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**INTRODUCTION**

The Iranian missile program started at the end of the Iran Iraq war to address the threat of the Iraqi missile launches against its territory. At that time, the Iranian regime was particularly jeopardized by the international support to the Iraqi regime, letting it alone to fight a technologically superior enemy. The end of its relations with Western powers deprived Iran from its former defense partners. Moreover, the change of political regime opened large vulnerabilities for the Iranian leadership. This technological gap, the lack of financial resources and the Iranian threat perception as well as the historical context shaped the decision of Iranian leadership to invest into a missile program as asymmetric forces to compensate its conventional weaknesses.

The Iranian regime achieved to find international partners to accompany Iran in its building of the missile program. Nowadays, the Iranian missile arsenal is so developed that international experts estimate that Iran achieved to gather the biggest number of missiles in the Middle East. Despite all the hurdles it keeps on improving the lethality and precision of its weapons as well as domestic production lines, Iran could develop a whole diversified arsenal ranging from very short range rockets to ranges superior to 2,000 km, cruise missiles, Space Launched Vehicles, solid and liquid fuel technologies and drones. Iran developed its arsenal with conventional payloads and coined original doctrinal concepts to fit its objectives. International efforts to cap the development of this missile technology could not impede these improvements. For the Iranian decision makers, the missile program is correlated to the security of the state, ensuring an efficient means of retaliation and attack in case of a direct threat against the stability of its regime.

Moreover, Iran achieved to integrate this asymmetric means of warfare within its hybrid warfare capabilities. The Iranian missile program is doubled with the Iranian development of proxies in the Middle East, ensuring large scale retaliation in the whole region if the Iranian regime is threatened.

The Iranian missile program is not implemented ex-nihilo. It is a reaction arising from the Iranian perceptions of an aggressive regional and international context. However, the Iranian missile program, used directly by Iran or through its proxies can reach a negative echo from regional and international actors and foster the development of defensive and offensive arsenals of Iranian neighbors.

Given this lack of knowledge, the case of the development of the Iranian missile program has not been the object of a main academic work and remains in the sphere of the practice papers and policy briefs. Unfortunately, this angle of research creates gaps in the academic research with the absence of a holistic analysis linking the Iranian strategy, its arsenal and the reaction of the different actors in the Middle East.

Previous work and main researchers:

The works regarding the Iranian missile program and the answers from regional actors in the Middle East are overwhelmed by the release of policy briefs delivered for practitioners. Hence, this topic has not been developed widely specifically at the academic level for research purposes.

The most quoted practitioners on the missile aspects of Iran are Anthony Cordesman, Uzi Rubin, Kenneth Katzman and Steven Hildreth. These experts represent the American and Israeli expertise and highlight the lack representation of Arabic experts. Regarding their reports (mainly for the congress of the United States or for CSIS), their analysis are quite consensual, regarding their common conclusions. These authors quote each other frequently and their researches are used in their respective works. However, their respective profiles are quite different.

Uzi Rubin[[1]](#footnote-1) [[2]](#footnote-2)is one of the very rare experts who benefit from a technical analysis from the Aeronautical Engineering from the Rensseler Polytech Institute and became then the first director of the Israeli defense organization. With Bruce Bechtol,[[3]](#footnote-3) Uzi Rubin is the only expert with an engineering and technical background, giving more weight to his technical analysis.

Kenneth Katzman represents experts coming from the intelligence sphere as the former analyst in the central intelligence. Anthony Cordesman is from the world of private consulting, then public during the American war in Iraq and Afghanistan. Their researches are not based on academic one, but more on the treatment of open sources and international media. The case of Anthony Cordesman is even more surprising with the use of Wikipedia sources in technical matters. It can be explained by the absence of clear data released by the Iranian government on the features of its missile capabilities. He himself highlighted that the Iranian regime tries to conceal some aspects of its missile capabilities, through the use of the various names for the same systems and the hide of their technical differences.

It is noticeable that none Western and Israeli experts use analysis from other actors of the Middle Eastern system and compare their point of view. Stéphane Delory in France, one expert in arms control and proliferation brought original conclusions[[4]](#footnote-4)[[5]](#footnote-5) allied with his technical expertise that could be used in the reports of American ones. Likewise, the report of Mohamed Kadry Said[[6]](#footnote-6) is based on his military expertise among the Egyptian army. His knowledge in air defense in the region is valuable to understand why missiles are used massively in the Middle East. Nevertheless, the bunch of analysts interviewed and reported are American, with very often a limited knowledge in Arabic and none in Persian (among the list of sources resented only a few scholars speak Persian). This is one weakness of the expertise which can handle very technical topics with a relative precision for the first sources used and with no knowledge in Persian to understand one of the most important components of the Iranian missile strategy: internal threat perceptions that determine the strategy of main powers in the region.

To palliate these gaps, some Iranian experts were used for this work. The analysis of Abdolrasool Divsalar were found particularly useful to explain the “cognitive context of strategic thinking” highlighting the variables that determine the shape of the Iranian strategic thinking[[7]](#footnote-7). His expertise in Iranian internal politics and strategic thinking helped me to shape my hypotheses and to improve my researches on the Iranian missile strategy.

Finally, the Iranian missile program and the use of proxies as well as the evolution of the reactions from the Middle Eastern actors are evolving on a very rapid pace. For the moment, no academic articles could have been released on the very recent events on the strikes in Saudi Arabia in 2019 for example or on the first military space launched vehicle or on the consequences of the killings of Qassem Soleimani and Abu Mahdi al-Muhandis. In this research work, a lot of recent newspapers articles were used in order to fill in this gap and to deal with the most recent sources on the evolutions of the Iranian missile program. These newspapers include official newspapers from Israel (such as i24 news, the Jerusalem Post, the Times of Israel) which are among the quickest to deliver information. Saudi sources are really scarcer and some blogs are more comprehensive than official news. Al Arabiya was quick and precise enough to use it in the framework of this research. Iranian and Iraqi newspapers were also used such as Radio Farda, Iran Focus, and the National Iraqi News Agency, to quote some of them. International Western newspapers such as CNN, BBC news or the New York Times were exploited as well. However, even newspapers lack rapidity and for the purpose of this research, I used a lot of Twitter sources in order to get more precise information. I used mainly official Twitter accounts from Iran such as the groups on IRGC, Pasdaran, Sepah news or official Twitter accounts from the proxies (Hezbollah, Al Masirah for example) in order to extend the point of views of my analysis. These sources are not 100% reliable due to the political interpretation of the information presented which are not always true. However, it can help to get a first information which is confirmed or not through the work of analysts and researchers.

Anthony Cordesman [[8]](#footnote-8)and Fabian Hinz[[9]](#footnote-9) are the quickest authors who analyzed these very recent evolutions in very comprehensive works. Fabian Hinz delivered comprehensive information on the very recent Space program in April 2020. This researcher from the James Martin for non-proliferation studies is also an expert in OSINT techniques (Open sources intelligence) which helped me a lot to gather the most precise information possible on the evolution of the Iranian missile program.

Anthony Cordesman also uses open sources in his analysis, relying less on academic work. He seems to be the only author who could determine evolution of the use of the Iranian cruise missiles allied with its drone capabilities, changing according to him[[10]](#footnote-10), the nature of warfare. Nobody else has seen such evolution except him showing the gap in the analysis of the other authors. The work of these two scholars’ particularly helped me to keep my researches permanently updated with very useful ramifications between the technological improvements and the strategic and security consequences in the region.

Anthony Cordesman is also the one very scarce author who highlighted the links between the Iranian missile program and hybrid capabilities[[11]](#footnote-11). He linked these two elements to the very specific situation of naval confrontation in the Persian Gulf through the use Iranian nonmilitary vessels to threaten the transit of oil in this sensitive region. In an article, Melissa G. Dalton established the very same link through the use of proxies in the region[[12]](#footnote-12). Missile capabilities can be used in both situation but is more widely used in the framework of the Iranian network of proxies. There is almost no article on the hybrid nature of the Iranian proxies and the inclusion of the Iranian asymmetric tools, rockets and missiles among hybrid actors.

The conclusions delivered among Western experts are quite consensual[[13]](#footnote-13)[[14]](#footnote-14)[[15]](#footnote-15). According to them, there is a fear to see the Iranian missiles more performant through the increase of their accuracy and payload, increasing their lethality and geographical scope. For the bulk of experts, the increasing of Iranian capabilities and the acquisition of this technology is only a question of time. The change in the accuracy of the Iranian missile is the most probable driver for the increasing of the military threats in the region. There is no consensus on the possibility to use Weapons of Mass Destruction as a payload, due to the opacity of information available. These prospects are nevertheless systematically examined in addition to the development of the nuclear program of Iran and the advantages and drawbacks of this tactic. Moreover, the nature of the Iranian strategy remains controversial. Most authors are questioning the role of missiles in Iran as offensive, defensive ones, operational or purely psychological. These difficulties are probably stemming from the impossibility to distinguish the real arsenal and missile technology available from Iranian sources and all the propaganda related to them. Psychological and operational aspects are intertwined in most analyses, more specifically if they are mainly targeted on the technical aspects of the Iranian program.

Most of authors recognize that the development of the missile technology is used to palliate the weakness of the Iranian air force and to challenge the more advanced armies in the region (particularly Saudi Arabia and Israel) through the use of an asymmetrical and psychological weapon. [[16]](#footnote-16)

The use of Iranian proxies is also the object of the consensual conclusions. Iran would use it to encircle Israel and to open and new axis of allies to challenge American allies in the region (such as the Gulf States and Israel. Iran is thus willing to foster the emergence of organized armed groups which would fight in proxy wars and weaken the enemies without earning direct retaliation on its territory. Unfortunately, there are some gaps on the specific cooperation between Iran and the regional proxies in the framework of the missile program. For example, only one academic article treats specifically the transfer of missile technology from Iran to Hezbollah[[17]](#footnote-17) . Other articles treat this question mixed with other topics, such as the evolution of the Hezbollah structure or strategy. Very few policy briefs exist on the Hezbollah missile arsenal. Likewise, there are almost no academic resources or policy briefs of the Syrian and Iraqi missile arsenals whereas their development dates back from the 1980’s.

The goal for the use of the Iranian missile arsenal is unanimously accepted as well. For scholars, the goal is mainly defensive and aims at keeping the integrity of the Iranian borders. Iran feels threatened by the military presence of the USA and the increasingly sophisticated arsenal of its neighbors.[[18]](#footnote-18)

For Iran, decreasing the security of its regional allies would increase its own one and avoids the alliances of the regional enemies with the USA through a constant military pressure against them, directly or through the use of proxies. [[19]](#footnote-19)

The consequence of this situation would be according to various research works, the growing regional arms race or the possibility for the Western powers to strike preventively Iran in order to destroy the possible missile arsenal, nuclear or WMD payloads.[[20]](#footnote-20)

**Gaps detected in the previous researches**

In the research works quoted before, there is very scarcely any literature linking the Iranian strategic thinking with the technical aspects of Iranian missiles and their strategic consequences in the Middle East. The technical and strategic aspects are very often separated between articles related to the description of the missile arsenals and the one dealing with the Iranian foreign policy.

Very little articles link the strategic aspects of the Iranian missile program and their technological features. If the rationale behind the Iranian missile program is not emphasized, it can cause miscalculations in the answer provided to the Iranian missile threats.[[21]](#footnote-21)

As some authors highlighted it, the previous American operations and the Gulf war highlighted the vulnerability of the Iranian army and asymmetrical means were used in order to fit with limited financial possibilities and with the deterrence strategy adopted.[[22]](#footnote-22) The goal of this deterrent strategy is to ensure the internal stability of the regime and to prioritize the internal security rather than the external one. Therefore, technology, does not determine the Iranian strategy but Iranian strategy shapes the missile tactics.

However, Western scholars tend to grant too much importance to the technological features of the Iranian missile program, without analyzing the strategy of Iran first, but to analyze its arsenal and then to deduce the strategy of Iran. Anthony Cordesman[[23]](#footnote-23) in Iran’s Rocket and Missile Forces and Strategic Options did the same, when he is assessing the technical capability of Iran. Most Western analysis on the Iranian missile technology tends to estimate that missiles can shape by themselves the strategy of one power. This is a materialistic and Western vision of war, coming from the American operations during the 90’s with concepts outlining that the United States should intervene only when it could bring overwhelming force to bear on the enemy.[[24]](#footnote-24) The force would be brought by the technological superiority of the United States. The deployment of massive air force during the Gulf wars and in the operations in Kosovo emphasizes that the technical perfectibility leads to the resolution of the conflict. The building of the tactics around the technological monism is very frequent in the United States due to their strategic culture.[[25]](#footnote-25) The policy briefs are targeted only on these technical aspects in order to assess the potentiality of Iranian the region and what should be done with technical means to stop it and overwhelm it. However, this mistake fails to assess properly the psychological effects of the weapons, according to the Iranian strategy which characterize their forces. Therefore, the policy briefs and research work can lead the decision makers on the wrong solution if they base only their assessment of the Iranian missile strength on their technological features only [[26]](#footnote-26)

This mistake explains the overwhelming quantity of policy briefs in comparison with academic articles. This topic has indeed, wide practical consequences. However, the impossibility to assess anything else except the technical issues and the tactical consequences of the technological development of the missile program hampers the researchers to catch the whole picture of the strategy of Iran. Policy briefs are limited by their practic and factual analysis, not including all the other elements of the Iranian strategy very often short termist and technical solutions. The Policy paper of Timothy Stafford is a case in point of this misunderstanding by proposing only economic and constraining sanctions to stop the Iranian missile program while Iran seems to react more on security issues.[[27]](#footnote-27)

Very few authors analyzed this situation through the shifting of the balance of power in the region leading to the fragmentation of the security context. Except Ron Tira and Mohamed Kadry Said[[28]](#footnote-28)[[29]](#footnote-29), very few researchers analyzed the deterioration on the security in the Middle East as one of the most important variable in the building of the Iranian strategy and operational tactics. This deterioration is in the same time the cause and the consequence of the Iranian missile deployment leading to negative effects for the Iranian security on the long run. Likewise, no authors made any correlation between the degradation of the security in the Middle East and the military commitment of the USA which can backfire as well and deepen and complicates the future military operations.[[30]](#footnote-30)

These mistakes lead to the wrong assessment of the Iranian strategy and the situation in the Middle East. First, a lot of papers are tackling to define the nature of the Iranian strategy. Unfortunately, this is done through a classification into specific categories: offensive, defensive, and asymmetrical whereas most of strategies are a mixed between defense and offense and there is no possibility to separate in clear categories.

Then, it leads to the misunderstanding of the Iranian behavior and attitude. It is very often seen as an irrational actor or as a rogue state. Several policy briefs qualify Iran in such a way.[[31]](#footnote-31) It leads to the impossibility to understand the roots of the missile proliferation in this country and in the whole Middle East and to catch the whole picture. This is symptomatic of an atomistic vision of the situation and the impossibility to consider the attitude of Iran as a rational choice determined by visible and systemic causes.

The choice of Iran, as well as other actors in the region is due to the belief that their existence is under threat and the degradation of the security in the region. The whole security situation needs then to be taken into account.

This gap is visible also in the way the authors understand the pattern of acquisition and proliferation in the Middle East. Very often, the image used to describe the proliferation spillover is the image of a virus and contamination[[32]](#footnote-32) . This leads to the misunderstanding of the situation, as if the proliferation of missiles were due to the presence of an “infected” or rogue state, as a blue sky threat, whereas the situation requires a deeper analysis of the security system in the Middle East to see why states are using this technology and its consequences. Most of researchers use just one part of the situation to solve one hypothetic problem without having a look on the deep causes. The proper image used by rare authors is more the image of cancer disease embodying the logical of arms race in the Middle East.[[33]](#footnote-33)

The geographic origin of the researchers here plays an important role in the understanding of the Middle Eastern missile race. Israeli and American sources were used with caution in this research work. Indeed, regarding the current context between Iran and these countries, the information delivered in researches from these states can be biased or politically misused or treated through a very specific angle.

The Iranian missile proliferation comes from the fragmentation of the security context in the region. According to the point of view of the authors, not all factors of the destabilization of the system leading to the missile race are conveyed. The American researchers’ don’t speak in detail about the impact of the American air operations in the region on the building of the Iranian strategy, neither on the exports of technology to American allies that can destabilize the system as well. Once again, it places Iran in a role of irrational actor led by bellicose feelings without considering the whole picture with every actor. For example, there is very little writing on the role of the selling of weapons by the USA to the regional actors and the security consequences in the region.[[34]](#footnote-34)

In practical researches, the roles of China and Russia are very often described as threats for the stability in the region through the transfer of weapons and technology,[[35]](#footnote-35) whereas the United States are seen as the one which are threatened and must dig this security gaps . The United States policy is not depicted as the origins of several destabilizing factors.

Moreover, even the most technical analysis cannot be taken for granted.[[36]](#footnote-36) Indeed, the technical expertise cannot serve the basis to assess the technical arsenal of Iran due to the impossibility to access through open sources to the real missile technology and operational capabilities of Iran. There are then real difficulties also to assess whether the Iranian arsenal is one part of its propaganda and its features enhanced in its speeches or if it is as such in the reality. Almost every Western scholar hinges their appreciation of the Iranian threat on the statement of James Clapper, the former head of the American national Intelligence stating that Iran is the biggest missile arsenal in the Middle East[[37]](#footnote-37). It is very difficult to assess from open sources the validity of this statement and Iran can use through its propaganda more impressive threats in order to frighten the neighboring countries. James Clapper could have had access on the ground to this information in the framework of his previous job, but it remains non verifiable by the researchers using also dubious sources in their analysis (Wikipedia for Anthony Cordesman, or other news from articles). The cases of Syria and Iran can be only loosely assessed and they could be often overestimated or politically oriented in the statements destined to decision makers. Once again, it hinders the elaboration of a rational analysis of the Iranian arsenal and strategy and it becomes complicated to distinguish the real operational capabilities of Iran and the ones used for propaganda purposes.

The main gap of this previous research work is the lack holistic analysis including the Iranian strategic concepts, the historical background, the technical and institutional means and the reactions from the regional neighbors. All these issues are treated very often separately and hinder the possibility to obtain a clear and comprehensive vision. In addition, Iran is very often perceived as an irrational actor, hampering the elaboration of correct conclusions regarding the Iranian missile program. Moreover, most of academic articles are outdated regarding the very recent evolutions of the Iranian missile program.

Within this research work, I will endeavor to palliate these gaps and provide a comprehensive answer to my research question. I will do my utmost to determine the security issues related to the Iranian missile program in the Middle East.

In the framework of this work, I studied the Iranian strategy and the historical background of the formation of the current Iranian regime as well as the Iran-Iraq war and its military organizations in order to understand the determinants of the Iranian military strategy. I tried to look more precisely on the formation Iranian threat perceptions which, I think is the departure source of the security issues related to the Iranian missile program. The Iranian missile capabilities were studied as well as the various ways for Iran to obtain the components and technology to develop these capabilities. I tried also to determine the collaboration of Iran with each of its proxies in the framework of the Iranian missile program and the potential security issues related. Finally, I endeavored to encompass the regional actors’ answers to these threats from Iran and its proxies and the possible security issues in the region. Finally, I tried to determine whether the reactions from the USA regarding the Iranian missile program could help to decrease the current level of tension in the region or not.

In this dissertation, I have chosen not to treat the arms control issues as an object of research since this dissertation is more targeted on strategic issues. Another dissertation could be dedicated on such topic regarding Iran and it would exceed the boundaries of the present research. The examples of missile components acquisition and smuggling were more used to explain the links between Iran and other international partners and to outline the level of collaboration between them and also the possible security threats that are involved in the smuggling roads in the Middle East. Regarding the issues related to the JCPOA, I have decided not to treat it as such but more to use it as an indicator of the current level of confrontation between Iran and the USA.

**Goal of this research**

The goal of this dissertation is to determine how the Iranian missile program shapes the security environment in the Middle East.

3 Chapters are dedicated to answer this question. The first one aims at explaining the Iranian missile strategy. It exposes the context in which this program emerged, the Iranian threat perceptions, the missile capabilities and the consequences of the development of such arsenal for the own Iranian security.

The second chapter explains the security threats that the Iranian missile program poses in the Middle East. It demonstrates on the one hand the issues that are triggered by the direct use of these weapons by Iran and its proxies in the region. On the other hand, it aims at explaining the security issues triggered by the answer from the regional actors’ reactions to the Iranian missile program.

