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REGIONALISING THE JCPOA: THE IRANIAN NUCLEAR DEAL AS A GUIDELINE FOR A WMD FREE ZONE IN THE MIDDLE EAST?

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Meeting of the Joint Commission on the Joint Comprehensive Plan of Action (JCPOA) in Vienna, Austria, December, 2021.

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The establishment of a Weapons of Mass Destruction-Free Zone (WMDFZ) in the Middle East has recently re-emerged in international debates as a result of the United Nations (UN) holding a conference on the topic. How should the international community and states in the region address the issue in order to make the Middle East a more secure place, and what lessons should be learned from past initiatives in this area to avoid the collapse of the current UN process? These questions have taken on a new urgency in global debates on arms control and disarmament.

In light of this, the current report aims to present proposals derived from empirical experience of non-proliferation in the Middle East region. The report focuses specifically on the Joint Comprehensive Plan of Action (JCPOA), which has been the only successful attempt to address WMD in the region, as a means of supporting the creation of a WMDFZ. The failure of past initiatives on this matter are largely due to the fact that the debate on the WMDFZ was limited exclusively to the WMD field. Instead, we propose a process whereby WMD control and disarmament efforts are closely linked to confidence-building measures (CBMs) and processes, thus, demonstrating that both dimensions are equally relevant.

Using this as a guide, we discuss the initiatives undertaken in recent decades to develop a WMDFZ in the Middle East. Such a comparison with past initiatives and the different approaches used to address the WMDFZ enables us to identify both the challenges of this initiative and the steps to be taken to achieve it. We then discuss the main regional and extra-regional obstacles to the creation of the zone, and finally analyse the JCPOA to ascertain whether or not it can serve as a model for the creation of the WMDFZ.

Based on this analysis, we concluded that the JCPOA provides states in the region and the international community with a solid toolbox of ideas and measures to prevent nuclear proliferation in the Middle East. In this sense, the Iranian nuclear deal undoubtedly represents normative progress, as it empirically and verifiably prevents Iran from developing nuclear weapons, while providing positive incentives for peaceful uses of nuclear energy. However, we also conclude that the agreement itself cannot be automatically translated into a WMDFZ due to reasons of scope and negotiation context. That said, since its adoption the JCPOA has been heavily criticized by states both within and outside the region and, as a consequence, its impact as an instrument for non-proliferation has been greatly underestimated. At the same time, Iran's most recent breaches of the agreement, increasing the chances of the Islamic Republic going nuclear, make it unclear whether the agreement will be able to serve as a viable regulatory framework for the region's nuclear activity in the near future. However, this report does not seek to discuss whether the agreement will survive or not, but rather aims to examine its provisions in a broader regional context. Thus, taking into consideration the content of the JCPOA, we outline what CBMs should be conducted, with a particular focus on those linked to peaceful uses of nuclear energy, in order to pave the way for future WMDFZ negotiations.

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1. INTRODUCTION

The Middle East is characterised by multiple overlapping rivalries, security challenges, and mistrust between regional states. It is worth noting that the Middle East has been one of the few regions where weapons of mass destruction have been used since 1945, and where there have been several clandestine attempts to develop nuclear weapons programmes. This makes the WMDFZ a categorical imperative.

This was made evident by the comments made by Iranian Foreign Minister Javad Zarif following the adoption of the JCPOA in 2015, where an expansion of the agreement to the region as a whole was proposed (Haghirian 2017). As this illustrates, the creation of a WMDFZ in the Middle East is increasingly being advocated.

This interest in the WMDFZ is driven by several recent developments and events, such as the use of chemical weapons in the ongoing conflict in Syria, the threat of the collapse of the JCPOA in the face of the US withdrawal and Iran's violations, and the interest shown by several states in the region in developing their own nuclear programmes.

Most political and academic debates on the WMDFZ focus on the different approaches to achieving the goals set out and why those approaches were chosen. One frequently asked question is whether the WMDFZ should be a precondition for a broader process of regional dialogue for security and stabilisation in the region, or whether it should be the end result of such dialogue and progressive confidence-building measures (Kubbig/Weidlich 2015). This report attempts to avoid this dialectical trap by outlining a regional CBM initiative, emphasising the dilemma of and the link between regional tensions and arms control.

In our view, the vital debate on how to create a WMDFZ should not be limited to arguments in favour of disarming Israel first or of initiating a disarmament dialogue without addressing regional and sub-regional tensions. Instead, this debate would be better grounded in clear empirical examples of regional restrictions on WMD proliferation. In this regard, it is important to take into account the fact that arms control and disarmament do not take place in a political vacuum, but in fact require an environment of predictability and trust between the parties involved, largely facilitated by institutions.

In light of this, the current report reviews and analyses several issues with respect to the WMDFZ. Firstly, we examine the initiatives carried out in recent decades to establish the WMDFZ. Such a comparison with past initiatives and the different approaches used to address the WMDFZ enable us to identify both the challenges of this initiative and the steps to be taken to achieve it. Indeed, most arms control initiatives have not been particularly successful in addressing WMD in the region—with one exception, that being the JCPOA. Consequently, we analysed this agreement to ascertain whether or not it can serve as a model for the creation of the WMDFZ. Based on this analysis, we conclude that the JCPOA equips the states in the region and the international community with a robust toolbox of ideas and measures to prevent nuclear proliferation in the Middle East. However, we also conclude that the agreement itself cannot be automatically translated into a WMDFZ in the region due to rea-

sons of scope and negotiation context. Thus, taking into consideration the content of the JCPOA, we outline what CBMs should be conducted, with a particular focus on those linked to peaceful uses of nuclear energy, in order to pave the way for future WMDFZ negotiations.

2. THE MIDDLE EAST WMDFZ PROPOSAL: A HISTORICAL CONTEXTUALISATION

The idea of establishing a Nuclear Weapons-Free Zone (NWFZ) in the Middle East was first proposed by the Soviet Union in 1958 (Baklitskiy 2013). The issue was subsequently discussed in the region over the next decade in the framework of the Committee for the Denuclearization of the Middle East, a group of Israeli intellectuals who saw a nuclear Israel as endangering the country's existence.

At the same time, the 1968 Treaty of Tlatelolco established the world's first NWFZ in Latin America and advocated the same type of initiative being replicated by other regions of the world, including the Middle East. However, unlike the Mexican-led initiative, the implementation of a NWFZ in the Middle East, which was formally proposed in 1974 by Egypt and Iran, sparked a diplomatic conflict that has proven difficult to resolve ever since.

In order to ascertain the views of the parties involved in this issue, in March 1975, the UN Secretary-General sent a *note verbale* to the states of the region. Egypt, Jordan, Iran, Iraq and Syria indicated that membership of the Nuclear Non-Proliferation Treaty (NPT) was mandatory if such a zone were to become operational. However, countries such as Kuwait expressed reservations about this because of Israel's nuclear arsenal and the fact that it was not part of the NPT. Jordan took a similar position, stating that a NWFZ in the Middle East would not be feasible without Israel's ratification of the NPT (UNSG 1975). For its part, Israel announced that it "wishes to state its support for the establishment of a nuclear weapon-free zone in the Middle East and considers that this would be a desirable further step towards a just and durable peace in the region" (UNSG 1975: 1), particularly given the rapprochement with Egypt that was underway at the time, and even went so far as to propose the possibility of holding a regional conference on the matter. However, Israel continued to refuse to sign the NPT because of the remaining tensions with its regional neighbours (UNSG 1975). These early reactions illustrate the political difficulties in establishing a NWFZ in the region, and positions have remained virtually unchanged since then.

Proposed members of a Middle East Nuclear Weapons-Free Zone or Weapons of Mass Destruction-Free Zone



Source: PRIF's own compilation, based on <https://www.mapchart.net/world.html>, license: CC BY-SA 4.0.

As a result of the use of chemical weapons during the Iran-Iraq War (1980–1988) and the confirmation in 1991 that Iraq was secretly developing a nuclear programme, Egypt declared the need to promote the establishment of a WMDfZ (Moussa 1990; 1991).

This new proposal was further developed during the Madrid Conference¹ (Goldblat 2002), where five multilateral groups were created. It was, however, during the Arms Control and Regional Security (ACRS) in the Middle East talks between May 1992 and December 1994 that the idea of a NWFZ and WMDfZ in the Middle East really began to take shape. Little in the way of tangible progress towards establishing a zone emerged from these meetings, but the overall outcome of the ACRS is no less significant. Peter Jones (2011: 2) stated that the “ACRS was a considerable success in many ways. It accomplished a great deal, particularly in the elaboration of several far-reaching confidence-building measures”. Moreover, it was the first time that Israel had sat at the same table as its regional partners to discuss arms control issues.

¹ The 1991 Madrid Peace Conference was an attempt by the international community to begin a peace process between Israel and the Palestine Liberation Organisation, Syria, Lebanon and Jordan.

