UAE. Prominent Jewish Democratic lawmakers in the US, like Debbie Wasserman Schultz, who is the US House Representative from a Florida Congressional district, expressed concerns about the possible implications for Israel's security, in case a future UAE government turned hostile to Israel and insisted that peace agreements with Israel cannot be quid pro quo for securing advanced weapons for Arab states (Schultz, 2020). Other Israeli analysts noted that once the US agrees for the sale of the jet to Abu Dhabi, it cannot possibly deny the same capabilities to Saudi Arabia or Bahrain, seriously undermining Israel's military advantages in case the political equations between these countries and Israel deteriorate in the future (Arad, 2020).

Prime Minister Netanyahu's office insisted that he opposed the sale of F-35 or similar advanced weaponry to West Asian countries, including those that made peace deals with Israel (Harkov and Ahronheim, 2020). Even as the Israeli and UAE defence ministers agreed to expand their bilateral defence cooperation in their first publicly acknowledged conversation on 25 August,

the F-35 saga is a reminder of the extant concerns regarding safeguarding Israel's regional military edge, even as it embarks on normalisation with key Arab states. The UAE, meanwhile, is expected to eventually receive the F-35s, perhaps a version that is technologically inferior to the one Israel has in its inventory. Israel is also expected to secure advanced versions of other fighter jets like the F-15s, which can be used for long-range strike missions, as well as refuelling tankers or heavy lift helicopters (Trevithick, 2020).

Apart from the continuing caution guiding Israel's approach to maintaining regional military balance, as regards its policy positions on the NWFZ, Israel continues to reject the link between NWFZ and the NPT. Israel, for instance, cannot join the NPT as a NWS. Israel's Dimona nuclear reactor continues to be outside the purview of the IAEA. Israel also cannot take advantage of nuclear commerce, as it is not a member of the NSG. Analysts note that Israel in 2007, in the aftermath of the Indo-US nuclear deal of 2005, proposed a criteria-based approach to membership for the NSG, unlike the country-specific approach that the US championed for India (Stewart, 2019). A criteria-specific approach to NSG membership was also championed by countries like Pakistan and China. This ironically placed Israel, one of India's close strategic ally, on the other side of the divide on a key nuclear policy issue. There has not been much progress in ensuring that countries like Pakistan or Israel are admitted to the NSG. Pakistan's troublesome non-proliferation record animated by the A.Q. Khan proliferation network, termed the 'nuclear Walmart' by former head of the IAEA, Mohamed El Baradei, seems a difficult history to place under the NSG carpet (El-Baradei, 2011, 168).

It is significant to note that among the arms control and non-proliferation treaties listed in Table 1, Israel has not signed the NPT, the CWC, the BWC, or the TPNW. It has only signed the CTBT in 1996 but has not yet ratified it as yet. Israel in recent times has expressed support towards the CTBT. The head of the CTBT Organisation (CTBTO), Lassina Zerbo, met with Prime Minister Netanyahu on 21 June 2016 in Jerusalem, the first time that such a meeting took place. Netanyahu affirmed that while Israel supports the treaty and its goals, the issue of Israeli ratification was contingent on "regional context and appropriate timing" (Comprehensive Test Ban Treaty Organisation, 2016). Israel is among one of the eight Annex 2 states, apart from China, Egypt, India, Iran, the DPRK, Pakistan, and the United States, that need to ratify the treaty before it can enter into force. Israel on its part hosts two CTBT monitoring stations on its territory as well as a radio-nuclide laboratory.



## **Status of Global WMD Arms Control and Impact on MEWMDFZ**

The four issues examined in this chapter relate to the regional pursuit of civil nuclear energy, transparency measures pertaining to ballistic missiles, the possible adoption of JCPOA restrictions/standards by other regional countries and the evolving regional geo-political situation between Israel and the Arab states and its impact on Israel's nuclear/security profile. These are critical regional factors that would significantly impact efforts to establish the West Asia NWFZ going forward. Apart from these regional factors, the global developments pertaining to nuclear arms control would definitely impact regional arms control efforts. The following sections would briefly examine the status of nuclear/WMD arms control as it pertains to NWS, specifically the US, Russia and China.