The last chapter aims at demonstrating the security consequences of the answer of International actors on the Iranian missile program and determine whether they achieved to control the increasing level of confrontation or on the contrary fueled it.

**Chapter 1: The Iranian missile strategy**

“In the midst of chaos, there is also opportunity”. [[38]](#footnote-38) This quote of Sun Tzu could be applied on the formation of the Iranian missile strategy which was born in a very tense and challenging context for the Iranian regime. Iran was severely targeted just after the revolution by a large direct conflict against its Iraqi neighbor at a time when the Iranian regime was particularly vulnerable.

However, the war against Iraq did not achieve to destroy the Iranian regime and was used by the military to rebuild all its previous military doctrines, institutions and capabilities. The building of the Iranian missile arsenal was born in this tense context and was adapted to the difficulties met by the Iranian regime, pressured by its weak financial means and denied to collaborate with foreign partners to improve its arsenal.

Despite this very difficult period for the Iranian regime, Iranian militaries achieved to build and develop one of the biggest missile arsenals in the Middle East. It benefitted from the help of state and non-state actors and achieved also to export this technology to a network of allies sharing its vision of international relations. This impressive result is one of the cornerstones of the Iranian asymmetric warfare doctrine, developed amid foreign tensions aiming at overthrowing the Iranian regime.

Under the Iranian newly asymmetric warfare doctrine coined during the Iraqi war, Iranian militaries understood the importance to increase the military costs to its enemies rather than preserving its own assets in order to defend its territory. Iranian missile systems are coherent with this doctrine. Iranian missiles are enshrined in such rationale, using an offensive weapon for a defensive purpose.

Their low cost of production, their value as a psychological warfare and their intrusiveness are the perfect weapon for an organized actor seeking to destabilize a more powerful enemy. The present chapter aims at explaining how this missile program is enshrined in the Iranian military strategy. It aims at establishing a link between the Iranian missile technology and the doctrinal and strategic concepts that are linked to such technological evolutions.

The present chapter is divided into three parts. The first one will describe the historical context, the military milestones, the Iranian military institutions the Iranian concepts and perceptions that form the Iranian military strategy. The second part aims at explaining the rationale behind the development of the Iranian missile program, the composition of the arsenal, the help of foreign actors, the potential use of Weapons of Mass destruction (WMD) and the issues in using such missiles by Iran. Finally, the last part aims at presenting the potential negative consequences of the Iranian missile program against the Iranian security and the risks related to the potential development of a nuclear payload.

**Part I-The Iranian military doctrine**

**1.1- Historical background**

Before the revolution, the Shah dynasty participated in the formation of an organized regular army from disparate components. The coup d’état in 1921 organized by Reza Khan against Ahmed Shah Qajar paved the way for the formation of this military organization called the Artesh which still exists nowadays.[[39]](#footnote-39) Reza Khan was renamed afterward Reza Shah Pahlavi and implemented a secular regime on the Iranian territory. The Iranian politics at that time was obsessed by the possible threats of invasion from Russia and the United Kingdom, very present in the region and which already invaded the Iranian territory during the 19th century. During the Second World War, the Iranian power was deemed too aligned with the Nazi regime which was seen by Iran as a good counterweight against the threatening British and Russian powers. Mohammad Mossadegh seized the Iranian power when the Shah fled the country. However, the new leader was not appreciated by the American and British powers which organized the overthrow of the new Iranian leader during the operation Ajax in 1953, placing again the royalist Reza Shah. During his reign, he endeavored to Westernize Iran and transforms his country as a powerful and dominant regional force. Under his reign, he built with the help of his Western allies a strong regular army, benefitting from wide armament procurement. During the 1970’s, Iran became the largest weapon customer of the United States and the biggest and most modern army of the region. Iran became the cornerstone of the American Twin Pillar policy, using Iran and Saudi Arabia to ensure the stability of the region. The Western powers and the USA more specifically needed to maintain the status quo to benefit from very cheap oil prices imports from the Persian Gulf to finance their economy. The Iranian Army, the Artseh, benefitted from the training and weapon exports from the USA and the United Kingdom. Advanced fighters such as the F-4, F-5 and F-14 were provided as well as modern helicopters, TOW ATGM, British corvettes, French patrol crafts and Soviet armored vehicles.[[40]](#footnote-40) In 1974, the Imperial Iranian Task Force was created, increasing the demand of the Shah of artillery, helicopter, air defense and naval support. Nevertheless, the power of the Shah reached a stalemate at the end of the 1970’s due to the internal economic problems and the growing internal criticisms seeing the Iranian Shah as a puppet of the United States in the region with little consideration for the needs of the population. The 1979 revolution toppled the Shah secular power to implement a religious regime and cut its relations with its former Western allies. With the referendum on April 1, 1979, Iran became for the first time in 2,500 years a theocratic republic based on the principle of velayat e faqih [[41]](#footnote-41)and designates the Ayatollah Khomeini as the new leader.

After the revolution, the new regime needed to prove the veracity of the doctrinal concepts it fought for. The Ayatollah Khomeini defined all the proper actions that need to be undertaken in contrast to the previous regime of the Shah that was considered contrary to the precepts of Islam. Everything that was considered as positive under the Shah regime; its cooperation with the West and political alignment with their interests in the region were rejected.[[42]](#footnote-42)

Iran started to regard more in depth about its previous place in the international relations and its history. The conclusion of this reflection is that Iran has always been an object of international relations and not a proper subject. It has been always invaded by external powers since the 10th century. The Qajar period has been interpreted as the decline of the Iranian power due to the involvement of the Western interest. More particularly, the USA has been considered as the main destabilizing and threat for the internal stability of Iran, intervening in its military affairs since the era of Reza Khan. The new Iranian power is nostalgic about the former Safavid Empire, considered as the apex of the Iranian influence in the Middle East and aspires to come back to this independent status and powerful enough to act freely on the international stage.

The revolution created a sharp milestone regarding the place of Iran in international relations. The USA, conservative Arab States and Israel that were considered as previous allies are completely rejected due to their involvement in the previous regime. The USA were unable to implement anymore the Twin pillar strategy that was defined under the Nixon era and were obliged to take their distances with the new regime although they did not consider it as a main threat before the Iraqi conflict and the hostage incident in the US embassy in Tehran on November 4, 1979.[[43]](#footnote-43)

The starting of the Iraqi invasion of Iran under the Saddam Hussein action revealed the weaknesses of the Iranian power due to the destabilization of the state institutions after the regime and the reject of its former economic and military partners. However, the new regime tried to convince the population about the necessity to win this war and then, to pursue the invasion of Iraq in 1982 in order to demonstrate through the facts that their military victory is a sign the Iran was not mistaken and is indeed led by the will of God. It would legitimize the political power of the Ayatollah Khomeini. [[44]](#footnote-44)

The invasion of Iraq by Iran in 1982 was the result of the misperception of the strength of the Iran ideological power against a technological superior enemy.[[45]](#footnote-45) Iraq was supported by a large number of powerful states which sees in the Iraqi conflict an opportunity to curb the Iranian influence in the region. Syria was the only state that supported Iran during this very challenging time. The regime of Saddam Hussein benefitted from the technological transfer from the USA, USSR and the Gulf States. Moreover, the Iranian regime completely changed all the previous institutions including the shape of the regular Army, opening more vulnerability in an asymmetric conflict.

However, Iran achieved to repel the Iraqi troops in 1982 from its borders. The Iranian regime decided to keep going the war and refused any compromises with Iraq. The main idea was to crush completely Saddam Hussein troops which still presented a risk for the security of Iran. The Iranian regime considered that a stable peace was not reachable with Saddam Hussein. From defender, Iran became the offender and it isolated more its position on the international stage.

Moreover, the perception of Iran at that time was that the war would be quickly won due to its previous military victories to repel Iraq from its borders. Moreover, Iran though that Iraq was in a situation of chaos and Saddam Hussein does not benefit from the support of its population. It would be seen as easy for Iran to crush completely this enemy.

Iran launched the operation Ramadan in 1982 sending 100,000 troops to the city of Basra . However, the offensive of Iran was not backed by a strong military strategy and relied on too optimistic perceptions on the weakness of their adversary.[[46]](#footnote-46) Iran started to get stuck in a war of attrition with the impossibility for one of the adversary to take the advantage on the other one. Iran does not have enough air cover and sophisticated weapons to crush Saddam Hussein. On the other hand, the Iraqi regime started to develop chemical weapons and to deploy them against Iranian trenches.[[47]](#footnote-47) Iraq still benefitted from the help of the USA which had ore interests to keep these dangerous but useful partners than to let Iran conquer Iraq. National expediency for the USA was more important than the legality of the actions of Saddam Hussein. The brutality of Saddam Hussein through the chemical warfare has been widely ignored by the international community and the chemical attacks are the widest one since the First World War. It comforted Iran that Iraq and its allies are in the camp of Satan and the Iran is victim from infidel governments. The USA only took mild condemnations against Iraq but was still helping it financially to feed its arsenal. This gloom episode of the war destroyed all potential confidence that Iran could put in the International Institutions to condemn these actions.

However, Iran refused to negotiate any ceasefire with its enemy and adapted its narrative to convince its internal population to keep the offensive against Iran. With this stalemate, Iraq started to hit directly Iranian civilian population by launching missiles against its cities. The war of Cities started then in 1984 against the city of Dizful. The goal was to demoralize the public opinion of Iran and withdraw then the political support for the continuation of the war against Iraq. Iraq kept going the launch of missiles and struck Iranian oil facilities on Khark Islands. Not a lot of deaths are deplored during these attacks but missile weapons worked internally to destroy psychological resistance of the population and pressured internally the regime to end the hostilities.[[48]](#footnote-48)

Iran did not have the capabilities to retaliate directly against Iraq. Its arsenal acquired during the Shah’s regime has been widely destroyed, and the military staff starts to be short of volunteers for offenses against Iraq. Iran retaliated against this attack indirectly by hitting oil exports in the Gulf. Iran considered all Gulf States as complicit of Iraqi offense as well as the USA and Iran did not make any distinctions in its attacks against oil tankers. From 1984, Iran started to attack merchant shipping and oil tankers in the Gulf. These operations were called the Tanker war. The Gulf States started to act collectively in an organized way in response to the new threat that represents Iran. In 1986, they increased their production of oil to decrease the prices on the international market in order to pressure Iran financially and to force it to stop the conflict.

In 1987, the USA gets involved in this conflict through the demand of Kuwait to protect the oil shipments in the Gulf. In 1988, the US Samuel Roberts ship hit an Iranian mine in the Persian Gulf, opening the direct retaliation of the United States against an Iranian civilian aircraft, killing 290 people. Iran was not able to strike in a direct confrontation the USA in the Gulf. Iran was more pressurized internally and internationally through the USA to accept the peace proposal from the UN resolution 598 on July 20, 1988. Iran has been vanquished by Iraq and forced to accept this ceasefire. Iran had to justify it internally since this defeat was meaning the defeat of the regime to follow the will of God. However, the regime achieved to maintain its influence and warranted this failure through the human costs that Iranian population has paid already. The Iranian powers presented the victory as not linked to the final result but to what the Iranian military and population has accepted to sacrifice in their battle against infidel regimes. In total, 200,000 Iranians were killed during the conflict against Iraq.

The answers from the USA and International community provides however a lot of challenges for Iran to implement its doctrine efficiently. The Tanker war and The Operation Staunch demonstrated for Iran the unfeasibility to confront directly the US fleet in the Persian Gulf.

The war consolidated the Iranian perception that all International actors are leagued against the Iranian regime and Iran must find new ways to defend its territory. The death of the Ayatollah Khomeini in 1989 opened however a new era of the Iranian policy. During the 1990’s, Iran started to invest massively in the support of proxies across the Middle East, creating a network of state and non-state actors, defending the Iranian territory against external aggression and degrading the positions of its enemies in the Middle East.[[49]](#footnote-49)

The 1990’s-2000 decade was characterized by the involvement of the USA in the Middle East, the falloff Saddam Hussein and the increasing of regional tensions and conflicts. Iran does not have to tackle the threat of Saddam Hussein but the USA and Taliban pressured more externally Iran on two different fronts. However, the fall of Saddam Hussein is a huge opportunity for Iran to extend its influence in Iraq, through the support to Shia militias and the implementation by the USA of a no fly zone on Shia Iraqi zones at the south of the country. Iran could safely extend its influence also in Lebanon through the Hezbollah group, existing since 1982.[[50]](#footnote-50) Following the war in Iraq, the international community became more alarmed by the extend of the Iranian nuclear program and the various reports from the IAEA as well as the development of the Iranian missile program, paving the way for international sanctions against the Islamic Republic.

The conflict in Syria triggered recently the increasing of offensive capabilities in Iran. The possibility to lose Bashar al Assad, its only state ally in the region pushes Iran to increase the efficiency of its network of alliances and get involved more in the smuggling of weapons and technological transfer to Yemen and Hezbollah. However, strengthening the network for Iran involves increasing the threats to its enemies and their potential negative answers leading to a negative spiral. Iran increased its presence in Syria by sending the Artesh and Quds forces in support of Bashar Al Assad. However this alliance is costly for Iran with the distance taken by Hamas recently due to their opposing positions on Bashar Al Assad.

**1.2- Iranian concepts of international relations and threat perceptions**

After the revolution, and during the Iran Iraq war, the Iranian driver of International perceptions was and is still nowadays, its deep sense of insecurity[[51]](#footnote-51). Iran considers its former allies as powerful enemies waiting for a good occasion to topple its regime. The objective of the Iranian power was and is still nowadays the preservation of the Iranian regime and the avoidance of any direct external interference in the Iranian politics. For Iran, the USA and Western powers were perceived as very threatening regarding their past operations to topple unfriendly Iranian regimes. This perception is still present nowadays[[52]](#footnote-52). Amid the coronavirus crisis, the Iranian regime fears that the USA would cash in from the current weaknesses of Iran to impose its maximum pressure policy and helps internal turmoil to overthrow the unfriendly Iranian regime.[[53]](#footnote-53) This perception of Iran is the source of all its decisions and creation of military concepts to protect its territory.

This perception is doubled by the Iranian vision that international relations are divided between the negative dominant powers and the victim countries. After the revolution the Iranian military doctrine is based on a very ideological Manichean interpretation of international relations construed by the Ayatollah Khomeini. According to this Marxist-Islamist vision[[54]](#footnote-54), the world is divided in two camps between the Mustafazin and the Mustakberin. The Mustakberin class exploits the weak and powerless Mustazalin class characterized by its dispossession of economic means. The role of Iran is to fight the dominating class represented at the level of international relations by the United States and the USSR and their allies in the region (Israel and conservative Arab states).

According to this doctrine, Iran must free the third and oppressed world from the influence of the Mustakberin class that is qualified as corrupted. Iran rejects completely the role that the US gave to the Shah previously under the Twin pillar doctrine. It refuses to be the gendarme of the Gulf for the interest of another power and cuts all cooperation with the USA. Iran also associates Israel and the Gulf states to this class of Mustakberin and working for the oppressing class. And qualify Israel as being the Little Satan (the USA being the Great Satan). Iran prefers to build relations with the Non-Aligned movement in the region and gets closer to Algeria, Libya, Yemen and Syria.

This aspect of this doctrine shaped the Iranian research of independence that is still present nowadays. This idea was also exploited at the internal level, showing that Iran is not influenced by the interests of external actors and in order to fulfill its mission on the International stage. Independence is one core idea of the Iranian military doctrine.

However, according to the Islamic law, followed by the Iranian regime during the 80’s, it would not be possible for Iran to attack directly the class of Mustakberin which does not respect the rules of Islam. Only two situations according to the Islamic Law allow the use of direct armed confrontation. The first case concerns the offensive or Jihad to overthrow infidel regime. This situation is possible according to Shia duodecimal Islam on the Judgment Day. The second case is defensive with the invasion by a non Muslim state a Muslim State. Iran could get involved in the Iraqi war only because it considers this state as not a real Muslim state. The attack of Iraq is a case example of the mainly defensive doctrine of Iran. This idea is still present nowadays. Until recently, Iran has never stricken directly any states first with its conventionally loaded missiles. Iranian militaries allowed themselves to strike back only after a first attack on their territories which happened two time with ISIS and the Iraqi Kurds in 2018[[55]](#footnote-55). The Iranian missile doctrine is still defensive in essence although it appears as offensive by the USA and Persian adversaries.

The Iranian military doctrine during the Iraqi war was led by the reliance on the spiritual power and human forces of Iran. The veracity of the ideology of the State would attract the attention of God and brings the military victory to the Iranian martyrs demonstrating thus the power of the regime and the necessity to get rid of the USA and infidels. In this sense, Iran was forced to adopt such doctrine during the Iraqi war regarding its weak technological power.[[56]](#footnote-56) Iran refused during all the Iraqi conflict to negotiate with the power of Saddam Hussein. Deterrence cannot fail and the spiritual determination of Iran is stronger than any technological or military superior state because God would be always in the side of Iran.

According to this ideology, Iran is therefore able to accept any human costs to win a conflict. It has been demonstrated during the Iraqi war. The revival of the culture of martyrdom in Iran shows that Iran is willing to kill itself in order to win the victory enhancing its deterrent power.[[57]](#footnote-57) The collective suicide defensive operations led on mines fields by the IRGC and Basij troops are examples of this thinking. Since the victory is led by God, the values of life are not that important and big rewards would be given soldiers who sacrificed themselves on the battlefields. Iran can fight at any costs and the final victory would be always satisfying since it is in the hands of God. Soldiers are assimilated to individual monks whose strong faith would allow winning the decisive and final victory. According to the Ayatollah Khomeini, “blood is victorious over the sword”. This is among the core element of the Iranian deterrence doctrine[[58]](#footnote-58). For Iran, this idea is still present nowadays, although less powerful due to the decrease of the strong ideologies from the 1980’s. However, the Iranian regime is still trying to degrade the adversary power rather than protect its own assets and population. Nowadays, the Iranian regime is construing this idea as the need to increase the costs of its enemies rather to decrease its own one in the framework of a zero-sum game. Iran would be safe if the power of its enemies is degraded, whatever the costs for the Iranian regime. This idea is still visible through the use of proxies in the region, armed with the Iranian missiles and rockets aiming at decreasing the regional enemies’ power through asymmetric warfare. This policy is deemed by experts as very economically and politically expensive for Iran. It appears that Iran is ready to invest massively in these proxies and missile program to defend its territory. The use of proxies in the Iranian missile program will be covered in more details in the chapter 2. Moreover, Iran resists to the American maximum pressure policy in the wake of the American withdrawal from the JCPOA whereas this policy is particularly costly for the Iranian economy and touches the everyday life of the population.[[59]](#footnote-59)

After the death of the Ayatollah Khomeini, Iran adopted a softer doctrine toward the USA and shifted its policy of Grand Satan to a more pragmatic and less confrontational narrative. National expediency became more important than the preservation of the Iranian ideology if it keeps the Iranian regime intact [[60]](#footnote-60)[[61]](#footnote-61). On surface, Iran seemed to open its communication with the West on its nuclear program and the intervention in Iraq and on the interests of Israel. In reality, Iran developed more hidden programs to undermine the position of the USA in the region through the use of proxies and the building of a more capable missile and nuclear programs.

The 1990’s was the occasion for Iran to observe the interventions of the USA in the region and in Yugoslavia. The conclusion for Iran was the impossibility to fight directly against the USA even though it develops a proper arsenal. Iran is still stricken by international sanctions impeding it the proper acquisition of military equipment.