The issue of a Middle East WMDFZ also started to appear in other fora, such as the NPT Review Conference (RevCon). The 1995 RevCon adopted the Middle East Resolution, which led to the reaffirmation of the will to create a WMDFZ in the region at subsequent RevCons², notably in 2010 where several steps towards the creation of such a zone were taken (Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons 2010). The convening of a conference on the WMDFZ by the UN Secretary-General and the co-sponsors of the 1995 Resolution (US, UK and Russia) in 2012, with the attendance of all the Middle Eastern states, was particularly interesting as it would have allowed the different parties to meet under one roof and talk directly. However, the 2012 conference did not come to fruition.

The reasons it did not take place are varied, and include factors that are both exogenous and endogenous to the region itself. First, the Arab Spring and its impact on the stability of several states in the region. Second, the issue of Iran's nuclear programme and the outbreak of civil war in Syria. Third, the growing tensions between Russia and the United States over potential violations of the Intermediate-Range Nuclear Forces (INF) Treaty. Fourth, the US backtracking on its commitment to convene the conference.³ Fifth, a facilitator and host government for the conference were not chosen until October 2011, which gave them barely a year to make all the necessary arrangements (Lewis 2014).

Nevertheless, consultations were held between 2013 and 2015, and two meetings were even organised in Switzerland in 2014, where several parties, including Israel, attended. Indeed, at the NPT RevCon Preparatory Committee (PrepCom) of 2013, the Finnish ambassador introduced several ideas regarding the operationalisation of the WMDFZ. However, disruptive events between the 2010 and 2015 RevCons (e.g., Egypt walking out of the 2013 PrepCom in protest) led to a fragmentation of the Arab states' position.

The 2015 RevCon ended without consensus on an outcome document, partly as a result of disputes over the organisation of a Middle East WMDFZ conference. The US blamed the Egyptians for putting forward unworkable suggestions, and the US was blamed for acting on behalf of Israel (Associated Press 2015). However, out of this failure a proposal emerged, made by the Arab League in 2017, in which the importance of achieving NPT universality and the need for WMDFZ conference to begin before the 2020 NPT RevCon was emphasised (United Nations 2017).

2 It is important to point out that the Middle East Resolution was an essential bargain to achieve the extension of the NPT. The Resolution remains key to understanding subsequent and ongoing debates on the creation of the Middle East WMDFZ.

3 In its final statement at the 2010 RevCon, the US was quick to make clear that it did not fully support the language of the outcome document with regard to the Middle East, arguing that its "ability to deliver [the commitment to work towards a WMDFZ] has been seriously compromised because the outcome document singles out Israel in the Middle East section, a fact that the United States deeply regrets" (Tauscher 2010). Only hours later, a statement by US national security adviser, General James Jones, cast further doubt on the impact of the 2010 outcome document on the establishment of the WMDFZ. This virtually ruled out the possibility and repeatedly emphasised America's unwavering support for Israeli security and its condemnation of the language used in the outcome document (The White House. Office of the Press Secretary 2010).

At the 2017 and 2018 PrepComs, states in the region continued to express dissatisfaction with the lack of progress towards a Middle East WMDFZ conference. According to a 2018 working paper produced by the Arab Group of 12, “three states, two of which are sponsors and depositaries of the 1995 resolution on the Middle East, prevented the 2015 Review Conference from adopting an outcome document to serve Israel’s interests” (Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons 2018). Furthermore, the document stated that “saying that nuclear weapon-free zones should be freely established by the States concerned does not mean that the international community can abdicate its responsibilities” (Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons 2018). Iran, for its part, complained that “in practice, some parties to the Treaty, representing the Israeli regime at review conferences, oppose decisions on the realisation of this zone” (Najafi 2018). For Egypt, the failure to implement past Middle East-related decisions “has eroded the credibility of the NPT and can potentially represent another setback in the NPT review process” (Amer 2017). At the same time, Cairo stressed the need for “new ideas and alternative approaches” to implementing the 1995 resolution, suggesting that the co-sponsors had “a special duty to present their ideas and chart the way forward” (Amer 2017).

For its part, the United States noted that the recommendations on the Middle East contained in the Final Document of the 2010 Review Conference, while well intentioned, can no longer be considered an appropriate basis for action on this issue (Ford 2018). The announcement was preceded by a lengthy debate on the futility of promoting a WMDFZ while ignoring the fact that “states make sovereign decisions about entering into arms control agreements according to their own security perceptions and political concerns” (Ford 2018). According to the US, the “realities that continue to impede progress in the region” are “the lack of trust among states in the region, ongoing conflicts and non-compliance in the region, the horrific use of chemical weapons by Syria and non-state actors, and the non-recognition of Israel by many states in the region” (Wood 2017). The US also criticised regional advocates of a WMDFZ for their “misguided attempts to coerce an outcome, or to hold the NPT review process hostage”, rather than engaging directly with their neighbours (Wood 2017). In addition, the US argued that such an approach had already proved detrimental to both the NPT review process and the goal of a WMDFZ zone in the Middle East, and had forced the US and other countries to break consensus at the 2015 Conference (Wood 2017).

Regional supporters of the WMDFZ rejected the 2018 US position. According to Egypt, “a set of issues that renders the NPT review cycle incapable of addressing the Middle East zone free of weapons of mass destruction” and is “in total disagreement with [...] the US co-sponsorship of the 1995 resolution and the consensus agreed by all NPT states parties on the importance of this issue”. Moreover, this approach could “jeopardise the success of the ongoing review cycle and risk further failure” (Egypt’s statement at the 2018 PrepCom).

Once again, the UN Secretary-General was requested to convene a conference on a WMDFZ. However, this time the request came from sources outside the NPT. Egypt argued that the proposed UN-facilitated process would “serve as a platform to address all regional disarmament and non-proliferation challenges, and to establish a strong regional security framework for regional security lead-

ing to sustainable peace and collective security dialogue and diplomacy” (The Permanent Mission of Egypt to the United Nations 2018). This has allowed for a new framework to be created, especially with regard to the incorporation of Israel into the process, since any initiative taking place outside the NPT will be seen positively by Israel and it might even intervene, directly or indirectly, or at least will not impede the functioning of the conference (Finaud 2022). In this sense, this conference opens a window of opportunity to re-engage with Israel on arms control as well as other contentious regional issues outside the NPT framework through secondary tracks. Although there have not yet been any tangible results, the attendees still have high expectations, especially with regard to the potential presence of Israel and the resolution of tensions in the Persian Gulf between Iran and Saudi Arabia (Finaud 2022).

3. CURRENT CHALLENGES FOR THE CREATION OF A WMDFZ IN THE MIDDLE EAST

Based on the review in the previous section, it could be argued that the main regional actors do not perceive the threat of WMD use as an immediate security threat. While they all see the benefits of a WMDZ, competing security priorities receive more attention than the zone itself. The growing security challenges facing the region, however, may lead to a snowball effect of cascading proliferation. Due to rivalries and the potential shift in the balance of power, many Arab states have shown an interest in acquiring nuclear technology to enhance their prestige, bolster regime security, match Iran’s capabilities and deter Israel or other potential adversaries. It is only a matter of time before countries in the region use national security to justify their push for nuclear weapons. Thus, in this section we will review the main regional WMD proliferation-related threats, as well as the perspectives and positions of the key regional actors with regard to this threat, in order to understand the main impediments to the creation of a WMDFZ in the Middle East.

3.1 REGIONAL PROLIFERATION DYNAMICS

For decades, extra-regional powers have only paid lip service to the goal of disarming the Middle East, and significantly altered the stability of the region. Efforts to promote guided democracy have shifted the situation in the region from cooperative actions to defensive reactions. As a result, instead of establishing a broad-based regional security framework in the Persian Gulf and creating the necessary mechanisms for cooperation and collective security, countries in the region are seeking security guarantees from major powers outside the region.

Largely from the 1980s onwards, the US, in its attempt to contain Iran’s hegemonic ambitions in the region, has strengthened a trilateral alliance with Israel and the Arab states, which has led to a militarisation of the region. In fact, states in the region increasingly see weapons of mass destruction as an attractive alternative, one that costs less, is easily accessible, will result in deterrence and will increase the power asymmetry in the region.

Moreover, apart from regional states, there are other types of actors that should be considered potential disruptors of any process that seeks to establish a WMDFZ in the Middle East. These include terrorist groups, such as the Islamic State of Iraq and Syria (ISIS) and Al-Qaeda extremists, which would threaten non-proliferation. These radicals would not be subject to any constraints, they would use weapons of mass destruction to unleash mayhem and terror on population centres. A commentary supporting this thesis is the statement by Nasir bin Hamad al-Fahd, a Salafist scholar: "If the unbelievers can be repelled [...] only by using weapons of mass destruction, then their use is permissible, even if you kill them without exception" (Cited in Mousavian/Kiyaei 2020: 96).