Both the United States and Russia have withdrawn from important bilateral conventional and/or nuclear force agreements in recent times, even as countries like China have not shown an interest or willingness to be part of tri-lateral arms control efforts. As pointed in Chapter Five, President Bush withdrew from the 1972 ABM Treaty in 2002 as his administration believed that the treaty constrained US efforts to adequately counter the purported missile threat to continental Europe posed by 'rogue' states like Iran.

Russia stopped implementing the provisions of the Conventional Forces in Europe (CFE) Treaty in December 2007. The CFE was negotiated in 1990 and entered into force in 1992. The treaty required a reduction in the numbers of offensive conventional equipment like main battle tanks, combat aircraft and attack helicopters. Within five years of the treaty's negotiation, by 1995, over 50,000 pieces of combat equipment were either destroyed or converted and over 4,000 on-site inspections of military installations took place (US State Department, 2002b).

A revised CFE agreement was negotiated in 1999 in the light of NATO expansion and the withering away of the WARSAW Pact. NATO and the US however refused to ratify the revised agreement prior to its entry into force unless Russia withdrew its forces from Georgia and Moldova. Russia on its part was upset with the inclusion of Baltic States into NATO and NATO's refusal to ratify implied that these states bordering Russia would not be subject to the treaty's new limits on arms deployment (*Arms Control Today*, 2017; Witkowsky, Sherman and McCausland, 2010, 7).

The US withdrew from the Intermediate Range Nuclear Forces (INF) Treaty in August 2019. The US accused Russia of not only testing new intermediate range ballistic missiles (like the 9M729 in 2011) — which was prohibited by the treaty, but also subsequently deploying them

(Gottemoeller, 2020, 143). The Trump administration also withdrew from the Open Skies Treaty (OST) in May 2020, which allowed for surveillance flights over the territories of member states. The 1992 treaty entered into force in January 2002 and had 34 treaty members, inclusive of most countries in Europe. The US accused Russia of unilaterally limiting observations permitted under the treaty (42 flights per year). Russia had stopped giving permission for possible overflights over Kaliningrad and its border with Georgia, due to conflicts over Abkhazia and South Ossetia (Richter, 2020; Gottemoeller, 2020, 150).

The 2010 New Strategic Arms Reduction Treaty (New START), which is the only remaining bilateral nuclear arms control treaty between the US and Russia, would expire in February 2021. The US and Russian delegations met in Vienna in June 2020 to discuss issues related to the possible extension of New START. The parties can exercise the option in-built into the treaty to extend it for a period of another five years, which Russia supports. The US however wants the negotiations to expand to a tri-lateral framework and also include China, given its rapid nuclear build up (Reif and Bugos, 2020). When China did not participate in the June 2020 talks, despite being invited, the US charged that China's reluctance was akin to hiding behind a 'great wall of secrecy' (Murphy, 2020).

Beijing insists that its smaller nuclear arsenal, largely made up of intermediate range missiles focused on a possible targeting of US assets and bases in the Western Pacific Ocean, cannot be subject to arms control limitations that involve US and Russia, which continue to possess the majority of the world's nuclear weapons (Trenin, 2020, 164). China insists that with its limited nuclear warheads — estimated to be at about 320 (Arms Control Association, 2020), it cannot be expected to be bound by restrictions that could equally apply to US and Russia as part of any tri-lateral agreement. Further, China states that it is “neither realistic nor reasonable” to insist on Chinese participation in tri-lateral nuclear arms control negotiations as the US and Russia “bear special and primary responsibilities on nuclear disarmament” (Foreign Ministry of the Peoples Republic of China, 2020).