Regarding the weak technological capabilities due to the ongoing sanctions, the Iranian powers aimed at increasing their resilience in a very tense security context for them. The Mosaic doctrine has been established in 2005 by Ali Jafari, the former commander in head of the IRGC, during the intervention of the USA in Iraq since 2003[[62]](#footnote-62). Iran decided to develop its command and control systems and to decentralize the decision making process in order to adapt to a potential invasion. Iran was really worrying at that time of the potential invasion by the US of its territory. The Mosaic doctrine divides 31 provinces with subaltern military commands to improve the flexibility of executions and orders in case of guerilla warfare. The aim is not to turn the total control of the Ayatollah on armed forces on a disadvantage for Iran through the lack of autonomy from the decision making process. This mistake has been made under the Shah regime controlling all the armies and rendering them dependent and inefficient. The indoctrination work of the Ayatollah and the purges allowed the release of control of the State on the IRGC and Artesh allowing the increase of flexibility without fearing the defection against the regime[[63]](#footnote-63). The principle of the Mosaic doctrine is still prevalent nowadays in the Iranian military institutions relying more on small units than on big contingents in order to increase the resilience of the Iranian forces in case of direct attacks. At the time of the writing of this text, the result of such doctrine is visible through the possibility to lead small maritime attacks in the straits of Hormuz amid the coronavirus crisis which struck the main Western military forces in Iraq and in the Gulf. Iranian forces proved to be more resilient through the use of very small units allowing the leading of attacks at the very same path when the American naval capabilities were reduced due to the current sanitary crisis owing to their concentration of larger units. [[64]](#footnote-64)

The concept of the Mosaic doctrine goes in par with the concept of strategic depth for Iran.[[65]](#footnote-65) Iran uses its wide geography to extend its forces on the whole territory and keep pockets of forces in all places. Externally, Iran increased this concept to encompass the proxy network considered as an integrated part of the Iranian forces with the possibility to outsource the direct confrontation against the regional enemies outside its territory. Iran does not implement a full control of the proxies but their presence allows Iran to avoid any direct retaliation against its own territory and increases its resilience toward a potential attack. The role of proxies for Iran is mainly to build a deterrent force without having to involve directly in its actions.[[66]](#footnote-66) Iran takes relations with armed groups in Yemen, Bahrain and Iraq more casually than its relations with Hezbollah considered as a real pillar for its military depth against Israel and serving to extend the cope of its missile arsenal.

Iranian military doctrine becomes more blurred between offensive and defensive. The threat for Iran shifted from the USA to the pressure put by regional actors and the USA together on Iran and the spiral of increasing aggressiveness between them.

**1.3- Military Institutions**

Under the Shah’s regime, the Army was benefitting largely from the huge investments in military equipments by the Shah. The ambition of the Shah was to transform the Artesh in the biggest military organization of the Middle East, ensuring the role of gendarme in the Gulf. It achieved this objective by the 1970’s thanks to the large military acquisition of the Shah in equipment mainly from the USA and from the West[[67]](#footnote-67). The Shah became dependent on the import of western technologies to maintain the level of technology of the army as well as western trainers and military advisors. However, the Artesh, army was kept under the strict control of the Shah, refusing communication between different branches of the army and having the obligation to refer directly to the Shah to take any decision. Due to the proximity between the Shah’s ambitions and the Artesh and due to the participation of the Army in the defense of the regime against the protesters in 1979, the Ayatollah Khomeini wanted to destroy these institutions when it came to power.[[68]](#footnote-68)

The impossibility to determine in advance which institution could fill in the role let by the vacuum of the Artesh led the Ayatollah to keep this institution but to purge it from inside, emptying all members that were estimated too close from the Shah. He kept also his domination by forbidding contacts directly between the different branches leading to the difficulty of the Army to organize any coup after the Nojeh Coup in 1980. [[69]](#footnote-69)

Before the war in Iraq, the large Western equipment allowed Iran to start a conflict with Iraq. However, due to the dependence on the military advisors from the US and the West and their reliance to provide all the necessary technology, Iran has not developed its own military organizational concepts and industrial production facilities to supply the war effort and research and development facilities. Moreover, the purges that occurred in the Artesh killed a big shrunk of the highest rank officers who were the trained to use the equipment given by the USA. The aerial forces of the Artesh was particularly hit which renders more difficult for Iran the use of aerial forces during the conflict.[[70]](#footnote-70)

On the other hand, the Ayatollah created through a decree in 1979 a competing military structure aimed at the protection of the regime and more in line with the new doctrinal changes. The Iranian Revolution Guard Corp (IRGC), called also the Sepah corps or Pasdaran, has benefitted from overlapping competences with the Artesh but with closer relations with the Ayatollah and benefitting more from the financial and political power[[71]](#footnote-71). The purges of the Artesh and considerably weakened it and its doctrinal positions relegate to the simple protection of the borders while the IRGC has a wider role to protect the regime. The Artesh follows then classical doctrinal concepts while the IRGC implements practices that refer to asymmetrical warfare and revolutionary warfare avoiding any direct military confrontation due to its lack of military experience. The financial means allocated to the IRGC shows that the priority for the state is more the conservation of the regime than the protection of the territory. IRGC reportedly currently gathers around 190,000 operatives. [[72]](#footnote-72)

Another institution has been created by Iran to tackle the Iraqi war. The Basij e Mustazafin has been created in reference to the fight of oppressed against powerful enemies. At the beginning of the revolution and the war, the regime aimed at training all Iranian male adults to fight[[73]](#footnote-73). They implemented programs of indoctrination and created a new troop, the Basej that would mobilize population against internal rebellion and the Iraqi presence. The aim was to create an internal guerilla potential with the impossibility for Iraq to subdue any part of the territory thanks to the determination, indoctrination of the population. This institution before autonomous was considered as dependent from the IRGC from 1980’. This institution still exists nowadays. At the time of the writing of this dissertation, the Basij troops is estimated to around 600,000 fighters, constituting the biggest ground forces of the Middle East armies . However, this paramilitary troop is still considered by experts as very inexperienced and lacks professional training. The force is mainly used to curb internal threats to the Iranian regime such as demonstrations during the Green Movement in 2009 or in November 2019. The troops were also made particularly visible during the ongoing coronavirus crisis in Iran through the distribution of medical staples and the disinfection operations.[[74]](#footnote-74)

The Quds forces, meaning the Jerusalem Force[[75]](#footnote-75) (Niru-ye Quds) troops were created as an independent group in 1990 under an order from the Ayatollah Khomeini. During the Iraqi war, it was the IRGC office of liberation Movement, a subsidiary body in the IRGC forces which leads extraterritorial low intensity unconventional warfare to support allies in the Middle East. The Quds forces could therefore be considered as a part of the Iranian hybrid force, relying on irregular warfare tactics. This organization is the link between the Iranian missile program and various regional proxies. Its missions at the beginning were to expand the revolution and support the resistance against oppressing enemies as the USA and Israel. The Quds forces supported their first allies, Hezbollah since 1982 in its war against Israel. According to experts, the Quds forces actively participate in the training and military support of various Iranian allies in the region such as Hezbollah, Hamas, Iraqi militias, Syrian forces and Huthis in Yemen. Al Quds operatives are also reportedly present in Central Asia, Africa, Afghanistan and Asia. The Al Quds forces are divided between several departments, each supporting one specific zone (such as the department 1000 supporting the operations in Iraq for example). Its ideology is considered as very flexible by experts deeming that the organization supports any potential ally regardless its ideology[[76]](#footnote-76). It was also reportedly fostering the proliferation of missile weapons and more specifically the training to use them properly or to build them among the proxies through the creation of a specific logistic element.[[77]](#footnote-77) It is a very interesting and important tool for the Iranian power to increase its influence in the Middle East and to support military a wide range of allies while keeping a high degree of deniability. Qassem Soleimani, its former leader was killed in January 2020 in a US-led attack in Baghdad, Iraq. Its current leader is the Brigadier general Vahidi. The Quds forces are put directly under the control of the Ayatollah, although, they remain a specific branch among the IRGC. Experts estimate the number of operatives around 5,000.[[78]](#footnote-78)

The trust in God is the unifying concept of Iran. The principle of Velayat e Faqiqh allows the representative of God, the Ayatollah to give orientations to all institutions and ensuring their consistency. [[79]](#footnote-79) They are still separated between each other but the ruling of the Ayatollah, the ultimate decision-maker, allows the coherence of the whole system. Within these institutions, the faith in God and the fidelity in the regime are more important than their real military capacities. The IRGC and Basij led during the Iraqi war suicidal population believing that human wave’s attacks would be stronger than Iraqi military superiority. There was however no real military planning behind these attacks which were considered as useless by the Artesh. The IRGC and Basej relied more on costly improvisation and not on conventional tactics. The cost of war relies more on the population since the IRGC and Basej worked on a conscript basis which involves the necessity for the political power to justify the intervention through a stronger ideological narrative to justify large human costs. Political power referred to the benefits of soldiers after their death to convince them to die for the regime. This policy was not sustainable on the long run and the regime and to stop it when military confrontation with the USA became more serious during the Tanker war.

At the institutional level, the roles of Artesh and IRGC started to be more defined after the end of the Iraqi conflict.[[80]](#footnote-80) The Artesh is relegated to the protections of borders and assigned to an apolitical role while the IRGC is in charge of the protection of the regime. The lack of experience of the IRGC completely reversed compared with the competences of the Artesh and its prestige and training of its forces are superior. The Artesh remains stuck in a classical understanding of warfare whereas the IRGC develops asymmetric doctrines to protect the integrity of the borders and the stability of problematic regions (Khuzestan, Sistan, Baluchistan; Kurdistan, Azeri borders). This division of role is more visible at the sea theatre of operations where the Artesh must ensure blue waters operations with the heaviest submarines (Russia Kilo class), while the IRGCN is in charge of asymmetric warfare in the Gulf with lighter and smaller equipment, more adapted to the tightness of the Straits of Hormuz.

This structure of the Iranian army is still dual nowadays. The Artesh is still operating on air and naval components. The IRGC is declined through the ground, air and naval components.

The IRIAF, the aerial branch of the Artesh controls the very old Iranian aircrafts. Since 2007, the Artesh was confided the role of aerial defenses through the equipment of surface to air missiles, radars, and anti-aircraft guns. In 2019, the IRIAF was renamed as the IRIDIAF and was allocated new 15,000 personnel for the aerial defense component.[[81]](#footnote-81)

IRGCAF is more in charge of the offensive missile capabilities and Iranian UAVs and the most modern Iranian aircrafts. The Al Ghadir missile command is the program which develops the Iranian Ballistic missiles. 5 brigades control the Iranian missiles in the Iranian territory. According to the 2019 HIS Janes assessment, the 15th brigade (Ghaem) is dedicated to the use of short range missiles. The 5th brigade, called the Ra’ad controls the Shahab 3 and 4 medium range missiles (MRBM) and is located at the West of Tehran. The 7th Brigade, Al Madid controls the Shahab 1 and 2 in the Kharaj area and controls the Ali Khomeini testing site in Khorramabad. The 19th brigade reportedly controls the Nazeat and Zolfagar missiles in the Karaj area. Finally, the 23rd Towid missile brigade is located in Khorranabad as well. [[82]](#footnote-82)

The duality of the Iranian army is also visible at sea.[[83]](#footnote-83) The IRIN represents the Artesh or conventional army at sea. In 2007, the IRIN was allocated the role to command the 3 kilo class submarines in the Caspian seas and Gulf of Oman. Its missions are more targeted at the external theater of operation rather than internal. The IRGCN is the maritime branch of the IRGC and controls the Iranian forces in the Persian Gulf and in the Straits of Hormuz. Regarding the small width and depth of its region of control, the IRGCN is allocated lighter and faster weapons in the Gulf to implement sporadic operations against its regional enemies. The IRGN controls the bulk of the Iranian cruise missiles deployed on the Iranian coast.

The coordination of the missions of the Artesh and IRGC is ensured by the Khetemolanbia air defense headquarters which allocates the respective missions of the different branches of the Army. It is the highest echelon of command of the Iranian Army. The commander is Abdobrahim Musair Artesh. Since 2016, this institution controls the command and control systems of both armies, which can be deconcentrated in case of conflict. A network of observation posts is also implemented under this institution.

The IRGC is favorised compared to the Artesh. It benefits from the most modern military equipment and has a hand on the economic sources in Iran allowing it to develop new weapon systems. The prestige of IRGC allowed it to obtain a better political position in the decision making process and has a direct link to influence the Ayatollah. A tighter civilian control has been implemented against the Artesh through the Ideological and political organization ensuring the indoctrination of the Artesh and their allegiance to Khomeini and the regime after the Iraqi war. [[84]](#footnote-84)This control has not been implemented for the IRGC which has more freedom and access to financial and material resources. For example, the IRGC can have access directly to the Iranian foreign reserves, which is prohibited for the Artesh. The IRGC became more influential on the architecture of the Iranian armed forces through the monitoring of their interests by the appointment in the Parliament and government of former IRGC officers. Moreover, after the Iraqi war, the IRGC has been depicted as the only victor of the war, attracting the best recruits with brighter career prospective than in the Artesh.

Nowadays, the military decisions are still done under the principle of velayat e faqih and under the leadership of the current Ayatollah Khameini.[[85]](#footnote-85) The Iranian president has a limited decisional power regarding the military affairs of the Iranian republic. However, other institutions exist and can serve as advisers for the main decision maker, the Ayatollah Khomeini. The supreme council for National security is an organization gathering heads of executive, legislative, general staff, main military commanders in one institution which aims at reporting the Ayatollah on the current common conclusions and issues met by the different forces ensuring the security of the Iranian territory. Moreover, Iran developed also a wide network of intelligence agencies, helping the decision-making process. 16 agencies were reportedly working in this field, the most important one being the Ministry of Intelligence as well as separated components within the IRGC and Artesh armies.[[86]](#footnote-86)

**Part II- Iranian Conventional and Missile capabilities**

**2.1- Weak aerial forces**

The Iranian aerial forces are not sufficient to protect possible attacks on Iranian territory and to retaliate and strike its enemies in the Gulf.

The last big wave of acquisition of Iranian air forces dates back to the acquisitions of American aircrafts during the Shah’s period in the 1960’s.[[87]](#footnote-87) Since then, the participation in the Iraqi conflict destroyed part of the fleet and the sanctions avoided the acquisition of necessary pars on the international market to repair the obsolescent fleet. Experts estimate that Iran possesses today 334 combat aircrafts in inventory in 2014. American aircrafts dating from the 60’s represent 60% of the Iranian fleet. 80% of it has been provided by Russia and Iraq. Experts estimate that 60% of the whole Iranian fleet is really operational, the remaining4 0%are estimated too old and too damaged to have a real military impact.[[88]](#footnote-88) Its most advanced combat fighters are constituted by Su24, Mig 29 which were provided by Russia during the 1990’s.

Iran does not have the possibility to upgrade its aircrafts since the fall of the Shah. Moreover, there has not been any operational exercise in real time operation since 1980’s during the Iraqi conflict. The knowledge of pilots is faltering with the multiple purges operated against the IRIAF by the new revolutionary power. The control of the fleet is still under the regular Army, the Artesh which commands non-strategic forces for Iran. It demonstrates the lack of strategic use by Iranian forces which relies more on its missile program to define its aerial forces. Aerial fleet does not have any offensive role in the Iranian aerial strategy.

However, Iran has not massively invested in surface to air missiles fulfilling the role of aerial defenses for Iran. The program of surface to air missiles has been developed first with the Shah but has not been fully developed to be operational. In 2008, the Artesh has been confided the management of the Iranian aerial defenses which remains faltering. Its most advanced SAM system is based on the export of HAWK by the USA during the 1960’s.[[89]](#footnote-89) Iran has been able to develop its own version of the French Crotale, the Ya Zahra but remains no per formant against upgraded versions from the USA, Europe and Gulf. Iran benefitted also from the export of HQ-2 missiles from China and could acquired someSA-6 missiles from Romania and 29 Tor-M1 from Russia in 2006.[[90]](#footnote-90) However, Iran was looking for longer ranges of SAM from Russia and China which refused to sell S-300 and S-400 systems. Russia cancelled its deal with Iran to deliver it in the wake of the efforts against the nuclearization of Iran under Medvedev and proposed instead shorter range system (Antei 2500). However, in 2018, Russia accepted to sell S300 in 2016 following the ratification by Iran of the JCPOA, resuming the defense cooperation between Russia and Iran.[[91]](#footnote-91)

Iran tried to improve its stockpile of SAM missiles trough upgrading the electronics parts of the SAM and through using only high frequencing radars to limit the ability of stealth aircrafts. It also tried to improve the command and systems parts to make them more survivable. Iran has also tried to build after the refusal of Russia to develop it its own S-300system, the Bavar 373 which is an improved version of its s 200-S systems. However, this system lacks of tests in real operational conditions and experts doubts on its efficiency.

The missile arsenal and SAM systems are used as air defenses. Iranian air forces are not able to sustain any conflict at high intensity and with little warning. According to estimates from experts, the Iranian apex of the fleets’ sorties can take days and the maximum sorties per day reaches only 1 every two day against 3 sorties per day for 1 American aircrafts. The SAM systems are no that performant either due to their very short ranges and their lack of accuracy to destroy effectively possible aerial attacks. Moreover, these capabilities remain very sensitive to electronic warfare from the West which moreover knows the technology that Iran is using. Only the Chinese missiles are not concerned by this weakness[[92]](#footnote-92). US and Western attacks can easily thwart the Iranian aerial defense system. Iran tried to increase the survivability of its forces through dispersion and putting them on mobile launchers. However, this system of decentralization requires a more integrated command and control systems. Through FIC2 and HADI structures, Iran seems to achieve the objective of a coordinated answer with the emergence of these two commands and control systems in 2014[[93]](#footnote-93). But experts’ estimate that the lack of training in SAM and aerial defenses would be a problem in times of war, and Iran is not able to sustain this effort.[[94]](#footnote-94)

Finally, there is not any homogenous protection of the territory and the SAM bases concentration gives more information on the vulnerabilities of the Iranian nuclear facilities. This information gathered with the lack of aerial defenses render the Iranian territory more vulnerable regarding the risk of preemptive strikes.

Since Iran does not have the means to invest properly in aerial defenses and conventional offensive capabilities, it decided to invest its efforts more on its offensive missile program in order to increase its deterrent effects and to thwart the defense systems of its adversaries. Offensive capabilities for Iran replace its defensive arsenal and participate in its deterrent program, blurring more the line between offensive and defensive systems.

**2.2- Iranian missile capabilities**

Iran is one of the three only countries in the world to have developed its indigenous missile systems. It is also allegedly the largest missile capabilities of the Middle East with a wide range of missile systems as well as the only country in the world to have developed a missile strategy and missile capabilities without nuclear warhead. Missiles are then considered under the Iranian ground forces by its asymmetrical aerial forces commanded by the IRCG aerospace forces. Rockets programs and defensive systems are controlled by regular ground army and the IRIAF[[95]](#footnote-95). The Iranian missile program started from the 1980’s with the cooperation of the North Korea in the development of the first Iranian Scud B and C programs. Iranian missiles were used for the first time during the war of cities in the 1980’s. The Iranian missile capabilities combine liquid fuel and solid fuel technology and benefitted from the cooperation of North Korea, China and Russia. In 2017, a fatwa from the Ayatollah Khameini limits the range of the missile to 2000 km, banning the potential development of ICBM.[[96]](#footnote-96) For the Iranian power, it is the proof of its good will and aims at reassuring the Western powers and thus avoids preemptive strikes from them on its territory.

The Iranian missile production is managed by the Iranian military industry apparatus which are under the control of the MODFAL[[97]](#footnote-97). The Iranian missile sector includes the Aerospace industry organization, the Shahid Hemmat industrial group, and the Shahid Bakeri Group.[[98]](#footnote-98) A modernization plan program launched by the MODFAL in 2017 encourages the production until 2021 to develop its ballistic missile program as well as its naval, and air defense capabilities as well as its Unmanned Aerial Vehicles (UAV). This plan aims at decreasing the Iranian dependence on the export of foreign materials and technologies.

The Iranian missile arsenal is currently divided into 6 principal categories.

The first one gathers **long range rockets** (such as Haseb, Falaq, Arash, Noor, Oghab, Fajr, Nazeat and Zelzal 1) with ranges between 9 and 140 km[[99]](#footnote-99). These rockets replace aerial offensive strikes on short distances. They are concentrated on the shores of the Straits of Hormuz and their ranges are estimated long enough to put a threat on critical infrastructures of the Gulf States given the narrowness of the Persian Gulf area. The Iranian missile doctrine aims at firing them in large salvos against target to compensate the lack of accuracy. The possibility to develop cluster warheads was also submitted but for some experts, this evolution would not palliate the lack of accuracy. However, the lack of testing of these systems and lack of efficient guidance systems is a problem for the operational use of these missiles. Experts estimate that these weapons play more a psychological role than real military offensive capabilities. However, these systems are far easier to export to Iranian allies through different channels and put at threat Israel on two fronts through Hezbollah and Hamas[[100]](#footnote-100).