The possibility of extremists in weakly governed states, such as Iraq, Syria and Libya, acquiring access to fissile or other materials that can be used in the development of WMD shows the serious risk to the region. An expanding network of illicit trade in nuclear or other radioactive material will exacerbate this situation across international borders. It is plausible to assume that such illicit trade will become a more prominent concern as Al-Qaeda or ISIS seek weapons of mass destruction. In this respect, Israel's nuclear arsenal becomes a highly desirable target for these groups, and rather than ensuring Israel's own security, it becomes a source of insecurity for the country and the entire region should any of these groups manage to infiltrate Israeli facilities and steal nuclear components and materials.⁴

Moreover, non-state actors and terrorist groups expose Israel's nuclear weapons arsenal and the decades-old Dimona reactor, located within the larger Shimon Peres Negev Nuclear Research Centre, to the risk of a conventional weapons attack.⁵ Such an attack could result in a deadly release of radioactive material and cause widespread destruction, with a significant human cost and irreversible environmental, economic and psychological impact. If current trends continue, there is a high risk of WMD proliferation and possibility of weapons ending up in the hands of by terrorist groups that could wreak havoc.

3.2 REGIONAL STATES' BEHAVIOUR AND POSITIONS

3.2.1 ISRAEL

Israel is the only country in the region that possesses nuclear weapons and maintains an official policy of ambiguity regarding its nuclear arsenal. It continues to neither sign nor ratify the NPT and is excessively opaque with regard to its nuclear programme, which precludes any serious discussion on the issue of a WMDFZ. The absence of reporting, inspections and verification of Israeli facilities puts the region at risk from potential undeclared nuclear incidents or nuclear terrorism.

4 It is also possible that these actors could receive materials from new clandestine nuclear smuggling networks, or from states like Syria, Iraq or Libya, which all had WMD programmes in the past but which struggle with unstable governance today.

5 Let us recall that in October and November 2012, as well as in July 2014, Hamas fired several rockets at the Dimona reactor.

The international community has made various attempts to encourage Israel to accede to the NPT. On several occasions, at the International Atomic Energy Agency (IAEA) General Conference, member states expressed their concern over Israel's nuclear arsenal and tabled a resolution detailing some of the reasons for that concern: "Israeli nuclear capabilities and about the threat posed by the proliferation of nuclear weapons to the security and stability of the Middle East ... [and] the States directly affected by the issue of Israeli nuclear capabilities, either by their geographical position or their influential role on the international scene" (Cited in Director General of the IAEA 2010: 10). Other example would be the December 2009 IAEA General Conference where the Agency expressed "concern about Israeli nuclear capabilities" and called "on Israel to accede to the NPT and place all its nuclear facilities under full-scope IAEA safeguards" (IAEA 2009). Israel rejected this, calling it "politically motivated" and "incompatible with the basic norms and principles of international law" (Cited in Director General of the IAEA 2010: 35). Israel also rejected the invitation to the WMDFZ conference scheduled for December 2012, and made its participation in the negotiations on the zone conditional on the evolution of the conflict with Palestine and on its recognition by the other states in the region.

As early as September 1975, the then Israeli Prime Minister, Yitzhak Rabin, declared: "in case there is a comprehensive agreement, that is, a peace agreement, we will sign all agreements on a non-proliferation treaty" (Cited in Marom 1986: 46). These preconditions, especially intertwined with a protracted conflict, have not only hindered any progress towards creating the WMDFZ, but have also formed the basis for Israel's maintenance of its nuclear arsenal.

In this sense, the main reason Israel maintains its nuclear arsenal is deterrence, as this ensures that it has a way to discourage regional aggression, especially since it has been at war with its Arab neighbours on many occasions (Sanchez 2014). This justification was articulated by then Prime Minister Shimon Peres: "We did not build this [nuclear] option to get to Hiroshima but to get to Oslo. We thought that the reason Israel was attacked several times without any provocation was because some of our neighbours thought they could overpower us, and we wanted to create a situation in which this temptation would not exist" (Cited in Bahgat 2006: 1).

So, as we can observe, Israel sees regional tensions and conflicts as an obstacle to its own disarmament. It believes that attempts to establish a WMDFZ in the region are premature and argues that "genuine regional arms control measures can only be advanced through a gradual process" that "begins with confidence-building measures and mutual recognition" and is "followed by the transformation of tensions, hostilities, latent conflicts and a state of war into lasting and peaceful relations". According to Israel, "the most significant threats to the non-proliferation regime and the NPT come from countries in the Middle East that pursue or continue to pursue nuclear weapons under the cover of NPT membership" (IAEA 2014).

Despite the central role of Iran's nuclear programme in Israel's threat perception, this perception does not seem to be affected by the JCPOA.⁶ The Israel Atomic Energy Commission (IAEC) noted

6 Now, with the change of government in Tel Aviv, Israel is reconsidering its rejection of the JCPOA and refraining from criticising its resumption, which may have positive implications for the ongoing UN process (Finaud 2022)

in 2016 that “despite the recent agreement, Iran remains a destabilising force in the Middle East”. It cited “blatant concealment and duplicity, as demonstrated by Iran’s known weaponisation activities”, and argued that “Iran’s commitment to the JCPOA must be assessed with a long-term perspective” (Snir 2016). Nevertheless, Israel points out its willingness to engage in broader regional security discussions: “any regional event should emerge from the region, based on direct dialogue among all states... to address a broad regional security agenda, based on the indispensable principle of consensus among regional parties” (IAEA 2014).

Israel’s main fear with regard to the WMDFZ is that it does not have adequate verification mechanisms in place to ensure that all states in the region can disarm. Without a credible guarantee that other regional states will not proliferate, Israel will never sign a legally binding agreement. In this sense, any process that seeks to establish a WMDFZ, and wants Israel to be a signatory, will require the question of recognition and normalisation of Israel as an actor in the region to be taken seriously. However, at the same time, concerted diplomatic efforts, with incentives and repercussions, are needed to change the Israeli position and advance the zone’s prospects of realisation.

3.2.2 IRAN

Iran, which like Egypt was one of the states that submitted the proposal to create an NWFZ in the Middle East, has consistently maintained its position on this matter. However, its commitment has declined as a result of accusations that it is trying to develop a nuclear programme for military purposes.

Iran’s nuclear effort was initially designed to enable the country to develop a civilian nuclear programme, but the secretive nature of certain aspects of its nuclear programme, its economic inefficiency, and evidence of attitudes linked to weapons development have led to the conclusion that Iran’s programme in fact seeks to develop nuclear weapons (Fitzpatrick 2015).

One of the most controversial issues is that most of Iran’s acquisitions before 2003 were undeclared, tacitly violating its safeguards agreement with the IAEA (Director General of the IAEA 2003). Moreover, Iran began enriching uranium in 2006, triggering UN sanctions that remained active until 2015. However, through the Joint Plan of Action (JPOA) in 2013 and the JCPOA in 2015, Iran committed to suspend uranium enrichment.

Until the signing of the JCPOA in 2015, the possible military dimension of Iran’s nuclear programme was seen as one of the biggest obstacles to a WMDFZ in the Middle East. But hopes of the JCPOA having a positive effect on progress in the Middle East quickly withered as Saudi Arabia and Israel questioned Iran’s intention to adhere to the terms of the JCPOA. In theory, we would expect resolving the question of the possible military dimensions of Iran’s nuclear programme to foster greater trust between its neighbours, an essential element for negotiations. In reality, it angered Israel and Saudi Arabia, both of which felt that the JCPOA should have included elements to limit what they see as hostile regional behaviour by Iran (Amidror 2015). Nevertheless, Iran has expressed willingness to

address other issues outside the JCPOA (i.e. ballistic missiles), provided that the framework of the agreement can be made to function properly again (Finaud 2022).

The problem with Iran, especially following the US withdrawal from the JCPOA in 2018, is that it possesses all the technical equipment and scientific know-how necessary to produce weapons-usable enriched uranium. For example, the Pilot Fuel Enrichment Plant (PFEP) at Natanz contains advanced centrifuges capable of efficiently producing enriched uranium. The PFEP can accommodate 984 centrifuges, and Iran uses the facility to test new centrifuge designs such as the IR-3 and IR-4 and to further enrich low-enriched uranium produced at the Fuel Enrichment Plant (FEP). Another example would be the four research reactors at Esfahan and Tehran, as well as the heavy water reactor at Arak, which can produce enough plutonium for military use.

While before 2015, there were indications that Iran developing an atomic device was a more tangible possibility (Director General of the IAEA 2011b), since then, Iran has been behaving in compliance with the agreement—at least until 2019. However, in the last three years, Iran has enriched uranium above the limits allowed by the JCPOA, and prevented IAEA inspectors from carrying out inspections of the facilities safeguarded by the agreement. Added to this is the latest episode of confrontation between the IAEA and Iran with the shutdown in June 2022 of the Agency's surveillance cameras at Iranian facilities, leaving the IAEA and the international community unable to observe Iran's nuclear activities.

3.2.3 EGYPT

Egypt, despite being one of the countries that proposed the creation of the NWFZ, is also the country that has failed to sign and ratify the largest number of agreements in this policy area. For example, it has not signed the Chemical Weapons Convention (CWC) or the IAEA Additional Protocol, nor has it ratified treaties such as the Biological Weapons Convention (BWC), the Comprehensive Test Ban Treaty (CTBT) and the African Nuclear-Weapon-Free Zone Treaty (ANWFZ). Egypt argues that it keeps these ratifications pending in order to exert leverage over Israel to sign the NPT (Esfandiary 2014).