Recent report of the US Department of Defense (DoD) on China's military and security postures as well as China's own government documents however highlight the rapid strides the PRC is making on its nuclear arsenal and delivery systems. A 2020 Pentagon report for instance notes that China was developing new inter-continental ballistic missiles (ICBMs) to eventually replace its current stockpile (made up of about 100 ICBMs). It was also building additional nuclear-powered ballistic missile submarines. While it currently has four such submarines, by

the end of this decade, it is expected to have double this number. China was also modernising the air leg of its triad, with new nuclear capable long-range bombers, like the H6-N, which was revealed for the first time in October 2019 (US Department of Defense, 2020).

As for China's own defence documents, the 2019 Defence White Paper insisted that China remained committed to the doctrine of no first use (NFU) of nuclear weapons. However, it affirmed that the PLA Rocket Force (PLARF) was engaged in increasing the credibility and reliability of nuclear defence and counter-attack, strengthening long range precision strike forces, and was building a strong and modernised rocket force (*Xinhuanet*, 2020).

Apart from their negotiations on New START, the US and Russia also held their first round of Strategic Stability Talks on 12 September 2020 in Helsinki, Finland. Reports in May 2020 meanwhile noted that the Trump administration had discussed the possibility of conducting new nuclear weapons tests, in the light of speculations that Russia and China were possibly conducting low yield nuclear tests to fine tune their respective nuclear arsenals (Hudson and Sonne, 2020). The US has signed the CTBT but has not yet ratified it.

Given advanced US capabilities that allow it to computer model nuclear explosions for the purpose of fine tuning its nuclear weapons designs, the US may not in fact require to conduct actual nuclear explosives tests. But the very fact that the Trump administration was indeed discussing such eventualities clearly indicates that so-called taboos associated with nuclear testing — given the environmental and other costs associated with the endeavour, seems to be crumbling.

In the non-proliferation and arms control arena, what the major nuclear weapon states do — or do not do, significantly impacts the nature and contours of the debate as it pertains to regional nuclear issues as well. The US withdrawals from the JCPOA in May 2018, the INF Treaty in August 2019 and the OST in May 2020, have significantly eroded the framework of cooperative, bilaterally as well as multi-laterally negotiated arms control measures. Major powers meanwhile, have continued their nuclear force modernisation efforts, despite commitments to pursue 'good-faith' negotiations to achieve disarmament, as per Article Six of the NPT. The gap between such commitments and rhetoric has often been cited by countries like Iran as evidence of the weakness of the non-proliferation regime. Israel on its part, as shown in Chapter Three, points out the gap between commitments and action on the part of regional NPT signatories like Iraq, Libya, Syria, and Iran, as it pertains to their WMD pursuits. If the arms control framework between the NPT-recognised nuclear weapon states crumbles,

there will be even less incentive for regional countries to pursue arms control measures, over and above the challenges in overcoming existing security deficit.

## **Conclusion**

The chapter has brought to attention the possibility of replicating regionally, the restrictions that were imposed on Iran as part of the JCPOA. The Iran nuclear deal, however, itself came under a shadow after the withdrawal from the Trump administration in May 2018. As and when the Biden administration re-joins the nuclear deal, the adoption of the JCPOA qualitative and quantitative restrictions on uranium enrichment and transparency measures, relating to IAEA inspector access to nuclear facilities, are useful measures to build regional confidence.

The chapter has also highlighted the status of the debate on adopting best practices pertaining to the pursuit of civil nuclear energy. Unfortunately, however, most countries in the region are opposed to foregoing access to technologies like re-processing and uranium enrichment. The only regional country that has agreed to give up such technologies, and instead depend on either multi-lateral mechanisms like IAEA Fuel Bank or supply promises of the country providing the reactors, is the UAE.

As for CBMs relating to ballistic missile technologies, the chapter has highlighted the only available international CBM mechanism in this field, the HCoC. Adherence by most countries regionally to this instrument will contribute to regional stability. As for unilateral or bilateral measures by countries like Israel or Iran to give up long-range missile capabilities, the chapter has indicated that there is less possibility of such measures fructifying, given the continuing security deficit and the significant regional military presence of external powers like the US and Russia.