The second one gathers the **liquid fuel technology**. These systems were developed since 1980 to match with the capabilities of Iraq since 1984 and the war of cities. It gathers the Shahab category of missiles, Qiam missiles and BM-25. It ranges from 300 km to 700 km. Guidance systems has been added in order to reduce the CEP[[101]](#footnote-101) to 50 meters. This kind of missiles is cheap and easy to produce for Iran which does not have more difficulties to export it to its partners in Lebanon and Palestine. According to experts, the liquid fuel technology was exported by North Korea during the 1980’s through the export of Scud B short range ballistic missiles. According to experts, North Korea and Libya would have exported a first batch of 120 entire missiles to Iran in 1987 as well as 150 missiles and launchers between 1988 and 1994[[102]](#footnote-102). These missiles were based on the USSR technology with a range between 280 and 300 km with the possibility to carry warheads up to 1000 kg.[[103]](#footnote-103) Iran would have fired these missiles for the first time against Iraq in 1987. By the end of the Iraqi war, Iran proposed to acquire the newest North Korea Scud B missiles with a wider range.[[104]](#footnote-104) According to American intelligence information, Iran started to improve its production capabilities for these missiles with the help of North Korean experts.[[105]](#footnote-105) By 1993, Iranian militaries were said to be able to build their own Scud B production lines[[106]](#footnote-106). The North Korean scud missiles served as a basis for the building of the Shahab Iranian missiles[[107]](#footnote-107). The Shahab 1 is the Iranian version of the North Korean Scud B missiles with a range estimated between 285 and 300 km and can carry a payload estimated around 1000 kg. The Shahab 2 is another Iranian liquid fueled missile based on a Scud C missile, allegedly exported by North Korea. Its range is estimated around 375km for a payload around 1000kg.[[108]](#footnote-108)

In 1993, North Korea developed a new version of Medium range ballistic missile, the No dong, which was afterward exported to Iran in 1997[[109]](#footnote-109). In July 1998, Iran would have been able to launch its own version of the North Korean No Dong missiles called the Shahab 3, a single stage liquid fuel and road mobile missile which can potentially carry a nuclear payload. According to experts, the missile can carry 1000kg on over 1300 km. This missile is considered as a medium range missile by experts. Specialists highlighted that this missile system was very little tested which decreases its credibility as a main threat for the region. It has been deployed since 2004 and tested 4 times since then.

According to Uzi Rubin, an Israeli expert of the Iranian missile program, Iran tried to develop a more performant missile based on its Shahab 3, called the Ghadr missile, a liquid fueled missile with a range of 2000 km.[[110]](#footnote-110) This missile includes 3 variants: the Ghar 1, Ghadr F and Ghadr H. The Ghadr 1 would be used with a triconic shape in order to reduce the CEP and would be manufactured in Iran at the Henmat Missile Industrial complex. The Ghadr F would be a new name for the Ghadr H missile and designate a two stage missile mixing a liquid fuel first stage and a solid fuel second stage.

In 2010, the IRGCASF tested for the first time the Qiam missile, a reportedly improved version of the Shahab 2 missile with a range of 700 km carrying 650 kg. According to Anthony Cordesman, this missile can carry a multiple warhead or cluster warheads. However, very little information was delivered on the capabilities of this missile regarding its performance. Only one test was registered.[[111]](#footnote-111)

Finally, the BM 25 was said to be exported to Iran. According to Anthony Cordesman, the existence of this liquid-fueled missile is not proven[[112]](#footnote-112). It could have been developed from the Soviet SS-N-26 missile or the R-27 North Korean missile with an improved guidance system. According to American intelligence reports from 2007, this missile would have a range around 2,500 km. Very little information exist on this missile.

Finally, Iran is said to have developed the Shahab 4 missile, but its existence has not been proven up to now. According to experts, it would have been developed under the Taepo 1 North Korean[[113]](#footnote-113) system or the No Dong 2 missile, but nothing has been proven on the origin and existence of this missile.

Finally, the last liquid fuel missile developed by the Iranian military is the Emad missile deployed in 2015. According to Anthony Cordesman, this missile is a variant of the Shahab 3 missile. It would have a maneuverable reentry vehicle with an improved accuracy. According to intelligence sources, several plans to develop the Emad 2 were proposed based on the previous Sejjil missile.[[114]](#footnote-114)

The Iranian **solid fuel program** was mainly encouraged by the technological transfers from Russia and China. The first Iranian solid fuel missile developed was the Mushak[[115]](#footnote-115) surface to surface missile developed under the USSR frog system. It was first tested in 1988. Its range is estimated around 160 km. The Zelzal family of missiles was declined into 3 variants and relies on the technological transfers from China and North Kora and USSR. The Zelzal started as an improvement of the Nazeat solid fuel program developed during the Iran Iraq war. With the help of North Korea and China, Iran developed the accuracy of these missiles through the spin stability systems. Zelzal 1 can be considered as a solid fuel artillery rocket whereas the Zelzal 2 and 3 as short range and medium range missiles. The Zelzal 3 missiles have a range up to 400km and have improved guidance systems. This missile system was produced in very large number and transmitted to the various Iranian proxies in the Middle East such as in Syria where this missile is called the M-600 missile.[[116]](#footnote-116)

From the 1990’s China particularly encouraged the development of solid propellant technology enabling Iran to reduce the CEP of its arsenal. According to experts, China exported its CSS8 missiles which were named Tondar 69 by Iranian forces and deployed in 1992.[[117]](#footnote-117)

The Fateh 110 medium range missiles are also based on the technological transfers from China during the 1990’s. The Fateh 110 missile was first tested in 2002 as a single stage missile with a 200km range. The Fateh missile would be an improved version of the Zelzal missile with guidance gyroscope systems. According to Anthony Cordesman, the full production of this missile would have been launch from 2004[[118]](#footnote-118). Its CEP was estimated between 100 and 300 meters but this estimation could be wrong in real combat circumstances. According to Rafsajani, the head of the Majles (the Iranian Parliament) at that time, Iran would have been able to produce by itself its own solid fuel propellant.[[119]](#footnote-119) According to intelligence information from January 2000, several projects of solid fuel production were detected through the import of the MTPB resin, the aluminum powder and the potassium chlorite. In 2015, the Fateh 313was created and was the last Fateh missile included. Its rande reaches 500 km and has a new fuel composition.

The Hormuz 1 and Hormuz 2 were designed on the Fateh 110 basis in 2014. It is not clear however if these missiles have a better accuracy than the Fateh 110. According to experts, the Hormuz 2 was converted into a anti-ship missile with anti-radar capabilities.[[120]](#footnote-120)

Similarly, Iran developed Khalij Fars from Shahab missiles as an anti-ship missile deployed on Iranian coasts and onboard. Its range is estimated up to 300 km for a 650kg payload. This missile was allegedly deployed in 2011.

Finally, the Seijjil or Ashura missile is considered by experts as a strategic missile force. This missile was tested for the first time in 2009 as a two stage missile. The first stage is composed of solid propellant and the second stage as a ballistic missile. Its range was estimated up to 2000 km for a 750 kg payload. The efforts of Iran to produce its own solid fuel helped increasing capabilities for the Seijjil 2 missile. According to experts, the Seijil missile would have a rudimentary inertial guidance system for a greater accuracy.[[121]](#footnote-121)

The Iranian arsenal includes 2 main **Space Launch Vehicles** (SLV). The first one is the Safir missile which is based on the development of Shahab 3 missile. It has been deployed since 2008 an served to launch in orbit 50 kg class satellites in low earth orbit up to 250km. Its range is deemed up to 2100 km with a payload of 500 kg.

The Simorgh missile is allegedly based on the North Korean Taeppo Dong 2 missiles and Shahab 3 technology. According to experts, its range is between 4,000 and 6,000 km for a payload of 5,000 km. [[122]](#footnote-122)

American and European experts fear that the development of SLV would pave the way for the development of ICBM threatening the European and American continent[[123]](#footnote-123). On April 22, 2020, the Aerospace Forces of the IRGC launched for the first time a Noor satellite with a new SLV called Qassed, allegedly based on the Safir SLV[[124]](#footnote-124). It is the first time that Iranian militaries launch a military satellite. This task is usually done by the Iranian Space Agency in cooperation with the Ministry of Information and communication with the Ministry of defense armed forces logistics (MODAFL). Moreover, the SLV was launched from Sharuhd missile base rather than the usual Ali Khomeini Spaceport near Semanan.[[125]](#footnote-125) The IRGC achieved to implement a secret satellite program which was not detected for many years by Western intelligence services. According to the IRGC space commander Jafar Abadi, the IRGC space program was launched since 2010 and focuses on the development of the solid fuel SLV. According to Fabian Hinz, the Qassed missiles are 3 stages, the first one including a Ghadr liquid fueled missile, the second being a Salman solid fuel motor. There is no precision on the exact composition of the last stage. The use of a solid propellant as a second stage was particularly criticized by the Western experts, fearing that the Iranian IRGC would use in the future a first stage with a solid propellant. Previous experiences demonstrated that it is possible to transfer the technology to build the solid fueled SLV into ICBM. The examples of Israel and India proved the possibility to do it. However, according to experts, it remains difficult to convert this technology into an efficient ballistic missile and the blue sky launch corresponds more to a gesture during a tense political context with the USA to recall that the Iranian military have the potential to threaten the USA. It also corresponds to a tense internal context for the Iranian regime, degraded by the shooting of the Ukrainian aircraft 752 and the current sanitary and economic crisis triggered by the coronavirus.[[126]](#footnote-126) It demonstrates that the IRGC can potentially compete with the traditional governmental powers degraded in the current context. This trend is visible through the massive use of Basij militias to distribute medical items to the population and highlights the inefficiency of the government. [[127]](#footnote-127)

If these systems are as performing as they are described in official communications from Iran, they would be able to strike targets in Israel, Levant, Russia, Gulf States, Europe, Arabian Peninsula and Central Asia, extending the deterrent power against more enemies in the Middle East and Western actors. Moreover, Iran reduced their vulnerabilities by using passive defense systems and camouflage and using the depth of its territory to disperse its entire arsenal. This longer category is deployed in hidden silos or on mobile road tracks. Shahab 3 missiles are deployed on mobile launchers while other missiles are hidden in underground silos

The strategic use of these missiles is to launch short range missiles in volleys in order to saturate the missile defense of the enemies and then to launch more lethal longer range missiles to hit strategic targets.

Finally, Iran advanced its range of **cruise missiles**[[128]](#footnote-128). The Iranian arsenal is composed of various land attack, sea based and air launched cruise missiles. The bulk of the Iranian cruise missile arsenal are anti-ship cruise missiles, they are deployed in the framework of its A2/AD strategy, more specifically in the straits of Hormuz and Persian Gulf[[129]](#footnote-129). These missiles are deployed mainly on coastal shores or on light, speed boats or on helicopters to strike enemies with no warning. 3 cruise missiles imported by Iran served as a basis for its indigenous capabilities. The anti-ship cruise missiles were first exported by China in the 1980’s as the C-801, C802 and C704. These missiles have a light payload for a range of 300km and are mainly deployed on submarines, surface ships, aircraft and land batteries. China also exported during the same period its Silkworm cruise missiles which include an autopilot for its midcourse guidance. Finally, Iran is said to have imported the KH 55 missiles from Ukraine in 2001. However this information has not been proven except within Israeli intelligence reports. The Kh 55 is designed as an air launch cruise missiles but was converted in Iran as a ground launch cruise missile used to protect the Iranian coastal shores.

On the basis of the foreign import of missiles, Iran developed its own indigenous arsenal such as the Soumar, developed in 2015 under the Kh55 pattern with an increased range of 3,000 km and a reduced CEP of 50 meters. Hozeivzeh cruise missiles were deployed in 2019 as an evolution of the Soumar missiles and can be fired from a mobile launcher. The Nasr missiles were developed under the C-704 pattern and are deployed on patrol ships and helicopters. The Ghadir and Noor missiles were created from the Chinese C-802missile and both remained ASCM. Finally, the Hobin missiles are the newest weapon created by Iran and are allegedly equipped with stealth capabilities.

These weapons are mainly used in the Straits of Hormuz within a layered maritime defense system allying coastal ground launch cruise missiles, ASCM deployed on speed boats with stealth capabilities and they are also allied with other weapons used by Iran such as mines and submarines designed for suicide attacks. They are integrated within the A2/AD strategy which aims at denying the presence of adversary forces in sensitive regions for the security of Iran. The Straits of Hormuz are particularly narrow and collisions between commercial tanks, Iranian speed boats and mines and cruise missiles can happen frequently with the possibility to obtain an escalation in case of miscalculation. Iran tries on the maritime theater to launch sub-level of warfare composed of light and small weapons with a high level of deniability. Moreover, Iran uses a lot of small islands serving to conceal its capabilities and launch surprise attacks on boats.[[130]](#footnote-130)

Iranian relevant arsenal also includes drones.[[131]](#footnote-131) In the case of Iran, they are not simply used for reconnaissance missions but can carry Iranian missiles inside. The use of strike drones is considered as a growing threat by experts such as Anthony Cordesman regarding their stealth capabilities.[[132]](#footnote-132) They were used during the attacks against the Aramco facilities in Saudi Arabia in 2019 and demonstrated that the mix between UAV and Cruise missiles can pose a serious threats for sensitive targets in the region.[[133]](#footnote-133) The Iranian arsenal includes the Fotros, H-110 Sarir, the Hamasheh , Hazem series with 3 variants, the Karar and the Shahed 129 which can be used both for reconnaissance missions and can bear missiles. The Raad 85, Sadeq and Saeqah are used exclusively for their strike capabilities.

**2.3- Issues in the use of the Iranian missile arsenal**

However, it should be added that all missiles have technical problems that hinder them from fulfilling their deterrent mission.

The first one concerns the lack of accuracy of the missile systems.[[134]](#footnote-134) Indeed, the tests did not reveal how Iran could strike precise targets on real operational conditions and all missile lack terminal guidance and advanced warheads allowing reducing the CEP to less than 50 meters. Iranian production lines endeavor to reduce the inaccuracy of the Iranian missiles through the use of GPS data but experts estimate that it is not sufficient to palliate the inaccuracy of missiles. For example, if the CEP is superior to 200 meters for a missile, it was estimated that more than 100 missiles were needed to obtain 50% of chances to destroy the target[[135]](#footnote-135).

To palliate this main problem, Iran developed a tactical use of missiles in salvos in order to overwhelm missile defenses systems and to have better chances to reach one target. The problem is about the strategy of targets developed by Iran. For Anthony Cordesman, there is no real target doctrine that would allow Iran to strike sensitive targets but only reach a world trade center effect by using the weapons as a psychological tool against its regional enemies[[136]](#footnote-136). However, this point of view changed recently with the recent strikes against the Aramco facilities in Saudi Arabia in 2019 where Iran was able to strike precisely the oil infrastructure through the use of GPS guided drones and cruise missiles. However, these systems can be used only within the Persian Gulf area due to the limitations of their ranges.

For experts, the calculus between the chances to reach the sensitive targets, the number of missiles that are needed, the costs of the operations for Iran by launching big amount of its missile capabilities, the benefits from hitting this target for Iran and the possible costs for the enemies or for Iran if it fails its mission, all these parameters are not expressed in its missile tactics. The only will to launch huge amount of missiles against adversaries seem enough to sustain deterrence for Iran. However, even this tactics is not possible in real life since the number of TEL in the country and the quantity of solid propellant missiles is not enough to lunch in large volleys missile attack with no warning. Another problem comes from the poor testing conditions of missiles with low rate of successes against targets. According to American experts, missiles are very often used to feed internal propaganda than real conventional direct confrontations.[[137]](#footnote-137)[[138]](#footnote-138)

To increase its deterrent power, Iran increased the survivability of its arsenal. Iran designed a passive defense doctrine aimed at hindering intelligence collection against its missile arsenal through the deployment of passive and concealment measures. With the help of North Korea, Iran could develop its missile factories underground in protected tunnels from where some missiles can be launched.[[139]](#footnote-139) Iran developed the largest underground facilities in the Middle East which is the cornerstone of the passive defense doctrine. Deep bunkers and tunnels are also used around nuclear facilities of Natanz and Qom. In 2009, Ali Akhbar Salehi, head of the Iranian Atomic Energy Organization (AEOI), reported that Iran built nuclear facilities in mountains, denying the potential preemptive strikes from Israel[[140]](#footnote-140). The same rationale exits for the Iranian missile factories and development agencies. Iran also increases the survivability through the dispersal of its missile factories, the use of mobile units or mobile launchers and camouflage measures. A specific Iranian institution was designed to promote the Iranian passive doctrine in all aspects of the Iranian civilian and military life, called the National Passive Defense Organization (NPDO).[[141]](#footnote-141)

Iran seems not to take into account the possible reaction of its enemies and the building of more complete defense systems reducing the importance and potential lethality of its missile strikes. The deterrent power of Iran is thus decreasing. There is also the probability of misinterpretation of the use of missiles among regional enemies due to the capacity of the development of payloads leading adversaries to believe the existence of Weapons of mass destruction program. It would be easier indeed for Iran to create such payloads than to increase the accuracy of its arsenal. Moreover, Iran developed missiles having the possibility to welcome such payloads which blurs more the interpretation from the point of view of adversaries with the possibility of preemptive strikes.

If Iran wants to transform these weapons in weapons of mass effectiveness, Iran must address these complex technical problems. There are a lot of doubts on the capability of Iran to do it by itself. If Iran wants to keep the relevance of it missiles and deterrent power, it must increase their lethality.

**2.4- WMD payload**

Iran can be tempted to develop WMD warheads to palliate the lack of accuracy of its missiles through the increase of their lethality and change the payload of its arsenal. Experts estimated that Iran has the industrial potential to develop chemical and nuclear warheads. Biological warheads are deemed possible although no verifiable information on the existence of such program exist in Iran. [[142]](#footnote-142)

At the beginning of the conflict, Iran stated that it would never use the weapon of its enemy. The Ayatollah Khomeini released a fatwa prohibiting the use of chemical weapon. However, the Iranian powers seem to have decided to develop this weapon although the Iranian population was itself suffering from this very same system from Iraq.

Moreover, a report from American Intelligence services released in 1988 increased the suspicion from the international community on the status of the Iranian chemical arsenal.[[143]](#footnote-143). According to this report, Iran would have lead research programs and produced all sorts of chemical agents in facilities located in Esfahan, Parchin and Qazvin. Other reports from UN Commission, active in Iraq reported also the possibility to have found wreckage of Iranian rockets which would have been filled with mustard gas payloads. Iran then ratified the Chemical Weapon convention in 1997 and abided by its obligations within the convention. After the ratification, the Iranian regime stated that it destroyed its chemical arsenal.

However, allegations on the violation of the Chemical weapon Convention still arise from the USA and Western Europe. Iran Watch reported that in 2005, a German intelligence service stated that Iran would have produced mustard gas, cyanide and VX agents for a military purpose.[[144]](#footnote-144) In 2018 and 2019, the USA accused Iran of not respecting its obligations under the OPCW and accused China of supporting Iran in its program. According to Iran Watch, China would have the development of such weapons through the export of medetomidine in 2014.[[145]](#footnote-145) Finally, the USA accused Iran of having helped Syria to develop its chemical weapon arsenal through the building of production facilities for VX, sarin and mustard gas.[[146]](#footnote-146)Iran is still accused by the USA of producing incapacitating agents.

Eventually, Iran was also accused of developing a nuclear payload[[147]](#footnote-147). The Iranian nuclear program reportedly started during the 1950’s with the assistance of the USA and Israel in the framework of the Atom for peace program.