On the other hand, the official rationale for Egypt's active support for the WMDFZ in the Middle East is the elimination of the WMD threat in the region, but the realities on the ground and Egypt's behaviour throughout the process suggest that its motivations are not so simple. Previously, the detection of WMDs in the region, or rather, the possibility of them being developed, might have justified Egypt's position. But now, with the invasion of Iraq in 2003 and the destruction of Syria's chemical arsenal in 2013, as well as the signing of the JCPOA, it seems increasingly clear that the sole purpose of Egypt's support for the WMDFZ is the disarmament of Israel. This has reinforced current Israeli claims that the Middle East WMDFZ is aimed only at them (James Martin Center for Nonproliferation Studies & Vienna Center for Disarmament and Non-Proliferation 2012).

3.2.4 IRAQ

Iraq developed a clandestine nuclear programme in the past, which was finally dismantled in 1991. This was the first case of clandestine regional proliferation detected in the region and it had significant impact on the NPT and how nuclear proliferation was prevented afterwards (i.e. it led to the adoption of the Additional Protocol). Nowadays, most of the infrastructure of this programme has disappeared and Iraq's nuclear programme is now exclusively for civilian purposes.

The risks of WMD proliferation from today's unstable Iraq no longer centre on the government, but on the possibility of non-state and extremist actors taking advantage of Baghdad's fragility to acquire, produce and use WMD.

3.2.5 LIBYA

Libya began its weapons of mass destruction programmes when Muammar Gaddafi came to power in the midst of the Cold War. Although Libya initially had no direct threats, it considered Israel and the United States as symbols of colonialism and imperialism in the region (Puga Álvarez 2019). Libya's interest in acquiring this type of weaponry arose in the 1970s with a view to increasing its influence on the African continent and in the Middle East, especially after reports during the Yom Kippur War (1973) that Israel had nuclear weapons. By the early 1980s, Libya had already developed rudimentary production capacity, which lacked autonomy, however, as it had no means of producing its own precursors and was dependent on imports (Pita/Domingo 2016). The ambiguity of Israel's nuclear programme prompted Gaddafi, in 1996, to argue for the need for Arab countries to arm themselves with nuclear weapons (Puga Álvarez 2019). However, economic sanctions against Libya, the invasion of Iraq in 2003, as well as poor access to nuclear material were incentive enough for Gaddafi to decide to end all his WMD programmes in the mid-2000s.

However, since the overthrow of Gaddafi in 2011, the Libya's fragile governance has led to the emergence of terrorist groups in the country and it becoming a safe haven for terrorists, who have control over land, people, weapons and resources. In this sense, there is a high probability that terrorists will use the country as a launching pad for attacks with more lethal means if they gain access to WMD materials.

3.2.6 SYRIA

Syria has been accused on several occasions of clandestinely attempting to develop a nuclear programme for military purposes. Like Iraq, it had a nascent clandestine nuclear programme until September 2007, when Israel bombed the Deir ez-Zor reactor (Director General of the IAEA 2011a). This led to the adoption of a United Nations Security Council (UNSC) resolution, but requests for further clarification by Syria on the matter have led to inconclusive results. It has been speculated that the reactor would have been capable of producing plutonium. However, the absence of a reprocessing

plant also makes this hypothesis somewhat dubious (Wright 2008). In any case, the secrecy both before and after the 2007 bombing suggests that the reactor was not being used for peaceful purposes.

Currently, risk mitigation with regard to WMD in Syria is primarily focused on dismantling the Syrian regime's chemical weapons stockpile, as well as on preventing non-state actors from getting hold of this and other WMD materials.

3.2.7 GULF COUNTRIES

There are also regional rivalries, which have grown as the region has become increasingly militarised. Most states justify this course of action as being a response to Iran's regional ambitions, especially in the Persian Gulf. The major divergence between Iran and its Gulf neighbours results from their approaches to the question of how to achieve security and stability in the Gulf itself. Iran argues that this issue has been dominated by Western powers for the past four centuries, and stresses the need for the region to assume a more prominent role in its own security and stability. On the other hand, the Gulf Cooperation Council (GCC) argues that the only way to preserve the region's security is through a political and security alliance with the United States.

While we can discern an overall standpoint in the GCC, positions do vary between the Gulf monarchies, for example, the lifting of sanctions combined with the constructive diplomatic relations between Iran and the international community has the potential to significantly empower Tehran at Riyadh's expense. Saudi Arabia's fear of losing regional power has been exacerbated by the deterioration of US-Saudi relations, which have become totally unstable and unpredictable. The expected increase in Iranian liquidity and militarisation due to sanctions relief reinforces Saudi fears that Tehran may use the JCPOA to increase its support for Shia actors in the region, thus allowing the Islamic Republic to gain an advantage in Syria and Yemen. Another important consequence of the deal for Saudi threat perceptions is the fear that the US re-entering the agreement may imply the resumption of further US rapprochement with Iran, a fear which is exacerbated by the simultaneous reduction of the US presence in the Gulf. In this sense, Saudi Arabia is deeply concerned that Tehran could once again become the main pillar of the US order in the Middle East.

In the nuclear domain, while Saudi Arabia shares the assumption that the JCPOA effectively prevents Tehran from acquiring nuclear weapons, the temporal limitation of the agreement is of great concern to Riyadh. It believes that its neighbouring state's uranium enrichment programme has simply been put on hold and will continue as soon as the restrictions expire. This fear is heightened by the end of Tehran's financial isolation. An increase in monetary assets would allow the Islamic Republic to modernise its nuclear infrastructure and conventional weaponry. Thus, despite the unprecedented scope of its restrictions, the JCPOA did not reduce the Saudi threat perception. Indeed, it may even have increased Saudi security concerns, which will still need to be addressed in the context of Riyadh's own extraordinarily large military procurement programmes.

In addition to the conventional military build-up, Saudi Arabia is likely to continue investing in its civilian nuclear programme, keeping the option of a uranium enrichment programme on the table. Moreover, improved security relations with Pakistan, a nuclear-weapon state, suggest that Saudi Arabia might actively consider purchasing Pakistani nuclear warheads should Iran eventually seek nuclear weapons capabilities (Bowen/Moran 2015).

When it comes to Bahrain, while this Gulf country has generally supported Iran's right to peaceful uses of nuclear energy and formally welcomed the JCPOA, it shares Saudi fears of an empowered neighbour. Bahrain's main concern is that the JCPOA could jeopardise the stability of its Sunni minority regime. Consequently, Bahrain-Iran relations are extremely tense.

Relations between Iran and Kuwait, however, have changed for the better, mainly due to the mutual interest of the two countries in a stable and peaceful Iraq. However, sharing the concerns of its fellow Gulf Arabs, Kuwait fears that Iran will seek regional supremacy (Althunayyan 2015). While Kuwait perceives several threats in relation to the Iranian nuclear deal, it also highlights the potential for increased bilateral cooperation.

Qatar, for its part, has not expressed any deep fears about Tehran's policy at any point during the negotiations on the Iranian nuclear issue. It even voted against UNSC Resolution 1696, which called on the Islamic Republic to end its uranium enrichment programme. Moreover, despite its own Shia minority and its engagement in Syria and Yemen, Qatar maintained an inclusive perspective, seeing Tehran as an important part of the solution to regional security dilemmas (Cafiero 2016). This stems from its strong economic ties with Tehran: The two countries share the world's largest natural gas field and are equal partners in the Qatar-based Gas Exporting Countries Forum (GECF). Since its economic prosperity depends heavily on natural gas exports, Qatar has a vested interest in avoiding any conflict in the Gulf involving Iran.

The United Arab Emirates (UAE), however, shares the Saudi position that Tehran poses a serious security threat in the Gulf. The Emirates has the same concern as other Gulf countries that an influx of financial assets could allow Iran to increase its support for militant proxies in regional conflicts. Having already suffered heavy losses in Yemen, the UAE fears that sanctions relief will ultimately tip the balance in favour of the Islamic Republic.

Finally, Oman's traditional approach to foreign policy is to foster alliances with all its neighbours and to move cautiously between Iran and Saudi Arabia. Despite its GCC membership and close relations with Riyadh, Muscat maintains its friendship with Tehran. These close ties are largely based on mutual economic and security interests. To ease tensions over Iran's nuclear programme, Oman brokered and successfully facilitated the first secret meeting between the US and the Islamic Republic in the summer of 2012. Risking its position within the GCC, the sultanate hosted a number of both clandestine and official meetings between the negotiating parties, contributing significantly to the completion of the JCPOA four years later.

4. THE JCPOA: A GUIDELINE FOR MOVING TOWARDS A WMDFZ IN THE MIDDLE EAST?

Having reviewed the main proliferation challenges and regional positions on these issues, in this section we will get to the crux of the matter and analyse whether the JCPOA can serve as a model for the creation of the WMDFZ. In this regard, it is worth mentioning that the JCPOA is the most comprehensive nuclear non-proliferation agreement ever drafted; it contains the most complete verification and transparency mechanisms ever applied in the history of nuclear diplomacy; it eliminates the ability of countries to produce and separate plutonium for constructing a nuclear weapon and limits the level of enrichment to less than five percent; and it includes the possibility of sanctions in case of non-compliance. In addition to innovative measures to keep proliferation activities in check, the JCPOA has strengthened the IAEA safeguards, especially Iran's commitment to implement the IAEA Additional Protocol.