Finally, the chapter has brought to attention the global status of nuclear arms control, to point out that the framework of bilateral nuclear arms control between the US and Russia is crumbling, even as countries like China are not showing any interest to participate in tri-lateral arms control efforts. China is continuing to insist that the US and Russia bear primary responsibility for reducing their nuclear numbers. The chapter ended by noting that in such an environment, there is even less incentive for regional countries to pursue arms control measures like the NWFZ. The concluding chapter brings to attention the major conclusions of the study.

## CHAPTER EIGHT

### Conclusions

Multi-lateral efforts to establish a nuclear weapon free zone (NWFZ) in West Asia were first proposed by Egypt and Iran at the United Nations General Assembly (UNGA) in 1974. Since then, several resolutions have been adopted by consensus. While Israel — whose nuclear programme was a prime motivating factor for Egypt and Iran to submit the NWFZ proposal — supported the concept in principle but put forward its own proposal in December 1980. The Israeli resolution essentially called for convening a regional conference to discuss the issue, on the lines of the 1967 Treaty of Tlatelolco, wherein the countries of the Latin American region got together to agree on the contours of the world's very first NWFZ. Israel's Arab neighbours, however, have insisted on the former's accession to the nuclear non-proliferation treaty (NPT) and placing its nuclear facilities under the International Atomic Energy Agency (IAEA) safeguards, as an essential pre-requisite for nuclear arms control measures like the NWFZ to come to fruition.

While the concept of a regional NWFZ, therefore, enjoyed wide acceptance, the modalities to achieve it have been the subject of contention, in a region beset with significant security deficit. The Israel-Palestine conflict is still unresolved, while the region has seen numerous inter-state and intra-state wars. The Israel-Arab wars, the Iran-Iraq War, the Kuwait War (1990-91), the 2003 United States (US)-led invasion of Iraq, are examples of inter-state wars that contributed to regional instabilities and security deficit. In order to overcome their perceived security deficits, West Asian states pursued the development and acquisition of conventional as well as non-conventional arsenals. The thesis has placed in perspective the essential aspects of these pursuits.

As shown in Chapter Three, the Israeli nuclear quest began in the early 1950s and it secured significant help from France in its nuclear and missile quests. Israel found Egyptian chemical weapons in the Sinai, after the 1967 War. The comprehensive defeat of the Arabs in the 1967 war did not bring a rethink of their long-standing policy positions on diplomatic recognition of Israel. Since then, Israel has followed a policy of ambiguity and opacity, as it pertains to its nuclear weapons programme. It does not acknowledge that it has nuclear weapons and has not overtly tested a nuclear explosive device but insists that it will not be the first to introduce nuclear weapons into the region, while it uses military force to prevent other regional countries

from developing their nuclear infrastructure. The Israeli military attacks on Osiraq (1981), Al Kibar (2007) and covert operations against Iran are evidence of its muscular policy.

While Egypt has been a champion of regional nuclear arms control since 1974, Iran after 1979 has placed less stress on the NWFZ proposal and has instead embarked on a significant pursuit of conventional and non-conventional capabilities. After the end of the war with Iraq in 1988, Iran pursued ballistic missile capabilities, with assistance from countries like the Russian Federation, China and North Korea. Iran has built a significant capability in medium-range and short-range missiles, as shown in Chapter Five.

Since 2002, when the existence of the Natanz uranium enrichment facility was revealed to the world by an Iranian opposition group, the Iranian nuclear effort has been the subject of much international scrutiny. It has been under United Nations Security Council (UNSC) as well as US and European Union (EU) sanctions, especially so after its referral to the UNSC by the IAEA in February 2006. These sanctions were imposed for its refusal to adhere by the IAEA injunctions to stop its uranium enrichment activities and be more transparent in addressing concerns relating to its nuclear activities. Iran, as a member of the NPT, insisted that it was only pursuing peaceful uses of nuclear technology.