Although Iran signed the NPT in 1970, the Iranian regime was accused to pursue a clandestine military nuclear program in the framework of the physics research center, subordinate to the MODAFL[[148]](#footnote-148). Due to the purges organized by the newly created Iranian regime, all Iranian scientists fled or were persecuted just after the revolution. However, the nuclear program reportedly resumed with the arrival of the president Akbar Hashemi Rafsanjani's by the end of the 1980s, following the end of the Iraqi war. In 1990’s, thanks to the Russian, Pakistani and Chinese assistance, Iran could develop its nuclear program through two agreements[[149]](#footnote-149). In 1990’s, the Iranian regime was accused of pursuing the project 111, aiming at designing a nuclear payload into the Shahab 3 reentry vehicle. In 1995, Iran reached an agreement with Russia to complete the building of the construction of the Bushehr and the supply of uranium enrichment plant.[[150]](#footnote-150) During that period, Iran reportedly received the assistance of these countries. Iran was also reportedly approached by the A.Q.Khan Pakistani scientist and suspected of having acquired on the nuclear black market sensitive components. [[151]](#footnote-151)

From the 2002, the international community started to be alerted by the allegations from the Mek[[152]](#footnote-152) (an exiled Iranian breakaway group)[[153]](#footnote-153) which revealed the presence of additional nuclear facilities such as the uranium mine at Saghand, as well as two enrichment plants near Ardakan, and at Natanz. Another IAEA report in 2004 stated that Iran tried to procure deuterium gas from Russia. The report from the Soviet scientist, Vyacheslav Danilenko,[[154]](#footnote-154) claimed that he helped the Iranian scientists to develop a conventional explosive system, suspected to be adapted for a nuclear explosive device. Moreover, the IAEA suspected the building of separated nuclear weapon components without testing it entirely such as within the Parchin facility[[155]](#footnote-155).

From 2015, under the JCPOA implementation, Iran cooperated more with the IAEA to provide more information on its nuclear facilities. The IAEA has not detected new military nuclear activity since the implementation since the 2000’s. Finally, on 8th May 2018, Donald Trump announced the withdrawal of the USA from the JCPOA, triggering the resuming of the Iranian enrichment program a year later[[156]](#footnote-156).

The development of these WMD programs could palliate the lack of accuracy of the Iranian missile capabilities by increasing the lethality of its arsenal. A lot of Iranian missiles are compatible with a nuclear warhead, worrying international experts on the potential development of a military nuclear program after the end of the JCPOA. Moreover, Anthony Cordesman highlighted that the Iranian nuclear program can be used for political purpose in Iran to put pressure on Western parts which were members from the JCPOA or for internal propaganda purposes, demonstrating the power of the Iranian regime.[[157]](#footnote-157)

**2.5- Procurement and smuggling routes**

For Iran, which is put under the 2231 UN sanctions, preventing it from acquiring and developing new missiles, it is challenging to obtain the necessary components to develop its missile program. According to experts, Iran is still dependent on the import of some critical components for the development of its missile program such as guidance technology (including gyroscopes, navigation sensors, accelerometers)[[158]](#footnote-158) some specific steel that can bear the vibrations or a specific aluminum alloy for the lighter rockets, electronic testing material, carbon fibers, graphite cylinders (used for reentry vehicles) and tungsten metal powder (used to produce solid fuel). Iran has 2 solutions to acquire these components and help to develop its missiles.

On the one hand, Iran could rely on the direct support from state actors.

North Korea was allegedly the first state to have helped Iran in the building of its nuclear and ballistic missile program. According to Bruce Bechtol, North Korea would have acquired Scud B missiles from Egypt during the 1970’s.[[159]](#footnote-159) According to this expert, North Korea would develop the Scud B and C missiles and export this technology directly to Iran. In exchange, the Iranian program allegedly finances the production lines in North Korea. The first Iranian missiles were thus produced in North Korea and exported to its Middle Eastern ally. The first pattern was reproduced for the development of the Scud C, the scud D and the Scud ER as well as the No Dong missiles[[160]](#footnote-160). Some missiles were said to be assembled in Syria which exported the completed missiles to Iran. In turn, Iran could learn the steps of production with the help of North Korean experts and develop its indigenous missile capabilities as the building of Emad missiles in 2015. In 1990, the North Korean militaries developed the SS-N-6 missiles which were transformed into the Musudan missiles, exported then to Iran which develop them to obtain the Shahab 4 missiles in 2006.[[161]](#footnote-161) According to Bruce Bechtol, North Korea also helped Iranian militaries to build underground facilities and tunnels to store and produce the missile weapons. North Korean experts would have been present during the Iranian tests of missiles and also invited Iranian engineers to participate in the test of their own missile and nuclear weapons. According to experts, the IRGC would have even built a house for the North Korean experts arriving in the industrial facilities. The special guest house would be located on the Damarrand Street in Tehran. North Korea is allegedly still active in the building of Iranian weapons through the improvement of cruise missiles and drones.[[162]](#footnote-162)

China is the second state which would have participated in the building of the Iranian missile program. The Chinese help started during the Iran Iraq war in 1980[[163]](#footnote-163). However, due to the moral stance of China, which stated that it would not help directly any parts in the conflict, China relied on North Korea as a third party to develop the Iranian missile program. The first Chinese contribution was reportedly the Silkworm missiles delivered in 1986 and tested in Iran successfully in 1987[[164]](#footnote-164). China helped the Iranian program more on the maritime component than on the ballistic program and developed more its solid-fuel technology. Under the pressure of American administration, China denied the accusations of the USA saying that it helps Iran and reported its responsibility on North Korea. According to American intelligence, China provided from 1988 technical and training assistance to Iranian engineers and sent also Chinese advisors in Iran.[[165]](#footnote-165) In 1989, China allegedly participated in the building of the Shadroud and Esfahan missile factories. The end of the Iraqi war strengthened the cooperation between Iran and China due to the isolation of the Iranian powers on the international stage. In the 1990’s China allegedly exported dozens of missile systems to Iran and assisted it in the missile factories. China also reportedly sold separated components such as gyroscopes, accelerators and test equipment’s. The first exports of the Chinese C-802 and C-801 were reported in the 1990’s as well. In 1997, The Washington post reported that The Chinese Company the Great Wall industrial corporation allegedly sent telemetry and missile flight testing facilities for Shahab 3 and 4 missiles[[166]](#footnote-166). China was also said to have helped the Iranian ballistic missiles for its Space launch program in the 2000’s through the Asia Pacific Space Cooperation Organization. China served also as a passive helper between North Korea and Iran. Several North Korean ships and planes used the Chinese territory to ship their deliveries to Iran. For example, in 2009, the UAE seized a North Korean ship that was stopped first in Shanghai and Dalian in China and loaded with missile components. [[167]](#footnote-167) With the help of China, Iran increased its capabilities in solid fuel missiles and anti-ship missiles as well as its indigenous missile capabilities. Between 2004 and 2007, the USA imposed unilateral sanctions against Chinese companies for having sold dual-use technology to Iran.

Finally, Russia helped Iran to develop its ballistic missile capabilities and liquid fuel technology. Very few academic documents report about the involvement of Russia in the Iranian missile program and these documents date back from the 1990’s. No information on a potential collaboration between the two countries was reported recently. Russia helped the implementation of the Iranian nuclear program through the financing of the Bushehr nuclear plant[[168]](#footnote-168). Regarding the Iranian missile program, Russia seemed to be more active in 1990’s. In 1997, the Energomash Company, a major rocket manufacturer in Russia reportedly sold the technology to produce the RD 214 rocket to Iran. This information was denied by the Russian government. On the same year, American and Israeli intelligence reports stated that the Polyus Scientific research institute supplied missile guidance components to Iran. Moreover, the Inor Production association was accused of selling special steel compatible for missile systems and shielding foil.[[169]](#footnote-169) The Russian Central Aerohydrodynamic institute was also accused of helping Iran to build an advanced wind tunnel and other testing facilities for the Iranian missiles. Russian government was also accused of training directly Iranian engineer students in the Baltic State University of Saint Petersburg as well as in the Bauman Moscow state university. The beginning of the 1990’s was a period when Russia was particularly vulnerable and maybe it could explain its difficulties to enforce the export control legislations. There is currently no information released on covert programs of collaboration between Russia and Iran.

The second channel of exports of components to improve the missile accuracy would be through private companies cooperating with Iran and the use of front companies. An article published from the Bulletin of Atomic Scientists in 2013[[170]](#footnote-170) explained how Iran used a wide network of front companies in the world to acquire sensitive components from Western companies. In the case presented, Iran tried at multiple times to obtain oscillators, allowing it to increase the accuracy of its missiles from the Rakon Company in Great Britain. The European front companies based in Switzerland, Bulgaria, USA, France and Germany launch the order to the Rakon Company and then planned to transship the components to Malaysian and UAE transshipment hubs before sending it to an Iranian private company. The British company could detect the suspicious orders by comparing the industrial base of the demanding country and the potential use of the components to detect inconsistencies. Another case reproducing the same scheme was reported in 2014 concerning the Portuguese company Firstfield firm[[171]](#footnote-171). It tried to acquire missile components such as optical machines and a Nanotech 250 UPL machine serving the building of guidance systems. An employee from this company benefitted from a training in the USA to learn how to use these machines. According to Iran watch, the orders from this Portuguese company would have been made on behalf of Rez Rejali, an employee from the Iranian Kiyan Saynpaniz International (KSP) and who used the network of front companies in Asia detained by two businessmen Ghobad Ghasempour, a Turkish native and Yi Xiong a Chinese businessman. The two businessmen detain the IBC trade company, the Modo international group and the Todi entreprises in China. The plan was to buy and acquire the machines and to transship them to these Chinese front companies before reaching the Iranian KSP companies. A same logic was seen with the Tjhiz Sanat Shayan Company, based in Tehran which achieved to procure components from the USA through an Emirati company, the Omid General Trade LLC and transshipped to a front company in Hong Kong before reaching the Iranian company.[[172]](#footnote-172)

It is particularly complicated for private companies to monitor the possible transshipment of the goods, particularly for dual purpose items.[[173]](#footnote-173) In the case of the Rakon company, it was reported that the company checked manually all the orders. The checking is particularly demanding when Iranian companies use a very wide network of font companies to acquire such items. Support of the states to such private companies could be a positive step to avoid the misuse and transfer of sensitive technologies.

**2.6- Financing of the Iranian missile program**

There is no precise literature and articles describing precisely how the Iranian missile program is financed. However, it is possible to determine some sources of financing of the IRGC. On the one hand, it is possible to determine the defense budget allocated mainly to the IRGC[[174]](#footnote-174)[[175]](#footnote-175). During the implementation of the JCPOA, an increase of this budget was reported reaching 3.8% of the Iranian GDP. In 2019, this budget decreased due to the American sanctions. In 2019, 29% of the defense budget was allocated to the IRGC while the Artesh could obtain 12%. It finances also the MOFADL and the pensions of the retired militaries and other military branches. [[176]](#footnote-176)

Moreover, the Iranian economy is highly centralized and has a very large public sector[[177]](#footnote-177). There is not a big private sector in the Iranian economy and the State controls the main economic assets of the country. The foundations, called bonyads, control a big share of the Iranian economy. On March 2015, these foundations represent 13% of the whole Iranian GDP. They are directly directed by the Ayatollah Khameini and put under control of the IRGC commanders. The largest foundation is the Astan Quds Razavi asset.[[178]](#footnote-178) Another kind of organization would be Setad or executive organizations also controlled by the Ayatollah and the IRGC commanders. With these assets, the IRGC has access to the whole Iranian banking sector which could help the financing of the weapons program. Some experts also highlighted the possibility for the IRGC to smuggle the weapons to other state and non-state actors to obtain more financing. This information has not been proven until now. [[179]](#footnote-179)

It should be highlighted however that the current sanitary with the coronavirus situation with the coronavirus has a negative impact on the economy of Iran and can slowdown the development and financing of its missile program. Regarding the economic issues triggered by the coronavirus in Iran, the regime may face a major economic crisis, weakening more its stability[[180]](#footnote-180). Before the arrival of the virus in Iran, the economic context in Iran was very gloom[[181]](#footnote-181). The withdrawal of the United States from the JCPOA in 2018 as well as the refusal to provide exemptions for foreign companies dealing with Iran sparked the dramatic increase of inflation rate to more than 50% and the devaluation of the national currency compared to the dollar. The freezing of the Iranian assets in foreign banks render impossible the access to foreign reserves, allowing alleviating the level of inflation.[[182]](#footnote-182)

The coronavirus crisis provoked a major economic crisis in Iran. China decreased its Iranian oil imports due to the end of the American sanction exemptions, reducing the revenues of Iran. Moreover, the general economic slowdown decreased the demand for oil by 1/3 and triggered a collapse in oil prices, reducing for Iran its revenues. [[183]](#footnote-183)[[184]](#footnote-184)

**Part III-Risks of the development of the missile program for the Iranian security**

The increasing development of the Iranian missile program risks triggering preemptive strikes from its regional and international enemies. [[185]](#footnote-185)This consequence is easily predictable by Iranian decision makers. According to Abdolrasol Divsallar, Iran has prepared to such Israeli reactions since its commitments on the Syrian ground on the side of Bashar al Assad in 2011. The risk of Israeli preemptive strikes significantly shaped the Iranian threat perception as well. For Abdolrasool Divsallar, it contributed to mute the Iranian defensive doctrine into an offensive one, blurring the lines between defense and offense and increasing the negative circle of violence in the Middle East.

Israel is the main threat regarding the use of preemptive strikes against Iran. It is particularly active against the Iranian Quds and IRGC positions in Syria, avoiding the opening of a new front at its Eastern border. However, the Israeli operations against asymmetric opponents such as Hezbollah emphasized that Israel relies mainly on the use of aerial forces, and standoff capabilities to ensure a “Total Victory” against its adversaries. Israeli strikes use the very same tools against Iranian positions in Syria. It could be envisaged this kind of strikes within the Iranian territory, although it would trigger retaliation from the Iranian powers through the activation of its proxy network. However, such consequence would be particularly negative for Iran due to the weakness of its aerial defenses.

However, although Iran deployed passive defense systems, it did not hinder direct actions from Israel against its missile facilities. According to Iranian sources, Israel would have launched aerial drone attacks against Natanz nuclear facilities. Israel would have launched its action from Azerbaijan where Israel is building more links which can encircle Iran. According to Abdolrasool Divsallar[[186]](#footnote-186), Iran perceives that these actions are not condemned at the international level, due to the negative perceptions against the Iranian power.[[187]](#footnote-187)

Iran could be tempted to develop nuclear weapons as the ultimate deterrent weapon against any attacks against its territory and gain the strategic leverage on the Gulf region and reverse the regional balance of power in the Middle East.[[188]](#footnote-188)For Iran, it would increase its status as an international power and would be treated on the same equal footing as other states. [[189]](#footnote-189)Iran could perceive it as the sanctuarization of its territory against any foreign interventions on it.

However, building a proper nuclear force and deterrence doctrine is particularly risky for Iran. It must overcome technical challenges to build its nuclear weapon quick and strong enough to get the deterrence benefit without suffering from preemptive strikes from Israel or the USA. Moreover it must ensure that the nuclear arsenal would be strong enough to compete with the mature nuclear power of Israel which requires also the improving of its delivery vehicles. In this sense, Iran would have more interests to build a threshold capacity with the potential to build a nuclear weapon but not to do it in order to avoid any preventive strikes[[190]](#footnote-190). This is again a dangerous game that Iran could play between its narrative and the building of dual use technology that must be construed by its enemies as an offensive defensive strategy but not too strong to avoid positive actions from them.[[191]](#footnote-191)

Three consequences could be expected if the regional adversaries are convinced of the Iranian nuclear potential.

The first one is the reaction by preemptive strikes to destroy the arsenals of Iran. This is the worst case scenario for Iran since it is completely vulnerable due to the weaknesses of its aerial defenses. Iran does not have the means to sustain threats that is trying to impose to its enemies. Israel and the USA would never accept the presence of nuclear weapons in Iran and military interventions are expected in that case. Preemptive strikes can also differ from aerial strikes. It can take the form of cyber-attacks such as the Israeli attacks against the Iranian nuclear centrifuges during the Stuxnet attack in 2010 against its Bushehr nuclear facility[[192]](#footnote-192). Iran has developed very recently its cyber forces and may be vulnerable to defend against the Israeli attacks.

The second threat would be the extension of the American nuclear deterrence in the region to answer the security threats of its allies working as positive security guarantees from Washington. The goal for the USA is to avoid the acquisition of nuclear weapons by Gulf States or any other states in the Middle East in order to avoid a domino effect and a proliferation of nuclear weapons in the region. [[193]](#footnote-193)

However, the last consequence would be the worst with a nuclear arms race in the Middle East if Iran decides to develop a nuclear power. Saudi Arabia declared multiple ties that it would seek itself its own nuclear weapons with the help of Pakistan to balance the military advantage of Iran and not to be dominated in the Gulf balance of power. This consequence would be addressed in further details in the chapter N°2.

**Conclusions**

Due to its previous historical and military background, Iran developed a fundamentally defensive doctrine aiming at protecting its regime that is deemed under the threat of the American and regional offensive intentions.

Although Iran built its vision of the international relations on a fundamentally ideological narrative, Iran remains a rational actor[[194]](#footnote-194).

The Iranian regime built the missile program regarding the weakness of its military and financial assets and adapted its doctrine to obtain the desired deterrent effect against potential attacks. Iran is therefore led by the “cognitive context of strategic thinking” mixing the ideological components, historical background, financial constraints and the decision making process to produce the missile weapon tools to protect its territory.[[195]](#footnote-195)

Iran rejected the American influence on its territory, triggering a major confrontational tone against the USA, Israel and the Gulf States. The war against Iraq was a milestone of the Iranian conception of its place in international relations and Iran started to act more pragmatically to save the stability of the regime rather than the protection of its revolutionary ideology. National expediency started to be the core of the Iranian military doctrine and it had to open to new cooperation to survive during the war. The Iranian self-reliance principle was too hard to sustain against an adversary protected by all former allies of Iran that were rejected under its own doctrine. Iran rejected the idea that technology could be fought by the only power of faith and tried to find appropriate means of warfare against military superior enemies. The active development of the Iranian missile program started from this period with the building of an asymmetric warfare doctrine. Missile program started by the end of the 1980’s as a mean to palliate its weak conventional forces.

Iran found however a lot of hurdles in its path to build a proper missile arsenal to deter any actions against its territory. Financially limited and with constraints from its adversaries to curb its military capacities, Iran uses its offensive narrative to increase the deterrent power of its arsenal as well as passive defensive systems to increase their survivability and built an efficient network of regional and international allies to obtain the necessary components for the production of its missile arsenal and to export it.

Missile systems are integrated in the Iranian air defense component to palliate the weaknesses of the conventional Iranian air forces. Iran has a wide range of different missiles from short range rockets to long range missiles from 40 km to more than 3,000 km. These missiles are particularly efficient to threaten the oil trade in the Gulf of Hormuz and to threaten Gulf States sensitive facilities. Nevertheless, the lack of guidance systems, terminal homing system, and the width of the CEP renders the accuracy and then lethality of the missiles far less efficient. To palliate the lack of accuracy of its missile arsenal, Iran developed the launch in salvos to overwhelm missile defense systems. However, with the lack lethality and precision and TEL, these salvos were estimated inefficient. However, its cruise missile arsenal and drone arsenal can be developed increasingly since their efficiency and stealth capabilities allow them to strike regional enemies easily.[[196]](#footnote-196)

Iran is under the threat of the Israeli preemptive strikes that are not condemned at the international level. Due to its isolation and economic constraints, Iran could not build an efficient aerial defense system. To avoid the possibility to be attacked by Israeli strikes within its territory, Iran built an offensive missile strategy as well as a more powerful arsenal having the potential to be loaded with nuclear payloads. This situation blurs the lines between the Iranian defensive and offensive missile strategy and is perceived by other actors as fundamentally offensive and increase the level of confrontation in the Middle East.

Iran has the potential to develop WMD payloads through chemical and nuclear weapons. The worst case scenario for Iran remains the building of offensive missile systems against it. Iran could be interested to add a nuclear payload to increase its deterrent power and reverse the regional balance of power[[197]](#footnote-197). This probability seems however impossible considering the necessity to build a mature and strong nuclear power quick enough and in the complete secret to avoid preventive strikes. Iran could develop threshold capabilities to increase its deterrent power without suffering from the threat of retaliation strikes.

However, such programs implemented by Iran are perceived as deeply offensive by the regional actors increasing the level of aggressiveness between them. The real-combat use of the Iranian missiles through its proxies and by Iran directly fuels the cycle of violence in the Middle East and triggers important security consequences which are exposed in the following chapter.