This makes it attractive to hypothesise about the possible regionalisation of some of its contents to close the gaps in non-proliferation and guarantee peaceful uses of nuclear energy in the Middle East. On the other hand, the weakening of the JCPOA can also be seen as a wake-up call to explore possibilities for regional cooperation on non-proliferation, in which at least some aspects of the agreement could be preserved. This could pave the way for regional restrictions on proliferation-sensitive activities, as well as measures on spent fuel management and uranium enrichment.

Although the JCPOA was specifically aimed at resolving the Iranian nuclear conflict, the composition of the final document may serve as a basis for parts of the final WMDFZ agreement. The sections of the JCPOA dealing with improved monitoring and verification tools for nuclear activities and infrastructure, the conflict resolution mechanism, and the confidence-building measures derived from both nuclear cooperation and peaceful uses of nuclear energy are particularly useful here. Ultimately, the survival of this agreement and the process that will see the international community succeed or fail in resolving the current impasse will have implications for the chances of creating a WMDFZ in the Middle East.

4.1 THE JCPOA NEGOTIATION PROCESS

In 2002, The National Council of Resistance of Iran, an Iranian opposition group in exile, presented evidence that Iran had secretly built two nuclear facilities: one at Natanz, for uranium enrichment, and the second at Arak, to produce heavy water that could be used to make plutonium. On the basis of this information, and other IAEA investigations, IAEA Director General Mohamed ElBaradei reported that Iran had failed to comply with its safeguards obligations.

The foreign ministers of France, Germany and the UK decided to open negotiations with Iran by offering technical cooperation in exchange for an agreement to suspend uranium enrichment and implement the IAEA Additional Protocol. Negotiations continued for several years. However, after the election of Mahmoud Ahmadinejad as president of Iran in 2005, Iranian negotiators rejected the

talks and resumed uranium enrichment activities (Associated Press 2006). This led the IAEA Board of Governors referring Iran to the UNSC in February 2006.

On 23 December 2006, the UNSC adopted Resolution 1737, which imposed the first UN sanctions on Iran's nuclear programme (UNSC 2006). In the years that followed there were several attempts to reach a compromise,⁷ all of which were unsuccessful, leading to the US and the EU imposing several unilateral sanctions on the Iranian oil sector (UNSC 2010).

On 14 June 2013, Hassan Rouhani was elected president of Iran. He ran on a platform of economic reform, which called for the lifting of sanctions imposed on Iran, and was mandated by Iran's Supreme Leader to resolve the nuclear crisis. On the US side, there was renewed determination to end the crisis during Barack Obama's second term as president. As a result, the talks that followed in September 2013 were quite constructive. Iran submitted a proposal containing a broad framework for a comprehensive agreement and interim CBMs to be adopted in the short term, and on 24 November 2013, the JPOA was adopted as a roadmap to a final comprehensive agreement⁸ (U.S. Department of the Treasury n.d.). In April 2015, negotiators concluded a 'framework' agreement, which outlined the key parameters of a final agreement, and finally, in July 2015, the EU3+3 and Iran agreed on the JCPOA, which outlined restrictions on Iran's nuclear programme and detailed verification and implementation measures in exchange for sanctions relief and the right to pursue a peaceful nuclear programme (U.S. Department of the Treasury n.d.).

The JCPOA negotiations provide a model for conducting multilateral negotiations and provide an example of the concessions and political will required by all parties for such a major process to move forward. Thus, a closer look at the process that resulted in the JCPOA, with details on the key elements of the agreement, offers a realistic and plausible approach to achieving the broader ambition of ridding the region of all weapons of mass destruction. An examination of these efforts and the key milestones detailed below can offer insight into the arduous process necessary to implement a WMDfz that requires the backing of the entire Middle East.

The first prerequisite is flexibility. A successful process is not a set in stone, but allows for changes of course and consultation between the negotiating parties, as well as between the negotiators and their capitals. A process that includes dialogue with experts and officials on specific issues will simultaneously ensure that progress in some areas is not held back by the lack thereof in more complicated ones.

Secondly, the availability and understanding demonstrated by participants in the negotiations is important. The JCPOA negotiations were conducted over a relatively short period of time, during which experts (scientific, technical and political) were available and in constant contact with each

7 These included the presentation of a negotiating platform by Iran in 2008; a fuel swap proposal between Russia and the US in 2009; and an attempt to negotiate a separate fuel swap deal with Brazil and Turkey in 2009.

8 The JPOA used a reciprocal approach whereby Iran would suspend various activities related to its programme and the EU3+3 would suspend certain sanctions, facilitate humanitarian trade, and cease efforts to reduce Iranian oil sales.

other. This will also be key for the negotiations on the Middle East WMDFZ. One of the problems, however, is that several states in the region do not currently have the necessary expertise for such high-level technical negotiations. It will be essential to develop this expertise and, above all, to listen to these experts when they make recommendations to the political-level negotiators, who will have to reach compromises. In addition, dialogue participants must show an understanding of the contexts and constraints faced by their peers. The nuclear negotiations were successful because the US negotiating team understood some of the difficulties faced by the Iranians at home. This did not mean that they had to give in to Iranian demands, but that they were able to sympathise with those difficulties and show flexibility in the negotiating process. It also meant that the Iranians found it less difficult to explain the national context and constraints to their counterparts. This availability and understanding creates a flexible environment for the participants in the talks, which fosters a greater willingness to compromise, rather than a refusal to budge.

Thirdly, the JCPOA process involved a mix of “carrots” and “sticks” to ensure that a compromise was reached. Both were necessary to secure agreement from all parties. However, the use of “sticks” will be more difficult in the WMDFZ process because states negotiating a zone must all be treated equally. No party can force another to compromise. Rather, any compromise must be reached by offering a compromise in return.

Finally, constant interaction between each of the negotiators, especially once the initial formalities were completed, was key to the success of the JCPOA negotiations. This will also be vital in the WMDFZ talks. Individuals developed relationships with each other, which naturally lowered and, in some cases, removed barriers to dialogue altogether. The fact that participants became acquaintances and then even friends meant that proposals and ideas were not automatically viewed with suspicion. The additional obstacle to the WMDFZ talks is that some participants refuse to sit down with each other and negotiate directly. This must be overcome because refusal to talk only makes the security situation even less stable for all states.

However, all this was only possible because there was a sense of urgency or crisis which was conducive to resolving the Iranian nuclear agenda. The same cannot be said of the WMDFZ. There is no impetus for the creation of the zone from the states involved. Reaching an agreement on Iran's nuclear programme thus differs from reaching an agreement on a WMDFZ. In the former, the international community was seeking an agreement on a state's nuclear activities. In the latter, a number of Middle Eastern states have to agree to a comprehensive ban on the existence, use and future possession of WMD in their region. While the morality of the ban is not in question, the ability to reach an agreement in a region fraught with deep-rooted historical distrust and animosity is. For this very reason, it is essential to take some of the negotiation approaches from the nuclear agreement and try to apply them to the dialogue on the zone. Above all, the flexibility of the process, the development of mutual understanding on all sides and the human relations aspect proved to be the keys to success.

4.2 PROVISIONS OF THE JCPOA

Through the JCPOA, the Iranians agreed to reduce the number of centrifuges to 6,104, but only 5,060 of the first-generation IR-1 models were approved to operate until 2025. The IR-2 and other advanced models were to be dismantled and stored at Natanz under IAEA safeguards. The Fordow facility was ordered to cease uranium enrichment and uranium enrichment research for 15 years. Once converted into a nuclear physics and technology centre, Fordow could house no more than 1,044 IR-1 centrifuges in six cascades in one of its wings. Two of the cascades were to be modified to produce radiosopes for medical, agricultural, industrial and scientific use. The other four cascades were to remain inactive. Iran could retain 300 kg of 3.67 percent enriched uranium and would reduce its stockpile of 10,000 kg low-enriched uranium (LEU) by either blending it or selling it abroad (Joint Comprehensive Plan of Action 2015).

The conversion of the Arak heavy water research reactor was performed in order to support peaceful nuclear research and production needs. The power of the redesigned reactor was not to exceed 20 MW and was prevented from producing plutonium, in keeping with the ban on plutonium production that the JCPOA imposed on Iran. Some of the heavy water plants (HWP) were to be used to modernise the reactor and the rest were to be exported to international markets. The agreement encouraged Iran to pursue the new technology, which favoured light water reactors and made it impossible to stockpile heavy water or build heavy water reactors for 15 years (Joint Comprehensive Plan of Action 2015).