Negotiations between Iran and its P5+1 interlocutors, held from 2006 onwards resulted in the Joint Comprehensive Plan of Action (JCPOA) in July 2015. The agreement imposed significant restrictions on Iran's nuclear infrastructure, in return for the removal of UNSC sanctions and US and EU sanctions waiver. The JCPOA began to be implemented from January 2016, after the IAEA gave a report in December 2015 certifying that it had come to a satisfactory conclusion over Iran's past activities of concern. These activities, under the rubric of, 'possible military dimension' (PMD), had stymied Iran-P5+1 negotiations for many years.

The Trump administration withdrawal from the JCPOA in May 2018 led to renewed uncertainty regarding the fate of the JCPOA. This was especially so after May 2019, a year after the US withdrawal, when Iran stopped following some of its JCPOA commitments, relating to the enrichment of uranium, and started work on advanced centrifuges as well. Such activities were prohibited by the JCPOA. Iran insists that these violations as reversible, as and when the other parties to the agreement, primarily the US, return to compliance with their respective commitments relating to sanctions waivers.

While the Israeli nuclear capabilities was the primary motivating factor impinging on regional nuclear arms control efforts in the last quarter of the previous century, the Iranian nuclear

contentions became the primary factor impacting the contours of the debate about the West Asian NWFZ in the first two decades of this century. The impact of the Iranian nuclear issue on regional arms control efforts, it was contended in the introductory chapter, was not sufficiently explored. Chapter Six critically examined the issue in its broad dimensions. After the ascendance of Iran's nuclear concerns, the focus of the regional nuclear concerns largely shifted from the Israeli nuclear weapons capabilities, to that of Iran's activities. Greater attention was urged to be focussed, at the Gulf Cooperation Council (GCC) and the NPT Review Conferences (Rev Con), on the establishment of the West Asian NWFZ, to avoid not just an Iranian nuclear weapons capability but also to prevent further regional nuclear proliferation.

Regional countries were, therefore, forced to grapple with the implications of the Iranian nuclear progress for their own well-being and regional security. Saudi Arabia explicitly affirmed that it will pursue a nuclear weapons capability, if Iran acquired a similar capability. Sub-regional zones free of nuclear weapons, limited to the Gulf region, were also proposed. Iran's nuclear concerns played an important role at the 2010 NPT Rev Con, which called for the convening of an international conference to discuss West Asia NWFZ. The proposed conference, however, could not be held on account of the geo-political turmoil that the region witnessed, on account of the 'Arab Spring'.

Chapter Five, which focussed on regional conventional capabilities, brought to attention the impact of the issue on regional nuclear arms control and stability. Ballistic missile pursuits have been a critical element of the security postures of the West Asian countries. Significant technical know-how and missiles and missile infrastructure were transferred by external powers like the US and France (to Israel), West Germany (to Egypt), the Democratic Peoples' Republic of Korea (DPRK) (to Iran, Syria, Iraq), China (to Saudi Arabia, Iran) and the Soviet Union (to Iran, Syria, Libya).

Ballistic missiles were seen as effective instruments for power projection given the constraints in developing conventional forces like fighter aircraft, due to economic considerations or arms embargoes. They were also seen as providing domestic legitimacy to the respective governments. Ballistic missiles were viewed as extremely dangerous delivery systems, given the weapons of mass destruction (WMD) arsenals relating to chemical and biological weapons that these countries possessed. Iraq also used such delivery systems to attack targets in Iran

(1980s) Saudi Arabia and Israel during the Kuwait War, even though the missiles were tipped only with conventional warheads.

After the September 2001 terror strikes in the US, successive administrations put in place policy measures to counter what they saw as inimical efforts by countries like Iran in the ballistic missile field. The US erecting a regional missile defence shield, with assets in Europe and Turkey, in turn, led to concerns by Russia and China about the strategic implications on their own security postures. This was because such missile defence assets, which included powerful tracking radars, were seen as endowing the US with greater abilities to counter the Russia and Chinese strategic forces.