**Chapter 2: Security issues of the use of the Iranian missiles in the Middle East**

“To fight and conquer in all our battles is not supreme excellence; supreme excellence consists in breaking the enemy's resistance without fighting.” [[198]](#footnote-198)

This quote from Sun Tzu could be applied to the Iranian missile strategy, avoiding any direct confrontation in order to avoid the retaliation on its own territory. Iranian militaries export missile capabilities to their regional allies, called proxies. These surrogates participate in the Iranian missile strategy through the use of the Iranian missile weapons with the support of the Iranian regime to confront on a multitude of asymmetric warfare against their common enemies. The use of proxies in the Middle East overlaps with the Iranian missile program in order to extend the security of the Iranian territory while helping remotely allied surrogates to increase its deterrent power. Therefore, Iran uses a hybrid tool to extend its security and exports its missile capabilities and its experience in asymmetric warfare to state and non-state actors.

Moreover, Iran increases its military presence in the Persian Gulf and its potential offensive missile capabilities in this area, representing a huge threat for the economies of its neighboring countries and threatens their economic and civilian facilities through hybrid warfare capabilities.

However, the Iranian conception of International relations and deterrence aims at decreasing the security of its regional enemies to expand its own one. This deep sense of insecurity pushes Iran to extend its military capabilities at the expense of the security of its neighboring enemies. The military confrontation starts when the regional neighbors targeted by the Iranian missile program directly, or through its surrogates, increase their own offensive and defensive arsenal to counter the Iranian threat, aiming at reducing the Iranian security to increase their own one.

This chapter aims at finding the potential security threats related to the operational use of the Iranian missiles in the Middle East. The first part concentrates on the indirect use of the Iranian missiles within the allied proxies. This part exposes the potential consequences of the spread of such arsenal on the structure of the non-state actors and on the ongoing conflicts in the Middle East. The second part deals with the direct use of the Iranian missile program against civilian and military assets in the Middle East. It will describe the security consequences of the increasingly precise Iranian missile arsenal and the current tit for tat strategy in the Persian Gulf. Finally, the third part aims at demonstrating through the answer of the regional enemies in Iran, the negative spillover triggered by the Iranian zero sum game in the Middle East and the proliferation of missile weapons in the Middle East.

**Part 1: Indirect use of Iranian missile capabilities**

In the usual strategy of Iran, the direct confrontation between Iran and its regional adversaries is avoided at all costs. The goal for Iran is to avoid any direct attacks and conflict on its own territory.

Like the USSR, Iran, driven by its threat perceptions and its permanent sense of insecurity, created a wide network of allies in the region playing an active role in the containment and confrontation of the Iranian adversaries. This influence and network started from the 1979 revolution to curb the influence of the Baath political party in Iraq and degrade the influence of Saddam Hussein on its own territory[[199]](#footnote-199). Hezbollah in Lebanon, the Badr corps and Katib Hezbollah in Iraq were the first proxies created since 1979 to curb the threats in the region. The use of proxies was further developed recently with the various threats that Iran perceives in the region such as the American invasions and presence in Iraq and Afghanistan, the emergence of the Arab Spring, the civil war in Syria and the increasing presence of ISIS. Building this network requires a connection between the different state and non-state actors supporting the Iranian strategy to transmit weapons and militiamen required to increase their roles in the Middle East. In the framework of the Iranian missile program, Iran exports and sends military advisers from the IRGC Quds forces, trains the different actors within its own territory and provides missile weapons and technology to state and non-state actors. Iran targets mainly weak state actors with weakened regular armies in order to increase its influence on the structure of the proxy groups created. [[200]](#footnote-200)The religion of the surrogate is not considered as a determining factor in the building of the proxy relation with Iran. The most important fighter is the fight against a common enemy; therefore, the Iranian national expediency allows Iran to create this relation with other religion such as with the Hamas or several proxies in Iraq.

This section aims at describing the impact of the transfer and use of Iranian missiles among its proxies on the security context in the Middle East. It will also compare which proxies would be prioritized by Iran and which advantages and threats it will involve for its own security and in the Middle East.

**I-1- Consequences of the export of the Iranian missile capabilities in the Levant Axis**

**I.1.1Hezbollah-Iranian missile cooperation**

The Hezbollah group was founded by Abbas al Musawi (killed in 1992) in 1982 during the first war between Lebanon and Israel. Cashing in from the opportunity to threaten its Israeli enemies, Iran, with the help of the Syrian government, sent its IRGC military advisors to train the Lebanese rebels against the Israeli invasion. Lebanon hosts a big community of Shia Muslims in the south of its territory, helping Iran to increase its ideological influence on the Lebanese rebels. The new Iranian proxy aimed at unifying under a single organization all the Shia Lebanese rebels operating against Israel at that time. A first training camp in the Bekaa valley was created by IRGC operatives (which is reportedly still operating).[[201]](#footnote-201) The resistance campaign was implemented between 1980 and 1990 against the Israeli occupation in the South of Lebanon.

Hezbollah benefitted from the direct help of Iran to thrive, and it was considered as the most integrated proxy of Iran and the spearhead of the Resistance axis. They share the same objectives. In its manifesto published in 1985, Hezbollah demanded the expulsion of "the Americans, the French and their allies definitely from Lebanon, putting an end to any colonialist entity on our land." This aim is linked to the very same objective in Iran to see the western powers to withdraw from the Middle East. [[202]](#footnote-202)

Hezbollah also swear allegiance to the principle of Velayat e faqih[[203]](#footnote-203), considering that the highest religious authority determines the direction and strategic objectives of the group. The Ayatollah Khomeini, presenting himself as the leader of the regional Shia Muslims fulfilled this role. Therefore, Iran delivered its strategic goals, leaving Hezbollah the task to determine by itself its tactical direction. During the 2000’s Hezbollah started to gain more strategic autonomy but it is still dependent from the financial, training, armament from Iran.

Since its creation, Hezbollah benefitted from the alliance between Iran and Syria with Hafez Al Assad to obtain some weapons. Syria supported also the group militarily although the collaboration was not fluid and consensual. Syria supervised with the IRGC the creation and training of Hezbollah until 2000.[[204]](#footnote-204)

Hezbollah obtained a growing internal political legitimacy through its war against Israel. In 2005, Hezbollah entered for the first time to the Lebanese government.

In 2006, following the capture of 2 IDF soldiers, Israel launched massive military operations to erase the Hezbollah threat in Lebanon. The war lasted for 34 days. The increase of Hezbollah capabilities and the use of missiles destabilized the Israeli use of standoff weapons and triggered massive internal reactions in Israel against their own military organization, perceived as inefficient against a non-state actors.[[205]](#footnote-205) Hezbollah achieved to be perceived as victorious at the end of the conflict and Israel lost its credibility by the refusal to launch massive ground maneuver operations on the Lebanese ground. Israel could not fulfill its objective to eliminate Hezbollah.

The war in Syria transformed the organization. The Hezbollah military actions in Syria are led by the necessity to keep the regime of Bashar Al Assad in power to ensure the survival of the organization depending on the transfer of technologies and financing from Syria and Iran. The Hezbollah participation in the conflict is thus determined by the survivability of the Iranian axis in the Levant and the perennation of the existence of the organization.

On May 25 2013, Nasrallah recognized for the first time the presence of Hezbollah fighters in Syria. Their presence was justified by the fight against the “takfiri” and Sunni extremism such as the Islamic State of Iraq and the Levant (ISIS) and Hay’at Tahrir al-Sham (HTS) terrorist groups. [[206]](#footnote-206)Hezbollah troops in Syria were estimated to around 8,000 members principally located near the Lebanese-Syrian border and as far as Damascus and Homs to defend the positions of Bashar Al Assad.[[207]](#footnote-207) The presence of Hezbollah fighters and IRGC soldiers helped the governmental troops of Bashar al Assad to increase their competences in urban warfare.[[208]](#footnote-208)

**I.1.1.1- Hezbollah’s missile arsenal**

Hezbollah has the biggest missile capabilities from all non-state actors in the world.[[209]](#footnote-209) Its arsenal increased since the end of the Israeli war in 2006. The Hezbollah missile arsenal increased exponentially since 2006. At that time, the group gathered 15,000 rockets imported from Iran and Syria. Experts currently estimate the size of the Hezbollah arsenal to 80,000 to 100,000 missiles. This improvement does not include only the quantitative aspect but the quality of the group arsenal expanded as well.

The current Hezbollah missile and rocket arsenal includes rockets such as, Katuyshas, Fajr 1, Falaq 1, Falaq 2, Fajr 3, with ranges between 10 and 20 kilometers[[210]](#footnote-210). These weapons were mainly manufactured in Russia, China and Iran and exported by Syria and Iran. The precision of these weapons is very low, except for the Falaq 1, which according to experts includes spin stabilizers which also used for boats and trucks. [[211]](#footnote-211)These weapons are often launched in volleys and targeted the Lebanese-Israeli borders during the operation pillar of defense and protective edge. The Israeli Iron Dome missile defense systems reached more difficulties to intercept these missiles due to their very short ranges, and constitute a threat when they are allied with the building of underground tunnels built in Israel, which increased to depth of the strikes.[[212]](#footnote-212)

The Hezbollah arsenal also includes short range missiles such as Zelzal 1 and Zelzal 2, Khaibar, Fateh 110, Scuds B and C from Syria with ranges between 210 and 550 km. These missiles were exported from Iran and Syria. Scud B and C were reportedly manufactured in Syria and exported directly to their Lebanese allies.[[213]](#footnote-213)

Hezbollah has also benefited from the transfer of anti-ship cruise missiles (ASCM) such as the Iranian version of the Chinese C-802 the Noor missiles and Yakhont which includes an inertial navigation system.[[214]](#footnote-214) In 2016 the United States estimated that Hezbollah has 12 Yakhont missiles. The presence of Noor missiles among the Hezbollah arsenal particularly surprised the United States and Israel in 2006 when these weapons sunk an Israeli corvette, meaning that Hezbollah could also threaten Israel at sea and defend its territory from the sea. Expert’s estimates that Russia exported 12 Yakhont missiles as well as 18 TEL to Syria in 2011 and Syria would have exported these missiles in return to Hezbollah.

Finally, the Hezbollah arsenal also includes anti-tank missiles (ATM) as the Vampir, 9 M14 Maluytka, 9K111 Fagot, 9M113 KonKurs, 9K115-2 Metis M and 9 M133 Kornet E.[[215]](#footnote-215) These missiles were sold by the USSR during 1990’s to Syria or Iran which re-exported these weapons to Hezbollah.

Experts reported the presence of aerial defense systems, mainly composed of weak defense systems of Man-portable air-defense system (MANPADS) manufactured in Russia such as the Misagh 1 2, ZU 23, 9K32 STRELA 2, 9K 33OSA, 9K 34 Strela 3, 9k310 IGLA 1, 9K40 BUK M2 and Pantsir S1.[[216]](#footnote-216)

Hezbollah reportedly benefitted also from the development of the drone capabilities from Iran with the export of its Ababil UAV.[[217]](#footnote-217)

This arsenal currently lack accuracy and lethality. However, the recent Iranian improvements of its arsenal are resorbing this defect through the development of precision guided missiles.

According to Israeli intelligence, Hezbollah is currently developing the same capabilities thanks to the increasing exports of the Iranian arsenal amid the Syrian crisis and the training of its officers to use and develop this technology. According to Israeli sources, Hezbollah developed inertial guidance systems in Fateh 110 through GPS commercial data to reduce the CEP. [[218]](#footnote-218)The data of the target would be preprogrammed by operatives via a laptop. The presence of a GPS guidance system, accelerators and motion sensors allow the operatives to track the exact position of the missile.

This technological development could allow the terrorist group to bypass the layered Israeli defense systems, which relies heavily on the ailing accuracy of the Hezbollah’s missile to be performant.

The accuracy of the Iranian precision guided missiles was proven during a strike by the Iranian IRGC in Koya, in the Iraqi Kurdistan region on September 8, 2018 when 5 of the 7 Fateh-110 missiles fired at the Kurdish opposition party reached their targets.[[219]](#footnote-219)

According to Israeli experts, there is a technical possibility to transfer the guidance system of Fateh 110 on other missiles like Zelzal 2.[[220]](#footnote-220) The operation carried out by a trained crew last only a few hours and the materials are very easy to transfer from Iran to Syria and Lebanon (due to their small size, discreet). According to an Israeli think tank, the components would be delivered through civilian airplanes from the Qaeshm Fars Airlines Boeing 747 where the components arrive at the Damascus airport and would be stored there. They would be thereafter shipped by terrestrial ways to Lebanon.[[221]](#footnote-221)

For Israel, destroying these assets would be difficult since Hezbollah built since 2006 layered defensive systems by reinforcing underground infrastructures to resist to aerial strikes. The only way to target them would be when the Fateh 110 are deployed outside, just before the firing requiring a huge intelligence and ISR efforts from Israel. According to Bruce Bechtol, North Korean operatives would have helped in the 1990’s, Hezbollah members to build their tunnels, a technique also developed in Iran to conceal their missile capabilities and which was also developed in Gaza among Hamas operatives.[[222]](#footnote-222)

Israeli militaries assess that Hezbollah already achieved to gather the guidance system for 20 missiles. International experts estimate that 200 PGM could inflict a severe damage to the Israeli defensive system.[[223]](#footnote-223)

Several storage facilities would exist in Syria. Israeli experts think that one exist in Hisya, in southern Homs as well as in Jamrya, near Damascus and Latakia which are also suspected to be production and development facilities. [[224]](#footnote-224)These factories are located between Sidon and Tyre south where the production of Fateh missile would take place. In 2018, the Israeli Prime Minister Benjamin Netanyahu reported that 3 satellites pictures would have showed the presence of missile factories in Lebanon, at the Beirut International airport under a soccer team and one under Uzai. [[225]](#footnote-225)

**I.1.1.1.2- Financial channels**

In June 2016, the Hezbollah leader Nasrallah, affirmed for the first time that Iran is the first financer of its organization. According to experts, the amount was assessed between 50 million dollars and 100 million dollars per year.[[226]](#footnote-226)

Moreover, Hezbollah has also other channels of financing through remittances from its diaspora located in Africa, Latin America and through partnering companies

However, the current global downturn of the oil prices triggered restriction of financing from Iran which is also pressured by internal tensions regarding its support to regional proxies. The United States is cashing in from this dire context to implement its maximum pressure policy against the Lebanese group and Iran to stem the financing of the Hezbollah. The United States implemented recently new sanctions against Hezbollah operatives, restricting their financing channels. [[227]](#footnote-227)In August 2019, the US administration targeted the Jammal Trust Bank (JTB) for facilitating the financial activities of Hezbollah. More recently, in February 2020, the American administration targeted 3 individuals and 12 entities, including pharmaceutical and medical companies, owing to their links with the Hezbollah Martyrs Foundation.[[228]](#footnote-228)

**I.1.1.3- Impact of the Iranian missile arsenal on the evolution of Hezbollah**

Hezbollah evolved from a non-state actor using guerilla technics to a hybrid actor mixing asymmetric and conventional warfare.[[229]](#footnote-229) In 1982, Hezbollah used mainly ambushes and suicide and human wave’s tactics, fighting an attrition war against Israeli defense forces in its territory in the framework of a Low Intensity Conflict.

From 2006 and the first Lebanese war, Hezbollah shifted to a pattern of high intensity conflict through the use of disciplined and organized units, tactics of concealment through the building of tunnels, underground missile launchers, intelligence, amphibious warfare thanks to the weapon procurement by Iran and Syria.[[230]](#footnote-230) These evolutions particularly surprised the Israel Defense Forces (IDF) during the 2006 war, when the Hezbollah fighters were able to coordinate their attacks and use the geographic assets of the southern Lebanon (particularly the mountainous relief) to dismiss the Israeli standoff strikes.[[231]](#footnote-231) For Israel, the impossibility to defeat Hezbollah operatives due to their hybrid nature only through standoff strikes demonstrated the limits of its centralized command and control structure and the importance to use ground maneuver warfare to defeat its enemy. The hybridity of Hezbollah allowed it to defeat a more technologically powerful regular army.

The participation in Syria was another step for Hezbollah capabilities through the formation of infantry, reconnaissance units, and sniper units to complement the Syrian forces

The use of missiles forces Hezbollah to develop new command and control structures which are usually used by conventional forces. The procurement of missile weapons forced Hezbollah to concentrate the decision making organism around Nasrallah and to keep the tactical autonomy of various cells in Lebanon. The arrival of the missile arsenal in Hezbollah transformed the scattered organization into a hybrid forces with a strong command and control on its different troops and the development of intelligence.

**I.1.1.1.4- Security consequences of the Hezbollah’s missile capabilities**

The first consequence for the regional security and the use of missiles is the transformation of Hezbollah from a single non-state actor to a force multiplier. Hezbollah used its experience and technological superiority in the use of missiles to support the Iranian proxies directly in Syria and in Yemen by sending operatives and training them in its Bekaa Valley, in Southern Lebanon. In Syria, Hezbollah and the IRGC trained and coordinated various Shia militias recruited by the Iranian Quds forces from Afghanistan, Pakistan and Iraq. The other Iranian proxies participating in the Syrian war are the Lima Fatemiyoun from Syrian and Afghanistan refugees from Syria and Iran, the Al Nujba movement from the Iraqi PMU militia, The Liwa Mukhbar Al Thaqfi, the Abu Fadl Al Abbas Brigade (from Iraq), the Imam al Baqa Brigade (pro Assad militias), Katib Hezbollah (from Iraq) and Liwa Zainabyoun (Pakistan). [[232]](#footnote-232)Hezbollah could thus expand its network in Syria and also in the other conflicts in the Middle East, and build a wide network of cooperation between various proxies. This networking gave Hezbollah more support and credibility from Iran and its proxies and also internally. The Iranian proxies are also taught on how to use different rocket and missile systems, how to build concealment infrastructures, learnt from North Korean operatives such as tunnels and underground facilities, and how to fight a urban war, spreading the Hezbollah experience on the whole region.[[233]](#footnote-233)

In Syria, the Israeli read lines were set and the actions of Hezbollah operatives in Syria risk to trigger Israeli preemptive strikes. They include the presence of Hezbollah and IRGC operatives in the Golan Heights, the transfer of precision guided weapons and the building of Iranian military bases in Syria. Israel does not want a permanent presence of Iran in Syria. On May 2018, after the US withdrawal from the JCPOA, Israel launched the operation House of Cards and stroke 20 Iranian targets in Syria with stealth fighters mainly in the south of Syria and at the air base of Qusayr and Damascus International airport. The number of strikes against the Iranian military assets in Syria increased since 2017. The use of missiles by Hezbollah and Iran expanded the settlement of Iranian bases in Syria for the production and storage of these weapons. The presence of these armaments justified also the presence of Syria and Hezbollah on the ground.

Israel feared that the chaos in Syria would lead to the increase of Hezbollah capabilities with the help of Iran in Syria. However, the Israeli strikes were refrained by the presence of Russian forces on the Syrian ground since 2015. [[234]](#footnote-234)Israel is thus put in a very difficult choice between the growing capabilities of Hezbollah thanks to the strengthening of the Iranian axis since 2017 in Syria which could bring the presence of a stronger, better trained and more aggressive terrorist group at its northern border by the end of the conflict. However, the continuation of Hezbollah fighting in Syria could also weaken its internal reputation and legitimacy in Lebanon by the growing number of Hezbollah operatives killed.

The presence of Russia in Syria is a thorny issue for Israel. [[235]](#footnote-235)In September 2018, the IAF destroyed Russian military aircrafts and killed 15 crew members. In answer, Russia decided to sell its SAM S-300 missiles batteries to the Syrian government, increasing the difficulties for Israel to strike directly Hezbollah and IRGC assets in Syria. According to experts, Israel started a rapprochement with the Russian government (with the meetings between Vladimir Putin and Benjamin Netanyahu) in order to avoid to confront the Russian government and to reach an agreement on the possibilities for Israel to strike Hezbollah assets.