To prevent Iran from cheating on the JCPOA, the agreement provided a strict protocol of safeguards. In this sense, the deal includes a number of verification and monitoring activities that go beyond the requirements and scope of a comprehensive safeguards agreement and the Additional Protocol. These include continuous monitoring of certain nuclear sites, such as uranium mines, uranium mills and centrifuge production centres, for a period of between 15 and 25 years; prior approval of the import or export of certain dual-use materials for ten years; continuous monitoring of enrichment levels; daily access for inspectors to Natanz and Fordow for 15 years; recourse for the JCPOA Joint Commission to resolve access disputes between the IAEA and Iran within 24 days; and a ban on certain weapons-related activities without prior approval in perpetuity (Arms Control Association 2021).

To implement these safeguards, IAEA uses a new generation of surveillance technology. Methods include fibre-optic seals on equipment that electronically send information to the IAEA and infrared satellite imagery to detect covert locations. In addition, environmental sensors that can detect minute signs of nuclear particles, tamper-resistant and radiation-resistant cameras, accounting software for information gathering, and anomaly detection using big data, which monitors Iran's dual-use imports, are particularly promising. Human oversight has also been increased, as the number of IAEA inspectors has tripled from 50 to 150 (Joint Comprehensive Plan of Action 2015). In addition to the IAEA, the national intelligence agencies of the United States, Israel and other countries also monitor Iran's programme unofficially (Ya'alon 2015).

One particular procedure address IAEA concerns about Iran's efforts to develop nuclear capabilities at undeclared locations. The IAEA has the right to access such sites to verify the absence of nuclear materials and activities that were either undeclared or inconsistent with the agreement. In the event that Iran rejects such a request or does not allay the IAEA's concerns, the JCPOA will trigger a special arbitration process that can last up to 24 days. Iran and the IAEA have 14 days to resolve disagreements between them (Rezai 2019). If they fail to do so, the Joint Commission, a body made up of representatives of the US, Britain, France, Germany, Russia, China, the European Union and Iran, will have a week to examine the information that initiated the IAEA's request. A majority of the Commission (at least five of the eight members) could then decide to require Iran to act. The majority rule provision means that the US and its European allies could not be vetoed by Iran, Russia and China. If Iran were not to comply with the decision within three days, sanctions would automatically be imposed (Joint Comprehensive Plan of Action 2015).

4.3 REGIONALISING THE JCPOA

While the final fate of the JCPOA is uncertain, its provisions can generate the necessary conditions for any arms control, disarmament and non-proliferation efforts in the Middle East, serving as a promising stepping stone to reintroduce the idea of a WMDFZ for the entire region. The established set of limitations, transparency, and confidence-building measures related to Iran's nuclear activities outlined in the JCPOA present an unprecedented opportunity to regionalise limitations, verification, monitoring and other provisions (Glaser et al. 2015).

The JCPOA was adopted at a time when other states in the region were planning to pursue or expand their own nuclear programmes, and its aim is indeed to achieve a balance between the civilian use of nuclear energy and the development of advanced technical capabilities towards the construction of nuclear weapons. Simultaneously, by curtailing the risk of nuclear proliferation it contributed to a stabilisation of the difficult security situation in the region. In this sense, to reduce the risk of international conflict and ensure the safe development of nuclear energy programmes, key components of the JCPOA, such as banning the separation of plutonium; limiting the level of uranium enrichment; and limiting and reducing current stockpiles of fissile materials available for nuclear weapons could be used in the region to strengthen the non-proliferation argument (Von Hippel et al. 2013).

Referring back to the first point above, states in the region could adopt the JCPOA's prohibition on plutonium reprocessing on a regional basis, the list of prohibited activities necessary to "weaponise" nuclear material in Annex T, and the IAEA's Additional Protocol to enhance monitoring, safeguards and verification of the region's fledgling civilian nuclear programmes. However, the most sensitive issue here would be the requirement of Israel to shut down the Dimona reactor and end reprocessing in a way that is verifiable by the IAEA. Beyond the above-mentioned compromises, satellite or airborne infrared sensors should be able to verify the operational status of Israel's Dimona plutonium production reactor, while the total plutonium production declared by Israel could be confirmed by nuclear archaeology techniques (Gasner/Glaser 2011). With regard to uranium enrichment restrictions,

all states in the region should be guided by the IAEA's 5 percent maximum allowable level⁹ (Glaser 2008). Only research facilities that require highly enriched uranium to operate, which must be under IAEA supervision, may exceed this maximum.

There is also the possibility of adopting certain structural elements of the agreement on a regional basis. For example, countries in the region could create a body responsible for the implementation of and resolution of conflicts over any agreed measures, such as the Joint Commission. The creation of such a body as part of an arms control or regional security process in the Middle East could become a regular forum for states in the region to meet, share information, cooperate and build trust. Such structures are not unique to the JCPOA and have proven useful in other regions and agreements where all participants can meet despite the lack of diplomatic relations between some of them (Müller et al. 2018).

With regard to transparency and verification, like Iran, other countries in the region that have not ratified the Additional Protocol should agree to do so (IAEA 2021). However, what is interesting for the potential development of the WMDFZ in the Middle East is its inspection and monitoring regime. The JCPOA established the most intrusive monitoring regime applied by the IAEA worldwide. Under the deal, Iran would provisionally fulfil the conditions of the IAEA's Additional Protocol, which allows the agency access to any site where it has reason to suspect that fissile material activity is taking place. Beyond this instrument, the IAEA would monitor Iran's uranium mines and plants, centrifuge production and assembly sites, and procurement supply chains for 20–25 years. A dispute resolution process was also set up to resolve disagreements over the implementation of IAEA access and other provisions.

The JCPOA's limits on civilian nuclear capability have no equivalent in the NPT either. The limits, imposed for 15 years in the case of enrichment and heavy water reactors, would prevent Iran from suddenly rushing to build nuclear weapons undetected. The IAEA would monitor the production of key centrifuge parts for 20 years, and track all uranium oxide for 25 years, until 2036 and 2041, respectively. These controls, if included in the WMDFZ talks, would undoubtedly block any attempt by states in the region to acquire nuclear weapons.

The potential positive value of these additional measures is that they place limits on nuclear activities of possible concern and introduce levels of transparency that, taken together, provide predictability and stability for an extended period after the entry into force of the JCPOA. Additional transparency measures could be ten years of monitoring the purchase of dual-use materials, 20 years of continuous monitoring of uranium enrichment centrifuge production, and 25 years of continuous monitoring of uranium mining and milling. There are also open-ended commitments, such as not separating plutonium. In this sense, it seems logical for the WMDFZ to adopt some of the contents and time schedules of the JCPOA.

9 Despite the JCPOA's 3.67 percent limitation, it is highly unlikely that regional states would agree to less than 5 percent based on arguments pertaining to international standards.

Some of the JCPOA's core obligations may end before a WMDFZ treaty enters into force. It is therefore uncertain what the scale, nature and transparency of Iran's nuclear activities will be when a possible WMDFZ treaty enters into force, unless the treaty stipulates the scope and transparency of these activities for an agreed time after entry into force. While a Comprehensive Safeguards Agreement allows IAEA inspection of declared sites, the Additional Protocol provides IAEA inspectors with access to all parts of the nuclear fuel cycle, complementary access¹⁰ to all buildings on a nuclear site, and allows for the collection of environmental samples at sites other than the declared ones. States must also specify the location of nuclear fuel cycle activities, including operating and closed uranium mines (IAEA 1997). Following the JCPOA, states could regionalise and extend the duration of transparency measures, or make them permanent beyond the Additional Protocol.

To this end, states in the region could complement IAEA safeguards with the creation of regional institutional structures to carry out verification work. A Middle East regional organisation, possibly together with the IAEA, could oversee the operations of any fuel cycle facilities in the region, such as uranium enrichment plants, and monitor all nuclear materials used in any enrichment facilities, including uranium mining and purification, uranium imports, conversion of uranium-to-uranium hexafluoride (UF₆) for enrichment or UF₆ after enrichment. Modelled on the JCPOA, a Middle East WMDFZ could include an agreed system of verifiable nuclear fuel cycle restrictions, initially limited in time, but with the potential to be made indefinite.

There are also a number of CBMs derived from various elements of the JCPOA that can be employed in the WMDFZ negotiation process. The experience of nuclear security engagement with Iran under the JCPOA can be applied more generally for the benefit of the entire region. It is worth noting that Annex III of the JCPOA provides for the possibility of civilian nuclear cooperation, which allows Iran to engage "in the field of peaceful uses of nuclear energy and to engage in mutually determined civil nuclear cooperation projects including through the involvement of the IAEA" (Joint Comprehensive Plan of Action 2015: 5). The JCPOA further states that the EU3+3 and international participants¹¹ will engage with Iran, including through the IAEA, in joint technical cooperation projects "in the field of peaceful nuclear technology, including nuclear power plants, research reactors, fuel fabrication, agreed advanced joint R&D activities, such as fusion, establishment of a state-of-the-art regional nuclear medical centre, personnel training, nuclear safety and environmental protection, as detailed in Annex III. They will take the necessary steps, as appropriate, for the implementation of these projects" (Joint Comprehensive Action Plan 2015: 17). In this regard, Annex III details a list of 40 potential areas of nuclear cooperation. Should such areas be developed, this could also be used to foster closer regional cooperation (Khlopkov 2021). This enables Iran to strengthen its international cooperation

10 Complementary access is requested in a number of situations, often when inspectors visit a declared facility and ask, for example, to see another building on the site that the IAEA does not routinely inspect. This right to rapidly expand access to declared facilities was included in the Additional Protocol in the early 1990s, after it was revealed that work on Iraq's pre-war nuclear weapons programme was being carried out at sites the IAEA had visited but in buildings the inspectors did not frequently check.