Iran's testing of ballistic missiles and space launch vehicles continue to the subject of contention, after the JCPOA. The nuclear deal only specifically dealt with Iran's nuclear concerns. The Trump administration, Israel and some Gulf Arab countries, have opposed the JCPOA for allowing Iran to continue its uranium enrichment activities and for not having provisions to constrain Iran's missile activities. Iran, apart from Russia and China among its interlocutors, insists that it has every right to pursue ballistic missiles to ensure its security.

Iran also points out, as highlighted in Chapter Five, that countries like Saudi Arabia and Israel are recipients of significant amounts of sophisticated conventional weaponry, including anti-ballistic missile systems, advanced fighter aircraft, cruise missiles, among other cutting edge equipment, from sources like the US, the UK and France. Iran, therefore, insists that the sale of such equipment negatively impacts regional security and greater attention should be focussed on stopping such arms trade, rather than focusing on genuine efforts on its part to ensure its national security. It remains to be seen, meanwhile, the mutually agreeable manner in which the Biden administration re-joins the other parties to the JCPOA, as also on whether it would insist on negotiating a follow-on agreement dealing with Iran's regional policies and ballistic missiles development, aspects which Iran is opposed to.

Chapter Five has also shown that apart from ballistic missile pursuits and arms trade, external military interventions have played an important role in determining the regional WMD debate. The 2003 US invasion of Iraq, in search of non-existent Iraqi WMD, led to enormous death and destruction, for the US and for Iraq as well. The Libyan decision of December 2003 to give up its WMD ambitions, though, attributed to ensuring regime security and evade a possible Iraq-style military intervention. The Libyan WMD disarmament decision is also held as proof that tough unilateral and multi-lateral economic sanctions targeting a country's key economic



sectors like its oil industry, coupled with arms bans and strict implementation of key export control regimes like the Missile Technology Control Regime (MTCR) and the Proliferation Security Initiative (PSI), makes it difficult for states on the look out to procure such items for their covert activities and could ultimately lead to their dismantlement.

Non-compliance with the non-proliferation regime treaties like the NPT by regional countries, including the pursuit of covert nuclear activities, played an important role in adding to the trust deficit. In the aftermath of the 1991 Kuwait War, the United Nations Special Commission (UNSCOM) inspections were an important development in the field of regional arms control. The inspections revealed covert Iraqi efforts to pursue WMD, despite being a member of the NPT. The Iraqi, as well as the North Korean examples in the 1990s, led to improvements in IAEA safeguards regime, with key new instruments like the Additional Protocol (AP), coming into being in 1997.

Chapter Seven also brought to attention that only seven West Asian states have signed the IAEA AP, while the Small Quantities Protocol (SQP) is valid in five countries. Among countries with significant civil nuclear energy ambitions in the extended region, only Turkey has still not accepted the Vienna Convention on Civil Liability for Nuclear Damage. The Vienna Convention establishes minimum accepted standards of financial protection in case of damages occurring due to a civil nuclear accident.

The pursuit of civil nuclear energy, meanwhile, is fast emerging as another critical element, as it pertains to regional nuclear confidence building measures (CBMs). The reluctance of countries like Saudi Arabia or Egypt to forego the development of enrichment or re-processing technologies, as the United Arab Emirates (UAE) has done, for instance, stands out. The desire to acquire such proliferation-assisting equipment and technologies has to be viewed in conjunction with the statements by the top Turkish leadership ruing the fact that some regional countries (specifically Israel) continue to possess nuclear weapons and ballistic missiles to deliver those weapons, while Ankara is not allowed to possess such capabilities.