The use of precision guided munitions and the implication of Hezbollah in Syria created a new balance of power between Israel, a state actor and Hezbollah group, a hybrid force and non-state actor. Israel hesitates to launch now a direct attack on the Lebanese territory, and directly against Hezbollah operatives, fearing retaliation through precision guided munitions against which its defensive layered systems are inefficient. Israel is put in a dilemma. Usually, it would not hesitate to launch heavy preemptive strikes to increase its deterrent power and reduce the threat. However, the missile capabilities of Hezbollah could lead to a too costly retaliation and an all-out war that Israel wants to avoid. Israel does not strike directly Hezbollah operatives but prefer to strike only infrastructure. Israeli forces use a “knock on the bumper” tactics against Iranian weapon shipments to Hezbollah in Syria. [[236]](#footnote-236)This tactics coined during the operations against Hamas in the 2000’s aimed at warning civilians before the Israeli aerial strikes in order to avoid collateral damage when they wanted to destroy their missile arsenal. Likewise, Israel prefers to hit the Hezbollah convoys in Syria without the Hezbollah operatives inside to destroy the potential precision guided arsenal.

**I.1.2- Syrian-Iranian missile cooperation**

**I.1.2.1- Historical background**

The Iranian-Syrian relations date back from the Cold war era when the diplomatic relations of the Shah was at odds with the rivaling pro-USSR Arab rivals in the region such as Egypt and Iraq. These common rivalries between the two countries, led to the development of relations between Syria and Iran since Syria was also competing for the regional influence with the Iraqi Baathist power. Syria cooperated with the Iranian Shah regime while leading an ambiguous policy by supporting the growing Iranian dissident movement such as the Amal Movement.[[237]](#footnote-237) When the revolution started, Syria was more threatened by the emergence of Muslim Brotherhood than by the revolutionary power and did not consider the emerging Shia power as a threat for the regional stability.

During the Iran Iraq war, Syria was the only regional ally of Iran against the Iraqi power. At this period of time, Syria helped the IRGC operatives in Bekaa valley in Lebanon to train the Hezbollah Shia insurgents during the 1982 war. Syrian troops were also deployed in Lebanon to curb the influence of Israel and to support the Lebanese Armed Forces. Syria was more powerful than Hezbollah at that time and often preferred to support the Amal movement leading to inter-Shia confrontations in Lebanon. [[238]](#footnote-238)

From the 2000’s, The Syrian influence in Hezbollah started to decrease with the growing capabilities of the Lebanese group. Hezbollah started to identify their alliance as the Axis of resistance in the same equal footing as Iran and Syria. The Hezbollah group was no longer submitted to the directives and direct influence of the Syrian government. From 2006, Hezbollah, winning the 34-days war against Israel, gained more political weight in the Lebanese government and more popular support, erasing the influence of competing Shia factions (such as the Amal movement). Hezbollah finished setting up its domination during the Syrian civil war when it helped the IRGC to support the regular troops of Bashar Al Assad, ill-trained for a non-maneuver fight. Thanks to its experience, Hezbollah provided its experience in insurgency and asymmetric warfare in exchange of its presence on the Syrian ground.[[239]](#footnote-239)

The government of Bashar al Assad became dependent from the help from Hezbollah and Iranian operatives on its ground since 2011.[[240]](#footnote-240) However, the presence of such foreign help is not seen as completely positive by the Syrian forces. Actually, Hezbollah and Iranian militiamen are looking for the opening of a new front in the Golan Heights against the Israeli forces. It was also reported that Iranian are looking for the displacement of Shia population in the Syrian territory to develop its influence in Syria, transforming the state into a puppet state.[[241]](#footnote-241) Several organizations from Iran were also created to achieve this objective. The Supreme Jafari Council, the first independent Shia representative, was created in Syria in 2012 to influence the Shia communities in Syria. Iran is also implementing central and command structures in Syria such as Damascus airport, Shibani Garrison, Kiswah, Izra and Deraa ( which hosts SAM defense units), Homs, Shayat airbase, Bohouth (which allegedly host a chemical production facility and missile fuel) and Camp Tala’e Sabiheh in the south of Latakia near Tartus.[[242]](#footnote-242) This implementation constitutes a red line for Israel and an incitement to launch preemptive strikes against the Iranian presence in Syria.

The Al Quds forces provided a huge help to avoid the collapse of the regime of Bashar al Assad in 2013. Under the influence of the Iranian Special Forces and the Al Quds Lebanese department, the Syrian forces of Bashar al Assad were redesigned into the National Defense Forces and put under the control of Iran and Hezbollah. In May 2013, thanks to the help of the Iranian and Shia forces, the Syrian power could seize the city of Qusayr, necessary to unify the Syrian forces. Owing to the growing threats from ISIS in Iraq, Iran could not rely on the presence of the Iraqi militias and increased its own IRGC and al Quds operatives as well as Afghan and Pakistani groups. Thanks to these collaborations and the arrival of Russian aerial forces, the Syrian forces achieved to regain Aleppo in December 2016.[[243]](#footnote-243)

**I.1.2.2 Syrian missile capabilities**

The Syrian arsenal is one of the oldest and largest missile arsenals in the Middle East. However, very little academic documents exist on the evolution of the Syrian capabilities prior to the civil war.

The Syrian missile program started during the 1970’s with the transfer of R-70 armament from the USSR.[[244]](#footnote-244) From 1980, Syria allegedly imported SCUD C from North Korea and the USSR[[245]](#footnote-245). The 1982 war in Lebanon where the Syrian troops participated demonstrated the superiority of the Israeli arsenal and the Syrian government was looking for more efficient weapons against a superior enemy. It negotiated with USSR the import of OTR-21 to replace its aging R-70 and OTR 23 which was impossible to deliver due to the implementation of the INF treaty between the USSR and the USA.[[246]](#footnote-246)

From 1990, Syria was looking for new partners not tied under the MTCR agreement. China and North Korea were the good candidates to export new missile arsenal to Syria.[[247]](#footnote-247) Under this collaboration, Syria could implement two missile factories in Aleppo and Hama and buy SCUD C from North Korea. North Korea allegedly helped Syria to build its SCUD D arsenal as well as production lines but this information was not confirmed by experts.[[248]](#footnote-248) According to experts, North Korean missiles destined to Iran were sent in detached pieces to Syrian factories and then re-exported to Iran.

In 2008, a failed deal between Russia and Syria to export the Iskander E, pushed Syria to look for help from Iran which accepted to export its Fateh 110, called M-600 in Syria. Syria also allegedly received two Chinese road mobile short range ballistic missiles Dongfeng 15 and Anti-ship cruise missiles but this information was not confirmed.

The missile strategy of Syria was traditionally based on the principle of strategic parity. This concept was coined under Hafez al Assad ruling. Syrian forces are confronted to asymmetric more powerful enemies such as Israel, and Syrian power decided to combine chemical weapons and missile arsenal to palliate the gap between forces. All missiles exported to Syria are allegedly compatible with chemical agents.

The bulk of the Syrian arsenal was destroyed since the beginning of the war. Most of missiles were very inaccurate and inefficient without the increase of lethality through the use of chemical agents. Experts and Israeli sources reported that the biggest part of the chemical agents was destroyed in 2014.[[249]](#footnote-249)

The American coalition tried to seize the weapons from the Syrian facilities to redistribute them to the rebels. For example, the coalition troops allegedly seized the Deir Alzour facility which produced the SCUD C missiles in February 2013 and redistributed them to Ja’afar al Tayyar and Al Nusra groups.[[250]](#footnote-250)

Syria became the territory of transit of Iranian missiles to Hezbollah. According to Israeli sources, the weapons from Iran were shipped through charter flights and stored in the Damascus airport before being exported through terrestrial ways. [[251]](#footnote-251)

Russia deployed defensive aerial systems such as S-300 and S-400 but never used them when the Syrian institutions were jeopardized and keep these SAM. These SAM are under the Russian control to protect the bases of Hmeimim and Tartus. [[252]](#footnote-252)Syrian forces are provided S200 and 9K40 and Panzir S1 missiles. Russia deployed a layered air defense system efficient also to detect cruise missiles. However, in 2017, several Tomahawks were fired against the Shayrat Airbase and against chemical weapons plants and Russia did not fire these missiles. In 2018, another attack targeted Syrian and Iranian military bases and the Russian aerial system was not launched, demonstrating the difference of interests and policies between Russia in Syria and the preservation of the Syrian military assets. [[253]](#footnote-253)

**I-1.2.3- Security consequences of the integration of Syria in the Iranian missile program**

Syria increased its role as a passive and indispensable actor in the Iranian, Shiite axis with Hezbollah and in the transmission of missile weapons to Hezbollah. Iran is fully committed to preserve the power of Bashar al Assad at all costs and does not want to see the Syrian territory cut from its area of influence, which is necessary to contain Israel trough the armament of Hezbollah and Shia militias in Syria.

The Syrian government does not have other choice to accept the help of Hezbollah and Iran but is against the idea of creating a state in a state. Iran and Hezbollah are cashing in from the power vacuum left by an ailing and failed state. Therefore, it is in the interest of Hezbollah and Iran to keep the current Syrian power but to conserve it in its weak position. Also the huge financial help from Iran to save the regime of Bashar al Assad and the military commitments created a debt from the Syrian power which would keep it in a situation of inferiority from the Iranian power.

The Hezbollah and Iran are the only actors really involved to keep the regime of Bashar Al Assad in place. According to experts, Bashar Al Assad and Israel relied on the aerial presence of Russia to limit the Iranian influence in Syria. Bashar Al Assad hopes to regain the full sovereignty on Syria while Israel wants absolutely to repel the Iranian forces from its borders. Russia could accept another actor if it does not counter its interests. Russia follows its own political agenda. It will react if its interests in Syria are jeopardize but not sacrifice everything and its relations with Israel to save Bashar Al Assad, it is not a condition of survival for the Russian regime.

The presence of Iranian military basis, the use of the Syrian territory to transfer weapons to Hezbollah and the rapprochement of the Iranian and Hezbollah troops near the Golan Heights are motives for the Israeli government to launch preemptive strikes (in agreement with the Russian government).[[254]](#footnote-254) In May 2018, The Israeli Aerial forces (IAF) launched the operation House of cards after alleged attacks from Iranian positions from the Golan Heights. Israel stroke Quds forces positions as well as Syrian aerial defense systems. For Israel, the permanent presence of Iranian and Hezbollah troops on the Syrian territory, opening a third front against the Jewish state is not possible, since it would open a third front for the Israeli state. Israel is already encircled between Hezbollah in the North and Hamas in the West. A new front from the Golan Heights would put too much pressure on the Israeli missile defense systems and render impossible the defense of its territory.

However, the Syrian war put Israel in a real quagmire. According to expert, the Israeli government does not seem to want the removal of Bashar al Assad.[[255]](#footnote-255) The removal of the Shiite power could trigger the advent of more aggressive and dangerous Sunni groups fighting in Syria (such HTS, ISIS for example). Israel feels thus that to win and diminish the influence of Iran, it would be forced to decrease the influence of Bashar al Assad and the potential arrival of a more dangerous security situation. These terrorist groups also benefitted from the weapon systems exported directly by the United States and the one captured in Syria during battles. The use of missile technology and chemical weapons by terrorist groups would involve another security problem for Israel.

**I.1.3- Iranian-Palestinian missile cooperation**

**I.1.3.1- Historical background**

The Palestinian groups were supported directly by Iran since the 1979 revolution and the explicit role of Palestine in comments by the Ayatollah Khomeini. The Palestinian groups, opposed to the “Little Satan” were coherent at that time to the ideological vision of Iran. This support evolved with time with a more pragmatic and opportunistic vision from Iran, supporting various Palestinian groups to limit the influence of Israel. Therefore, the Quds forces started to help Iz al Din al Qassam, the military edge of the Hamas during its insurgency against Israel in the 2000’s. The Iranian forces also opened training centers for Palestinian rebels in Iran and Lebanon in the Bekaa Valley or IRGC Tehran Bases.[[256]](#footnote-256) According to Israeli sources, the training course would be designed for them there and teach them the handling of weapons, rockets, various ranges of anti-tank missiles, place IED and manufacture explosives[[257]](#footnote-257)

After the withdrawal of Israel from the Gaza strip in 2005, the power vacuum left provided an opportunity for Iran to develop its influence there and to pressure Israel on an additional front. The Hamas group won elections in 2007 and increased its collaboration with Iranians which fuels its blocked economy and provided various weapons. Palestinian groups such as Hamas and the Palestine Islamic Jihad (PIJ) started to confront more seriously the Israeli influence since the 2008, with the launch of the operation Cast Leads in 2008. This operation lures the international criticisms against the Israeli regime and degraded the legitimacy of the Israeli policy in the Palestinian territories. This trend was strengthened during the Operation Pillar of Defense in 2012 when Hamas and the Palestinian groups confronted again against the Israeli forces in an asymmetric conflict. During this period, the Egyptian revolution brought the Muslim Brotherhood in power, supporting and strengthening Hamas and Palestinian groups against Israel. A new confrontation was triggered among the same actors in 2014 with the launch of the Israeli operation Protective edge aiming at curbing the launch of Palestinian rockets and short range missiles on its territory and destroying the underground tunnels helping the Palestinian groups to launch attacks directly on the Israeli territory.

The ousting of the Egyptian president Mohamed Morsi and the arrival of the Egyptian president al Sissi triggered the reduction of the Hamas military influence and the alignment of the Egyptian policy on Israel. The various channels of smuggling from Egypt to Hamas were destroyed in Sinai region. The Palestinian groups were cut from their main passive ally in the region, isolating them to receive the Iranian and Lebanese military support required to confront Israel.

The civil in Syria finished taking away Hamas from Iran. Hamas groups are against the actions of Bashar al Assad and supported rebel groups, reducing the scope of its relations with Iran. The headquarters of Hamas were moved from Damascus to Gaza, further isolating them from Iran. Before the civil war, Syria was the communication hub for Hamas and Palestinian groups.

However, the Syrian war and the reversal of power in Egypt did not completely end the collaboration with Iran. Indeed, Iranian still supports financially the Palestinian groups. According to Israeli sources, Hamas and PIJ were provided weapons factories and recommendations from the IRGC are sent by emails.[[258]](#footnote-258) IRGC does not have a direct command and control on the group but support them at distance.[[259]](#footnote-259) Hamas and Palestinian forces could be qualified as latent forces. The reversal of power of Egypt and the resolution of the Syrian conflict could change the whole situation for Hamas and PIJ.

**I.1.3.2- Palestinian Missile and rocket capabilities**

According of experts, Hamas was provided since 2000’s several Iranian short range rockets such as Fajr 5, Graad 122 mm, Oghab, Fajr 5 rockets, Fajr 3, M-75 and 120mm mortars and explosives ranging between 10 and 75 km. These weapons were mainly manufactured in Iran and Russia and exported by Iran. Later, Hamas operatives were provided aerial defense systems such as Strela 2 MANPADS. [[260]](#footnote-260)

The arsenal of Hamas is quite weak with very short range rockets and low lethality. However, several internal rocket factories were reported in Bereshda, Ashdod and Ashqelon giving the possibility to Palestinian groups to build their own missile systems. [[261]](#footnote-261)Nevertheless, they still need to import components and materials from Iran to launch their production lines.

The former smuggling routes impacted the security architecture in the Levant region and in the Horn of Africa by the proliferation of rockets and missiles to weak states and non-state actors. [[262]](#footnote-262)

Several routes existed to smuggle weapons to Palestinian groups. According to Israeli experts, Iran exported its weapons to Sudan through Chartered Sudan Badr Airlines.[[263]](#footnote-263) Unscheduled cargoes were reported between Iran and Khartoum. Then, other operators in Sudan reportedly send the weapons to Egypt, which is in turn smuggled in the Sinai province through underground tunnels.

According to Small Arms survey, Sudan facilities manufactured weapons small arms, rocket propellants mortars and short range rockets for Iranian proxies. On October 2012, Israel attacked 40 containers at al Yarmouk weapon factory near Khartoum. No sources could specify whether this factory hosted Iranian weapons for Palestinian proxies. The presence of weapons factories in Sudan is worrisome considering the presence of various terrorist groups such as Al-Shabaab and Al Qaeda terrorist groups in the region and the lack direct control from the Sudanese State on these activities.

Iran could also smuggle these weapons by sea, through friendly ports in Syria as in Latakia and allegedly, through Kuwaiti waters. On March 2011, a French ship was intercepted with a Liberian flag and carrying 50 tons of weapons with Iranian copies of C-704, 60 mm and 120 mm mortar bombings and an accompanied manual written in Farsi. According to Israeli sources, the ship would have been loaded in Latakia, Syria and captured in Alexandria, in Egypt. The destination of these weapons was attributed to Palestinian groups.[[264]](#footnote-264)

In Egypt, the Egyptian arms smugglers collaborated with Rashaida tribesmen and Bedouins in Sinai province to smuggle weapons to Gaza. The weapons from Egypt were sent to Hamas through the Rafah tunnel or through the East Bank Nil. Later, from 2014, Hamas and PIJ operatives reportedly tested their rockets near the Sinai border.[[265]](#footnote-265)

The Rafah tunnel was the cornerstone of the smuggling network to Gaza, which was relied to a wide network of cross border tunnels in Egypt to import the necessary equipment. The demand of missiles and weapons was allegedly so important during the operation protective edge that weapons factories were set up in Sinai province such as the Sheikh Zaid factory discovered in 2009. The use of tunnels and smuggling activities widely increased since the Israeli withdrawal in 2005. The tunnels were hidden in civilian areas and were necessary to fuel the blocked Gaza economy. The Israeli war in 2012 destroyed several cross border tunnels, but not those between Egypt and Israel, since Israel avoided launching ground operations.[[266]](#footnote-266)

The collapse of the Egyptian president Mohamed Morsi triggered the increase of instability in the Sinai region. This instability was accompanied by the presence of heavy weapons, and the increasing development of terrorist groups like ISIS. The collapse of the Libyan government and the civil war in 2011 was a further step to fuel Hamas and PIJ with more sophisticated weapons. According to experts, 100 SA-7 SAM were smuggled to Gaza after the collapse of Muhammad Qaddafi.[[267]](#footnote-267)

The arrival of the president Al-Sissi, erased the influence of the Muslim Brotherhood in Egypt and constituted the final blow to the development of Hamas capabilities. 98% of the tunnels between Egypt and Gaza were reportedly destroyed.

**I.1.3.3- Consequences of the use of the Iranian missiles on the evolution of the Palestinian proxies**

Like Hezbollah, Hamas evolved from a from guerilla terrorist group relying on suicide attacks to an organized hybrid non-state actor. The help from Iran and state actors transformed Hamas into a hybrid forces mixing asymmetrical warfare with conventional means. However, Hezbollah reached a higher level in its conventional means compared to Hamas, which remains a small actor.[[268]](#footnote-268)

The Hamas tactics evolved with the integration of more sophisticated weapons. These weapons were integrated in an asymmetric warfare doctrine palliating the weak lethality and accuracy of the missiles with the launch of volleys and the use of passive and active defensive means. The rocket and missile launchers were concealed in civilian homes and facilities, denying the attacks from Israeli forces, reluctant to launch ground operations and relying mainly on standoff capabilities, to strike them directly. Underground tunnels built on the Israeli territories helped also Palestinian groups to increase the ranges of their strikes and attacks.

Rockets and missiles were mainly used as psychological weapons and to disrupted economic life in Israel. Therefore, the lethality of the weapons was not the first concern for the Palestinian operatives. The continuous fire of weapons from Gaza triggered the blockade of the Israeli economy, since the political power was forced to protect the population and could not take any risk for them. Therefore, Hamas played with the casualty shyness of Israel to increase the psychological effect of its weak rocket arsenal.[[269]](#footnote-269) This was made visible through the closing of the Ben Gurion airport just after the strike of Palestinian rockets which landed nearby.[[270]](#footnote-270) The concealment of launchers in civilian areas put the responsibility of the strikes on Israel Aerial forces and dismissed their technological superiority. Like in Lebanon, Israel was reluctant to launch massive ground attack and preferred to rely of standoff attacks, which were not adapted to fight a non-state actor melted with the civilian population. It allows the Hamas group to play with their victim status while degrading the Israeli military credibility regarding its own population faced to weaker non state actors.

Another aspect of the Hamas asymmetric warfare was the effort to extend the duration of the campaign to erode the credibility and the moral of Israel. Hamas and Palestinian groups sought therefore to pursue a war of attrition through the use of rockets and missiles against a technologically stronger enemy. The main aim of these groups was to deny any possible victory for the Israeli forces. The victory of the Palestinian groups was thus more visible through their own survival and the disruption of the Israeli economic life.