11 This section of the agreement allows non-member states to participate in cooperation in the peaceful uses of nuclear energy, opening the door for Israel or the Persian Gulf states to deepen their relations with Iran in these politically uncontroversial areas (Finaud 2022).

on various scientific and technological projects within the energy sector, and provides the opportunity to rebuild trust in Iran as a reliable international actor (Rezaei 2019).

Another productive approach taken in Annex III is its openness to states not party to the agreement. This approach could be useful for the preparation of any eventual Middle East agreement. It would allow for the involvement of more international partners from outside the region that are not formally part of the agreement but can make a positive contribution to its implementation. For example, states outside the region can encourage and support dialogue in the Middle East with a view to reaching tangible agreements, as well as confidence building in general. States outside the Middle East that are major nuclear suppliers could also play a role in the technological projects, including the exchange of best practices in the safe operation of nuclear facilities.

Also related to the experience of the JCPOA in the broader Middle East context is the idea of conducting non-proliferation projects, where possible, on a commercial basis. Projects like this would also allow the scientific and technological capabilities of states in the region to be used for advanced nuclear applications. Examples of commercial nuclear projects implemented in the spirit of Annex III include the export of 32 metric tons of Iranian heavy water to the United States (Davenport 2022). The project was implemented in the context of Annex I of the JCPOA to bring the Iranian nuclear programme into compliance with the terms of the JCPOA. However, it was also clearly in accordance with the spirit of Annex III, as of the 32 tons of heavy water imported from Iran, six tons went to the Spallation Neutron Source (SNS), the world's most powerful accelerator machine for generating neutrons for research purposes, located at Oak Ridge National Laboratory (Davenport 2022). The project thus demonstrated the possibility of using commercial approaches in the implementation of non-proliferation initiatives.

At the same time, Iran's expertise in the field of peaceful use of nuclear energy could serve as a basis for cooperation in the region.¹² Iran and the GCC countries could consolidate their shared position on this issue and continue to urge other world powers and responsible countries to advance this initiative and rid the Middle East of nuclear weapons. Nuclear cooperation will not only help improve bilateral and multilateral relations, but will also be an important factor in inhibiting WMD proliferation in the Persian Gulf region and beyond. Adopting a more practical approach to encourage the states of the region to develop civil nuclear energy may be a good way to stabilise future nuclear competition without singling out Iran.

In this regard, the regional multilateralisation of uranium enrichment could function as a twin-track initiative to build confidence among states in the region and re-engage Iran as a responsible nuclear non-proliferation actor. The idea of multilateralising uranium enrichment was put forward by the IAEA as early as 2005, which led, a year later, to Iran proposing the creation of a regional consortium as a way out of the crisis surrounding its own uranium enrichment activities. Based on IAEA safe-

¹² However, this does not mean that, for example, in the field of energy security, the states in the region should focus exclusively on nuclear energy, but that cooperation in the peaceful uses of nuclear energy can build sufficient confidence to enable those states to address other issues regarding the future of energy and energy security in the Middle East (Finaud 2022).

guards, Iran's proposed regional consortium would have been jointly operated on a cost-sharing, benefit-sharing, and labour-sharing basis, depending on the expertise of the participating country (Iran Watch 2006). At the time, his proposal was largely ignored. However, in 2014, the idea re-emerged when Mohammed Shaker,¹³ then chair of the Egyptian Council on Foreign Affairs, argued that the JPOA negotiations had created the conditions for the achievement of a multilateral nuclear fuel cycle in the Middle East. Shaker argued that incorporating Iran's nuclear programme within earlier plans for an Arab nuclear fuel cycle would not only provide a "technical-diplomatic solution to the Iranian nuclear problem", but also avoid the proliferation risks "inherent in multiple investments in nuclear fuel cycle technologies by Middle Eastern states" (Shaker 2014). Harnessing Iran's advanced nuclear programme made more sense than relying on an exclusively Arab effort, given that Arab states' nuclear capabilities were still at an early stage (Shaker 2014). With this approach, certain activities could be carried out jointly (e.g., mining or equipment production), all parties could benefit from economies of scale in terms of business operations and management, and joint activities would build bridges and reduce the gap in control over and knowledge of nuclear technologies. In turn, regional control would have "beneficial spillover effects on mutual confidence", beyond the nuclear domain (Shaker 2014). However, states would need to agree on very intrusive inspections and control mechanisms for all regional actors (Moniz 2019).

This is already a problem due to Israel's nuclear status and the fact that its voluntary item-specific agreement with the IAEA is expected to end with the upcoming decommissioning of the Soreq Research Center, which will render a number of critical facilities ineligible for inspection. Several other countries in the region do not accept the IAEA Additional Protocol and its more intrusive safeguards regime. In light of this, rather than relying only on the IAEA's inspection regime, it would be necessary to establish a regional verification system operationalised through a regional organisation along the lines of the European Atomic Energy Community (EURATOM) or Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC). It should be noted that this type of organisation has significant capacity for self-deterrence, as a violation of commitments would lead to sanctions by the rest of the members of the organisation.

Another clear advantage of multilateral enrichment facilities is the sharing of the high financial burden. To address and balance the demands for nuclear energy and technology acquisition, one option is to establish a multinational uranium enrichment facility in Iran.¹⁴ The facility could follow the URENCO¹⁵ model and supply nuclear fuel to civil nuclear power plants throughout the Middle East. Such an initiative could dispel regional concerns about Iran's post-JCPOA nuclear activities; foster regional relationships and confidence with regard to nuclear fuel; and mitigate the proliferation

13 Dr Mohamed Ibrahim Shaker was an Egyptian diplomat and political scientist. He held several functions, including Ambassador to the IAEA in New York, Deputy Delegate of Egypt to the UNSC and Ambassador of Egypt to the United Nations Agencies in Vienna. He was also a member of the IAEA Board of Governors, General Representative of the IAEA to the UN in New York, and member of the Advisory Council of the UN Office for Disarmament Affairs.

14 The choice of Iran as the site for the establishment of this facility has technical reasons, as Iran is the only country in the region with sufficient know-how and infrastructure to operate all stages of the nuclear fuel cycle.

15 Urenco is an Anglo-German-Dutch company which supplies uranium enrichment services using the centrifuge process.

risk from other potential national enrichment programmes in the region. Undoubtedly, a multilateral agreement on uranium enrichment would be a good confidence-building measure limiting the potential for proliferation in the region. Greater transparency, joint ownership and fuel supply would not only contribute to regional cooperation, but would also be a step towards the broader ambition of creating a WMDFZ. In addition, consideration should be given to the establishment of a fuel bank for the region.¹⁶

Whether it would be possible to obtain sufficient regional support for this initiative is another matter. It is unlikely that Iran would allow a level of foreign influence over its domestic enrichment programme that would limit its ability to acquire a large-scale enrichment infrastructure if it so desires. Moreover, other Middle Eastern states, particularly those in the Persian Gulf, would probably be unwilling to depend, for their fuel supply, on a facility over which Iran had physical control, regardless of their level of multilateral involvement. On the other hand, Saudi Arabia, and perhaps other states in the region that wish to keep their nuclear weapons option open, can be expected to resist any multilateral arrangement that would require them to give up their right to acquire their own national enrichment programmes.

This leads to another relevant issue with regard to any future multilateral site for collective uranium enrichment in the Middle East—the existence of sufficient trust on all sides. It is not only a matter of Iran guaranteeing access to facilities, materials and fuel to the other states in the region, but, from a political point of view, Iran must also be seen as a reliable partner to carry out this enterprise. Without this trust, along with the political and business foundations, no multilateral uranium enrichment facility will be viable no matter how many (regional or global) verification mechanisms are in place. In this sense, states in the region should approach sharing technology and know-how from a win-win, non-zero-sum game point of view and avoid a winner-take-all situation regarding access to and use of nuclear technology.

A multilateral approach based on voluntary self-restraint with respect to the fuel cycle in exchange for economic security and non-proliferation benefits may represent an acceptable compromise. Such exchanges are generally more viable than a full domestic programme and would also help control proliferation risks (Shaker 2010). Therefore, pursuing nuclear energy development cooperatively offers economic, technological, security and non-proliferation advantages to all countries in the region.