Chapter Seven has also shed light on the possibility of regional countries following CBMs relating to ballistic missiles or their pursuit of civilian nuclear energy, as essential steps to build regional confidence. The Hague Code of Conduct (HCoC) Against Ballistic Missiles Proliferation is an important voluntary measure that generates confidence in the missile activities of member states. It is the only multi-lateral CBM in the sphere of ballistic missiles. Member states are required to provide pre-launch notifications of their missile launches and

satellite tests and annual declarations of their space programmes and ballistic missile programmes. While the Code was adopted in 2002, in the aftermath of concerns generated by North Korea's missile activities, only Jordan, Libya (both in November 2002) and Iraq (in August 2010), are members of the HCoC in the West Asian region, apart from Turkey, Tunisia and Morocco in the extended region. If other states in the region also subscribe to the HCoC, it could bridge the trust deficit to some extent.

The nuclear verification regime that Iran has agreed to as part of the JCPOA is an important example for intrusive and comprehensive verification measures that states can adopt vis-à-vis the IAEA to generate confidence over the exclusively peaceful nature of their nuclear programmes. As the thesis has highlighted, in Chapters Four and Three, the covert pursuit of WMD capabilities by regional countries has negatively impacted regional security. All regional states subscribing to the IAEA AP is, therefore, an essential pre-requisite.

Iran's JCPOA commitments, which Israel unfortunately does not accept as sufficient, are a significant barometer of the extent to which regional states can agree to such restrictions, either due to the pressure that is brought on them or due to the promise of greater economic benefit and political integration with the rest of the region. Further, the JCPOA has unique restrictions that are normally applicable to a NPT member state. For instance, Iran has pledged not to undertake research activities relating to uranium metal, activities which could lead states to develop expertise in designing nuclear warheads. These were precisely activities that countries like Libya and Iraq indulged in covertly, in cooperation with trans-national proliferation networks running out of Islamabad. Such conditions could be made mandatory to other regional NPT member states also, going forward.

The Abraham Accords, signed between Israel and the UAE, in the presence of the Bahraini Foreign Minister and President Trump in Washington on 15 September 2020, are a path-breaking development, given that Arab states had committed to not do so unless there was progress on the Israel-Palestine issue, as part of the 2002 Arab Consensus. Israel has subsequently established diplomatic ties with the North African state of Morocco, as well. Iran's nuclear programme has played an important role in the strategic convergence between Israel and Saudi Arabia, even as there has been no progress in resolving the long-running Israel-Palestine conflict. The Israel-Gulf Arab states rapprochement, however, may not positively impact regional nuclear arms control. The rapprochement only further solidifies the regional

strategic divide, with Israel and the Saudi Arabia-led GCC on one side and the Islamic Republic, on the other.

Israel's NPT non-membership was a critical element that thwarted the only instance of multi-lateral nuclear arms control in the West Asian region, the Arms Control and Regional Security (ACRS) talks. Israel continues to reject the link between NWFZ and the NPT. Given its recognized nuclear capabilities, Israel, for instance, can join the NPT neither as a nuclear weapon state (NWS) nor as a non-nuclear weapon state (NNWS). The challenges relating to the establishment of a NWFZ in West Asia, therefore, continue to be determined by the Israeli nuclear arsenal, even if the Iranian nuclear issue has had an increasingly greater impact in the past two decades.

Egypt, meanwhile, continues to insist on linking its signature to the Chemical Weapons Convention (CWC), to Israel becoming a member of the NPT. As shown in Chapter Seven, apart from Egypt and Israel, all other countries in the region have signed the CWC, while Israel has not yet signed the Biological Weapons Convention (BWC). The West Asian region has seen an unfortunate use of chemical weapons against civilian populations in conflict situations, ranging from Yemen in the 1960s (by Egypt) to Iran in the 1980s (by Iraq) and Syria (by the Assad regime) in recent times. Saudi Arabia and Syria have also not signed the Comprehensive Test Ban Treaty (CTBT), while apart from Libya, none of the major countries of the region have signed the Treaty on the Prohibition of Nuclear Weapons (TPNW) of 2017. Libya, Iran and Israel have signed the CTBT but have not ratified it as yet.