All the above-mentioned provisions have the advantage of normalising elements of the JCPOA and creating a broader non-proliferation doctrine, making certain JCPOA provisions less exceptional and more of a standard of practice. However, for all this to be applicable, US re-entry into the agreement and its full implementation by Iran is mandatory in order to reduce tensions and provide a more suitable climate for negotiations. A return to implementation of Annex III projects would open up new

16 A nuclear fuel bank holds stocks of low-enriched uranium from countries with uranium enrichment capabilities and supplies countries that do not have the technology to enrich fuel for their power reactors (UN News 2009). An international nuclear fuel bank aims to bring uranium enrichment under multinational control to reduce proliferation risks and deter countries from establishing their own enrichment facilities and to ensure nuclear fuel supplies to those countries.

opportunities to apply this experience in the region. This would be an important element in building confidence between states in the region and increasing mutual transparency in the framework of efforts to establish a WMDFZ in the Middle East. In this regard, and given that several states in the region are looking to develop their own nuclear programmes, regional implementation of certain provisions of the JCPOA in the field of nuclear cooperation and peaceful uses of nuclear energy is essential to ensure that such programmes do not lead to nuclear proliferation.

The nuclear deal must not be seen as a blueprint, but as an essential departure point for the discussion of controversial issues and thus as a means to enhance security and stability in the region. Exploring the transformative potential of the JCPOA must be seen in this context, as it is a unique agreement not only because it is the only empirical case of proper regional non-proliferation controls, but also because of its unprecedented scope and intrusiveness with respect to nuclear-related provisions, and also due to its sanctions provisions and the associated financial and economic dimensions.

The JCPOA and the WMDFZ differ significantly in both scope and objective. The JCPOA's objectives included limiting Iran's ability to develop nuclear weapons by extending the breakout time to one year, in exchange for sanctions relief and international civilian nuclear cooperation. The goal of the zone is to rid the entire Middle East region of all weapons of mass destruction and their delivery systems, which is more ambitious.

Another element that makes the two issues entirely different is the negotiating process. One of the main differences between the JCPOA and the WMDFZ processes has been the vastly different power dynamics between their respective participating states. The JCPOA includes six of the world's most powerful states (five of which have nuclear weapons and rights of veto in the UNSC) and the EU on the one hand and Iran on the other, with clear asymmetries in their political, economic and military capabilities. Given the disparity in power and the objectives of the agreement, each side committed to different obligations. Iran agreed to a series of restrictions on its nuclear programme, some of which expire over time, while the EU3+3 committed to lifting sanctions and participating in peaceful nuclear cooperation. This disparity has been a defining feature of the EU3+3 nuclear negotiations with Iran and the JCPOA, but is largely absent in the context of the Middle East WMDFZ.

While it is true that different states in the region possess different overall and WMD capabilities, in a WMDFZ all states would assume identical obligations. They will probably question the applicability of this framework to a WMDFZ in the Middle East for three reasons: the relative equality among states in the region; the fact that most are not subject to a web of strict WMD-related sanctions; and JCPOA participants' negative experience of sanctions. One option is collective sanctions that would be imposed by Middle Eastern states in response to a violation of the zone's provisions by a member state. These sanctions could be modulated according to the severity of the violation, ranging from diplomatic censure to full sanctions. Another option, though this and the above course of action are not mutually exclusive, stems from the JCPOA as well as NWFZs in other regions and would involve delegating implementation to the UNSC, which could formulate a comprehensive response to a serious violation by a member state of the WMDFZ.

Finally, another feature of the JCPOA that derives from differential power dynamics and which is absent in the context of the zone is the pressure exerted on the countries of the region. While Iran was under great pressure to negotiate the JCPOA, the same does not apply to most states in the region when it comes to signing an agreement on a WMDFZ.

5. CONCLUSIONS

The prospects for establishing a WMDFZ in the Middle East appear bleak. From the outset, the proposal for such a zone, the first of its kind, faced several obstacles. For Arab states, such a process should start without preconditions. Israel, however, prefers to address regional security issues more comprehensively.

Another factor that has contributed to this stalemate is the inherent incompatibility between the current process and the political and security interests of the countries involved. So far, the steps taken by the Arab countries suggest that their interest in the Middle East WMDFZ is primarily to dismantle Israel's nuclear arsenal. Israel's response to the process, on the other hand, reflects its desire for direct talks and official relations with its neighbours. Throughout the process, Israel has called for a more holistic approach to disarmament as part of a regional security framework. Arab states are not opposed to this idea, but cannot accept it without the inclusion of the Palestinian issue. It is at this point that most talks stall.

Nevertheless, establishing a WMDFZ in the Middle East is imperative if more dangerous regional developments with catastrophic consequences are to be avoided. This process will be progressive and will include multiple dimensions in which hard and soft security issues related to specific regional developments will be addressed in a multiplicity of fora, involving a multiplicity of actors. However, it is unlikely that the current UN-led process will be able to move forward and bear fruit without addressing the sense of regional security inequality stemming from nuclear asymmetry (Müller/Baumgart-Ochse 2015). In this sense, there has to be a profound change in the region that leads its member states to no longer perceive WMD as legitimate foreign policy instruments. Part of this change consists in the recognition of all states in the region. In this regard, the most pressing issue is the recognition of Israel and Palestine. On the other hand, a stable peace will require the development of regional institutions and norms regarding the use of conventional weapons and a verifiable ban on all WMD (Prawitz/Leonard 1996).

The fate of a WMDFZ in the Middle East is thus closely linked to the pacification of the region. Ending the occupation of Palestine and the support for terrorism are two essential issues that must be addressed by the UN in order to move both processes forward in tandem. Even if there is a change in regional states' positions on this and other issues, the WMDFZ will have serious difficulties establishing itself as a stable solution a result of regional procedures, contents and practices, as well as an increase in the number of actors involved.

While it is unlikely that such a zone can be established any time soon, it should be possible to make progress on several of the building blocks for it. Region-wide commitments to refrain from separating plutonium for any purpose, to limit uranium enrichment to levels necessary for power and research reactors, and to conduct any enrichment activity only within the framework of a multinational agreement would be important achievements. These should be reciprocal commitments, meaning they must come not only from the side of the Arab states or Iran, but also from Israel. International and regional verification of such commitments would provide greater confidence that possible proliferation risks were being minimised.

The JCPOA is therefore a useful source of ideas and initiatives to be applied in a future WMDFZ, but as we have seen, it is not a blueprint that can be transposed one-to-one. The agreement was the result of a specific set of circumstances: an Iranian state standing alone in negotiations against major world powers and under immense economic and political pressure, but determined to maintain a nuclear programme it considered vital to its national interests. The result was a compromise in which Iran restricted its nuclear activity in exchange for sanctions against it being lifted. The process of creating a WMDFZ is very different. Its potential parties in the region are at very different stages of nuclear development and have very different ambitions for their nuclear programmes. Some states are determined to retain their nuclear capabilities or at least keep open the option of developing them. Unlike the JCPOA, where there were considerable pressures and a perceived urgency to reach an agreement within two years, Middle Eastern countries face little pressure to reach an agreement, and the process has remained largely a political exercise for more than 30 years. The parties have not yet had to meet the specific requirements of a regional WMDFZ. However, while the JCPOA cannot be replicated at the regional level, it contains a number of elements that could be used as CBMs in the region. A more in-depth analysis of the Joint Comprehensive Plan of Action is therefore required as it is the sole successful empirical model for preventing the proliferation of nuclear weapons in the region.

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ACRONYMS

ABACC	Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials
ACRS	Arms Control and Regional Security
ANWFZ	African Nuclear-Weapon-Free Zone Treaty
BWC	Biological Weapons Convention
CBM	Confidence-building measures
CWC	Chemical Weapons Convention
CTBT	Comprehensive Test-Ban Treaty
EURATOM	European Atomic Energy Community
FEP	Fuel Enrichment Plant
GCC	Gulf Cooperation Council
HWP	Heavy water plants
IAEA	International Atomic Energy Agency
IAEC	Israel Atomic Energy Commission
INF	Intermediate-Range Nuclear Forces Treaty
ISIS	Islamic State
JPOA	Joint Plan of Action
JCPOA	Joint Comprehensive Plan of Action
LEU	Low-Enriched Uranium
NPT	Non-Proliferation Treaty
NWFZ	Nuclear Weapons-Free Zone
PFEP	Pilot Fuel Enrichment Plant
PrepCom	Preparatory Committee
RevCon	Review Conference
SNS	Spallation Neutron Source
UF6	Uranium hexafluoride
UK	United Kingdom
UN	United Nations
UNSC	United Nations Security Council
WMD	Weapons of Mass Destruction
WMDFZ	Weapons of Mass Destruction-Free Zone
US	United States

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MANUEL HERRERA ALMELA //

REGIONALISING THE JCPOA: THE IRANIAN NUCLEAR DEAL AS A GUIDELINE FOR A WMD FREE ZONE IN THE MIDDLE EAST?

The establishment of a Weapons of Mass Destruction-Free Zone (WMDFZ) in the Middle East remains an urgent item on the international agenda. But which approach has the best prospects of success? The author presents the positions of the most relevant states in the Middle East in terms of weapons of mass destruction (WMD) and then analyses the Joint Comprehensive Plan of Action (JCPOA), which has been the only successful attempt to contain WMD in the region to date. He concludes that while the JCPOA is not a blueprint for the establishment of a WMDFZ, it provides many ideas and steps for confidence-building measures that can pave the way for future negotiations.

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