As for the status of global nuclear arms control, the US and Russia have withdrawn from important bilateral conventional and/or nuclear force agreements in recent times. The US withdrawal from the JCPOA in May 2018, the Intermediate Range Nuclear Forces (INF) Treaty in August 2019 and the Open Skies Treaty (OST) in May 2020 have significantly eroded the framework of cooperative, bilaterally as well as multi-laterally negotiated arms control measures. Countries like China have not shown an interest or willingness to be part of tri-lateral arms control efforts, involving the US and Russia.

The aim of the thesis was to place in a historical perspective the reasons accounting for the lack of realisation of a NWFZ in West Asia, despite more than four and a half decades of multi-lateral activism. The first hypothesis underpinning the study was that the regional security deficit, stemming from multiple protracted conflicts, has thwarted efforts to establish a NWFZ in West Asia. The thesis has brought to attention the negative implications for regional stability

and security due to military interventions by external powers, wars of aggression by regional countries on their neighbours, and the continuing lack of formal diplomatic relations between Israel and most of its regional neighbours. The first hypothesis, therefore, has been substantiated, with historical evidence to buttress the claim.

The second hypothesis underpinning the study was that the pursuit of sophisticated conventional as well as non-conventional capabilities by regional countries reinforced as well as exacerbated the prevailing security deficit. The thesis has brought to attention the negative implications flowing out of the regional pursuit of sophisticated delivery systems like ballistic missile capabilities and significant conventional arms trade involving high-technology equipment like ballistic missile defence systems, cruise missiles and advanced combat aircraft. The non-conventional pursuits of countries like Israel, Iran, Iraq, Libya and Syria, spanning nuclear, chemical, and biological weapons field, reinforced as well as exacerbated the prevailing security deficit, and thwarted efforts to establish a NWFZ. The second hypothesis, therefore, has also been substantiated and proven.

Regional countries agreeing to establish geo-graphically defined NWFZs has been an important element of nuclear arms control in the nuclear age. Even in instances where regional NWFZs have been formed successfully, the thesis brings to attention the fact that the ratification of such zones by member states and their subsequent entry into force, was delayed substantially, in some cases. The entry-into-force of the Tlatelolco treaty, negotiated in 1967, for instance, happened only in September 2002. It took 15 years for the African NWFZ treaty to enter into force, after it was signed in 1995. The reluctance of the NWS to sign the protocol to the Southeast Asian NWFZ treaty is proof of the continuing contentions relating to the South China Sea and freedom of navigation, particularly as it pertains to the movement of nuclear-powered warships or submarines.

The difficulties involved in negotiating a similar treaty for the West Asian region, given the serious security deficit, therefore, continues to be enormous. States abutting the region, like Turkey, are under the US nuclear umbrella while countries like Pakistan possess nuclear weapons themselves, though not recognised by the NPT. Iran, therefore, is essentially surrounded by nuclear weapon powers on all sides, if one takes into account the significant US military presence near its periphery.

In the West Asian context, if ever a NWFZ is established, it will be a testament to the regional nations overcoming their continuing security and trust deficits—over and above the difficult

task of coming to terms with the reality of the Israeli nuclear arsenal. The challenge of establishing a NWFZ in the West Asian region, therefore, is not substantially different from the enormous challenges involved in working towards general and complete disarmament (GCD). Nations voluntarily and unilaterally giving up their nuclear arsenal continues to be an isolated event. South Africa remains the sole example of a country that possessed a nuclear arsenal, albeit made up of less than ten assembled nuclear weapons, but gave up those weapons in 1993 and joined the NPT.

The dominant thinking in key countries in West Asia and in its extended neighbourhood, as detailed in Chapter Seven, meanwhile, is privileging the development of critical nuclear technologies that could endow them with the weapon option, if they so desired in the future. In the global context of a diminishing nuclear arms control architecture, coupled with the regional context of continuing security deficits, nuclear arms control efforts like the WMDFZ are likely to be further relegated lower down in the spectrum of policy choices to be pursued to achieve regional strategic stability.

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