**I.1.3.4- Security consequences of the use of Iranian missiles by Palestinian groups**

The presence of such groups in Gaza is interesting for Iran. Indeed, it allows the Islamic Republic to confront Israel in two different fronts against two asymmetric adversaries, while Iran, as a passive actor remains not exposed to the direct retaliation from Israel.[[271]](#footnote-271)

Due to the highly urbanized area of conflict, in Gaza, Hamas could develop its use of missile technology within the urban context. This strategy denied the possibility for Israel to strike directly the Non-State actor. Limiting the efficiency of the Israeli aerial strikes and with the reluctance of Israel to launch large ground maneuver operations, Hamas achieved to block the offensive actions of IDF.[[272]](#footnote-272)

The solution brought by the Israeli forces was to develop effective missile defense systems to block the arrival of Palestinian missiles on its territory. The Iron dome, efficient since 2011, was estimated efficient at 90% after the Operation Protective Edge.[[273]](#footnote-273) However, the development of this defensive arsenal from Israel was bypassed by the strategic adaptation of non-state actors. Palestinian forces developed shorter range rockets to keep threatening the Israeli population.

For Iran, the use of Palestinian groups was useful to degrade the image of the IDF as efficient forces. It decreased the elite image of the Israeli aerial forces which were defeated by poor actors, relying on far less sophisticated weapons. Allied with the Lebanese groups, it encircles Israel between two different fronts and asymmetric conflicts that are difficult to defeat. Finally, it increases the internal political pressure from the Israeli civilian population which demands security from their government. The latter can have difficulties to explain why its sophisticated and expensive army has so many problems to defeat a weak actor. Therefore, Iran developed an indirect active confrontation force in Levant against Israel and have a sufficient leverage to deter Israel to launch an attack directly on the Iranian ground. Iran could therefore keep a high level of deniability while benefitting from the containment of the Israeli forces. Israeli forces would be misled by the various agendas, tactics and organizations of the proxies, increasing the level of deniability for Iran.

Iranian proxies were the most developed in the Levant region due to the vital stakes to keep the Syrian and Lebanese allies aligned. Iranian forces could therefore, through the procurement of missile technologies and financing transform guerilla forces into hybrid forces participating in its “sword and shield strategy”. These forces achieved to implement a real balance of terror with Israel and increase their influence in the region. However, this fragile balance of terror could be destroyed quickly if Iran fails to keep Bashar al Assad in power in Syria. This very narrow objective does not leave enough options for Iran and expose its strategy to a high risk of failure. Therefore, Iran should develop the forces of other proxies in the region to maximize the protection of the Iranian territory and interests through the use of proxies.

**I.2- Consequences of the export of the Iranian missile capabilities in the Gulf Axis**

**I.2.1- Iranian- Iraqi missile cooperation**

**I.2.1.1- Historical background**

Iranian Quds forces started to transfer weapons to Iraqi Shia communities since 1980, in order to fight internally Saddam Hussein. Iran always supported internal Shia dissidents to weaken internally the power of Saddam Hussein. The Iranian Quds forces department 1000, or Ramadan department was created allegedly at that period to implement training centers, send weapons and advisors to internal Shia and Kurdish dissidents. The Al Quds forces played a major role in the expansion of the influence of Iran in Iraq.[[274]](#footnote-274)

The arrival of the USA in Iraq in 2003 represented an opportunity for Iran to extend its presence in Iraq through the removal of Saddam Hussein and the no fly zone on Shia and Kurdish communities. Paradoxically, the presence of the United States near the Iranian borders in Afghanistan and Iraq allowed the Islamist republic to reverse the balance of power in the region and to extend its influence. Iranian Al Quds forces saw an opportunity to extends its influence on Iraqi Shia populations, very often persecuted by the Iraqi government under Saddam Hussein. This period constituted the first period of sophisticated weapon transmissions efforts from the Al Quds forces which increased the number of American causalities

By 2011, the Iranian Al Quds forces achieved to strongly implement their influence on the Iraqi ground through its network of proxies and through its relations with the Iraqi political powers. Iraq was not considered as a deadly threat for the Iranian regime but more as an integrated part of its strategic depth.

However, the emergence of the Islamic state in 2014 and the fall of Mosul destabilized the political situation in Iraq. In 2014, ISIS was present from Anbar, Diyala, Ninewa, Salah ad Din provinces in Iraq.

The Ayatollah al Sistani, a major Shia figure in Iraq, issued a fatwa in 2014, allowing irregular Iraqi forces to launch armed attacks against the Islamic state. The Popular Mobilization Units (PMU) militias were formed by the Iraqi government to fight the ISIS in 2014.[[275]](#footnote-275)

The PMU is a semi-autonomous group counting between 75,000 and 145,000 fighters. No official data are released on this umbrella organization, gathering according to experts between 40 and 50 militias. The organization is reportedly financed and armed by the Iraqi government but the latter does not imposed a direct control.[[276]](#footnote-276) The organization reassembles different militias present in the Iraqi ground and some of them are directly supported by Iran. The Iranian regime does not support the militias on the same level and establish distinctions according to the level of loyalty and their ideological relations with Iran. The PMU gathers largely Shia militias as well as Sunni, Christians and Turkmen forces.[[277]](#footnote-277) The Iraqi government tried to impose its direct control on the forces through a law in December 2016 but was rendered impossible due to the pro-Iranian Shia influence among the Iraqi government.

Iran supports mainly 3 Shia groups among the PMU: the Badr Organization, Kata’ib Hezbollah and Asa’ib Ahl al-Haq. Iran provides a lower support to Kata’ib Sayiid al Shuhada, Marabat Hezbollah al Nujaba.

The Badr organization is the oldest Iranian ally among the Iraqi PMU militias. It helped Iran in its fight against Saddam Hussein during 1980 war. The group was formed in 1982 under the military wing of the Supreme Council for the Islamic Revolution by former prisoners of war and Iraqi Shia who fled to Iran during the Saddam Hussein era. Former Badr militiamen became later ministers among the Iraqi government such as former Badr Ameri Minister Transports.

Kata’ib Hezbollah, an organization created in 2003 by Jamal Jafaar al-Ibrahim, known as Abu Mahdi al-Muhandis (who was also the deputy chairman of the PMU until 2020) is the closest Iraqi ally to Iran. It shares the same ideology and pleaded its allegiance to Iran through the acknowledgement of the Velayat al Faqih principle. Katib Hezbollah militiamen participated in the Syrian conflict with Iran and Hezbollah.[[278]](#footnote-278)

Asa’ib Ahl al-Haq comes from the split of Qais al-Khazali from the Muqtada al-Sadr's Mahdi Army after the Shi'a uprising in 2004 to create his own Khazali network. It founded the Special group in July 2006 and helped Hezbollah to fight the second Lebanese war against Israel in 2006. Operatives from this militia were also sent to the Syrian front.[[279]](#footnote-279)

According to experts, other groups, sharing less ideological links with Iran, are benefitting from the opportunities offered by the Islamic Republic to gain more support and weapons in short termed and opportunistic relations such as the Liwa Salahadin. Iran can support also non PMU or non-Shia forces to extend its influence in the Iraqi territory such as the Iraqi security forces and several Peshmerga groups. Iran also sent military advisors and artillery units to Turkmen fighters.[[280]](#footnote-280)

Through these militias, Iran found a way to increase its security through its influence in Iraq and to pressure the remaining US troops on the Iraqi soil. The absence of direct command and control on these groups confers Iran the possibility to deny all its commitments in Iraq while it benefits from the actions of the allied Iraqi militias.

The pressure against the American troops increased after the withdrawal of Donald Trump from the JCPOA, triggering an outcry in Iran and Iraq and a spiral of violence in both countries. On December 27, 2019, the American embassy in Baghdad was attacked by Iraqi Shia militias.[[281]](#footnote-281) In retaliation, the American government launched the execution by drone attacks against Qassem Soleimani and Abu Mahdi al Muhandis at the Bagdad Airport on January 3.[[282]](#footnote-282) These executions launched an outcry among the Iraqi political class. Shia parliamentarians voted on January 5, 2020, the withdrawal of the American forces from Iraq, in protests against the actions of the USA in Iraq, recalling that the United States was only invited by the Iraqi government to fight the Islamic state.

On March 11, 2020 Kata’ib Hezbollah attacked the Us military base, the Camp Taji with 107mm rockets, killing two American soldiers as well as a British operative.[[283]](#footnote-283) The strike was claimed by a new Shia militia, allegedly affiliated to Kata’ib Hezbollah, called Aisbat al Thaireen. In response, on March 12, American forces struck 5 Kata’ib Hezbollah weapon storage sites. On March 13, another rocket attack on Camp Taji injured three US service members. On March 17, rockets struck a base south of Baghdad hosting US and coalition troops. Following these attacks, the United States transferred at least 4 bases to the Iraqi security forces. They include al-Qaim, Qayyarah Airfield West, K1 Air Base and Al Taqaddum Air Base. [[284]](#footnote-284)With the current coronavirus crisis, the United States, British and French forces, withdrew or reduced the presence of their national troops on the Iraqi territory. This situation could lead to a power vacuum and increase the influence of Iran or more aggressive non state actors such as ISIS.[[285]](#footnote-285)

**I.2.1.3- Iraqi missile capabilities**

There are no official data on the size and composition of the Iraqi missile arsenal. With Syria, Iraqi missile program is particularly understudied and very few data exist on this topic. Iraq could gather, with the help and arms exports from international partners a first layer of missile arsenal in the 1980’s. These weapons allegedly still exists in various weapons caches of militias and terrorist groups in Iraq, mainly in Baghdad.

Iraq is reportedly currently the 6th largest market of heavy weapons in the world. The bulk of this financing comes from the Iraqi Federal budget.[[286]](#footnote-286) In 2016, 1.5 billion dollars were dedicated to the acquisition of new weapon systems.[[287]](#footnote-287) Various contractors are competing to sell weapons to Iraq such as Russia, China and the USA. Several experts warn about the possibility to divert these weapons by terrorist groups, such as ISIS due to the lack of control on various militias.

Since the creation of the coalition against the ISIS, Iran provides heavy weapons tailored against ISIS with Kornet (anti-tank guided missiles) Iranian copies. Amnesty international reported the presence of the Iranian Dehlevieh anti-tank missiles, designed on the Soviet 9M133 Kornet. In August 2018, Iran reportedly transferred Zelzal, Fateh 110 and Zolfagar short range missiles and 107 and 122 mm rockets[[288]](#footnote-288)

In the wake of the attacks by the United States against Qassem Soleimani and al Muhandis, Iraq wanted to buy independent the S400 SAM systems from Russia. In 2019, the Iraqi parliamentary security and defense committee chair Mohammad Reza announced the resume of negotiations to buy the Russian air defense system. According to Al Masdar news, The Parliamentary Security and Defense Committee of Iraq submitted a detailed study requesting the purchase of Russian long-range, surface-to-air S-400 missile defense systems for the consideration of the country’s caretaker prime minister Adel Abdul-Mahdi on 18 April.[[289]](#footnote-289)

However, the USA doesn’t want Iraq to buy S400 missiles from Russia, Saddam Hussein had the weapons systems from the USA when it tried to invade Kuwait in 1991, easier to control for the USA. If Iraq buys Russian weapons, it would become more complicated to control it by the USA. In March 2020, following the series of attacks by Iranian proxies against American positions in Iraq, the United States started to deploy 2 PAC batteries to Ain al-Assad Air Base and Irbil Air Base without the agreement of the Iraqi government.[[290]](#footnote-290)[[291]](#footnote-291)

According to experts, weapons and militiamen from Iran are transferred through the Diyala province where the Badr militia is very present. [[292]](#footnote-292)The power vacuum in this region allowed the militia to expand its influence and Iran to safely transfer its weapons to the Iraqi militia. Iranian weapons are also transferred from Iraq to Syria through the Anbar province where PMU chokepoints allow the weapons batches to be smuggled through Harakat al Nujaba, mainly by militiamen from Kata’ib Hezbollah.[[293]](#footnote-293) Experts report also the transfer of militiamen from Iraq to Syria since the beginning of hostilities. Kata’ib Hezbollah participated in the fighting against rebel groups. Israeli sources reported also the transfer of Iraqi militiamen to Yemen such as Kata’ib Hezbollah, Asa’ib Ahl al-Haq and Sayara al Khorasani. This information was not confirmed by international experts however.[[294]](#footnote-294) According to experts, weapons smuggled to Iraqi militias, represent 3 billion dollars between 2015 and 2017.

**I.2.1.4- Consequences of the Iranian missile program on the Iraqi proxies**

After the fall of Saddam Hussein 2003, the IRGC operatives started to train Shia militias in various camps in camps in Iran. According to reports, Iranian IRGC forces opened training camps in Ahvaz in Iran for operatives from the allied PMU militias. The training allegedly last for one month and teaches the basics on the use of rockets and artillery machine guns and IED. [[295]](#footnote-295)The trainings are modelled on the same one as the Hezbollah operatives. Other training centers reportedly opened in Iraq and provide standardized and limited formation. These trainings allowed Iran to cement the loyalty of the Iraqi militia and provided a uniform training, helping them to communicate and integrate themselves in the bigger PMU militias. The strongest the Shia militias in Iran, the biggest the Iranian influence in Iraq.

The case of the Asa’ib Ahl al-Haq is a prime example of the use of this training to frame the strategy of the PMU Shia militias. Qais Al Khazali, the founder of the Asa’ib Ahl al-Haq and leader of special group (gathering Kata’ib Hezbollah and Asa’ib Ahl al-Haq under the aegis of the Quds forces) asked to Iran to increase its training and reinforce the smuggling of weapons.[[296]](#footnote-296) The strengthened special group became the main Iranian interlocutors in Iraq. This loose network achieved to establish an efficient communication with the Quds forces operatives and adapted the delivery of weapons to a just in time shipments, avoiding the presence of caches in the Iraqi territory.[[297]](#footnote-297)

The increase of the training allowed the Shia militias to improve their command and control and to unify their fighting tactics among all different militias, spreading the influence and prestige of Iran in Iraq. The aim of Iran is to create a reservoir of allies in Iraq which would adopt the same tactics and strategy as Iran. Iran capitalizes therefore on the links between the different groups and its long term presence rather than on a mere economic and military help.

However, after the death of Abu Mahdi al-Muhandis and the fall of ISIS in Iraq, the Iraqi Shia militias started to find difficulties to justify their existence.[[298]](#footnote-298) Under the Iranian influence, they are turning into an Iraqi Basij force, constraining the population and the recent demonstrations. This strategic shift could backfire and annihilate the positive Iranian image among the Iraqi population.[[299]](#footnote-299)

**I.2.1.5- Security consequences of the Iraqi use of the Iranian missile program**

The consequences of the Iranian actions in Iraq and the exports of its missiles is the risk of preemptive strikes from Israel or a direct retaliation from the United States. In 2019, Israel launched 7 airstrikes against the PMU missile depots.

The recent events between December 2019 and March 20202 showed the risks of an American and Iranian backed Shia militias tit for tat strategy through the use of missile strikes against American military assets in Iraq. Both felt obliged to retaliate against a previous attack in order to keep their deterrent power. This situation could lead to an escalation if none of the actors refrain and cut this negative spiral.

The killings of Qassem Soleimani and Abu Mahdi al-Muhandis triggered the reject from the Iraqi Shia politics of the United States. However, the Islamic state has not completely disappeared from the Iraqi territory and the USA was deemed more efficient to fight militarily the terrorist group. If the US withdraws from Iraq, experts doubt about the efficiency of the Iranian actions through the allied militias against such an actor. Iran does not have the same aerial power and intelligence required to dismiss the Islamic state.

Moreover, the withdrawal of the United States could trigger the emergence of a power vacuum in the country leading to the increase of the terrorist influence.[[300]](#footnote-300) Iraqi sources already pointed out the presence of a resurgence of the IS threat from Jazira and Badia areas between the Iraqi and Syrian border which is poorly monitored. The PMU reported the increasing activity of ISIS cells in Hamrin Mountains in Diyala province and in the South West of Saladin province. The Kurds were also actively fighting against ISIS in Syria and Iraq with the direct support of the USA. Their withdrawal could trigger the degradation of the Kurdish capabilities against ISIS. According to them, the ISIS could take the Mount Sinjar placed border between Syria and Iraq. Moreover, due to the covid crisis, several ISIS terrorists were reportedly freed or escaped from the Kurdish-held Syrian prisons. They allegedly reached the Syrian/Iraqi border where they joined sleeping cells in this unstable region.[[301]](#footnote-301)

The departure of the USA from the Iraqi bases triggered already such trends. A complete withdrawal could be catastrophic for the Iraqi stability. The Iranian goal to oust the USA from the Iraqi territory could therefore backfire and spurs the degradation of its credibility on its capacities to defeat non-state actors.

The development of Iraqi militias also fuels the Syrian conflict through the land exports of weapons and militiamen. For Iran, Iraq is necessary to avoid any direct strikes on its own territory and to transmit its support to Bashar al Assad’s troops and Hezbollah operatives.

The alliance between Iran and Iraq triggered another security issue for Saudi Arabia. The strikes in Abqaiq and Khurais in Sepember 2019, demonstrated an issue in the Saudi missile defense systems. [[302]](#footnote-302)According to experts, the drones’ attacks originated from Iran and crossed the Iraqi territory before reaching the Saudi oil facility. However, the PAC 3 radars do not cover the whole Saudi territory but only angles targeting the southern borders, where Houthis regularly launch attacks on a 120° angle. Therefore, the presence of missiles in Iraq could open a new front in Saudi Arabia and put it in a difficult situation to protect its northern and southern borders.

Finally, it appears that the killing of Qassem Soleimani and Al Muhandis spurred the growing independence of the Iraqi militias, estimating that they no longer need the directives from the Quds forces and Hezbollah operatives to thrive.[[303]](#footnote-303) The death of the charismatic military leaders from Iran created a vacuum in the relations between Iran and Iraqi militias. According to Shia PMU militias, their training and weapon systems are enough to develop their activities and Iran has less leverage to control the activities of its Shia allies. The Iranian Quds forces relegated therefore their role to manage the PMU operatives to Hezbollah leaders such as Sheikh Mohammad al-Kawtharani, the Hezbollah representative in Iraq to avoid any direct confrontation with its Iraqi allies. [[304]](#footnote-304)Therefore, it will become more difficult for Iran to keep an eye on the activities of the Shia proxies in Iraq while they are provided sophisticated weapons and leading operations against the USA. A negative spillover confrontation between the USA and Iraqi militias could lead to a direct retaliation against Iran if the USA estimates that the Iranian power is responsible for the actions of the Iraqi militias.

I.2.2- **Yemeni-Iranian missile cooperation**

**I.2.2.1- Historical background**

The Houthi movement comes from the clan of the Houthis family formed in the region of Sa’ada province since the 1980’s. The founder of this group was Badr al Din al Houthi, dead in 2010. This movement advocates for the implementation of Zaydism, a Shia branch in Islam and the revival of this religious current competing with the Salafist movement brought by Saudi Arabia. During the 1990’s the movement developed its social network and imposed its rules in the Northern part of Yemen. It created a political party and a youth program to train their future affiliates.

The Houthis reject the presence of foreign powers in Yemen as Saudi Arabia and the USA. The influence of Saudi Arabia is a deep rooted in the country and is characterized by the spread of Wahhabism, an ideology opposed to the one supported by the Houthis. After the revolution, the Iranian power started to support the Southern state, more aligned with its Marxist ideology, in opposition to the Northern regime which backed the Iraqi invasion in Kuwait. The IRGC allegedly started to train and lure various Zaidist and Houthis students providing them full scholarship for their studies in Iran and indoctrinate them to Twelver Shia religion.[[305]](#footnote-305) They were usually gathered on 3 IRGC camps in Shuiraz, Mashad and Isfahan.

6 Houthi wars were launched between 2004 and 2010. The Houthis fought against the governmental power, represented by Saleh president. The government was accused of being corrupted and inefficient. The execution of the founding father of the movement launched a surge of indignation among the Shia Yemeni population and increased the legitimacy of the Houthis power in Yemen.

The advent of the Arab Spring marked the increase of the Houthis capabilities to expand their network in the country. The Saleh government was toppled in 2012 and started to ally to the Houthis, the former enemies to regain control on the territory. The former president was replaced by the president Abdrabbuh Mansur Hadi, who aligned later with the Saudi coalition to fight the Houthis insurrection in the territory. In 2011, the Houthis adopted their new official name: Ansar Allah, the Union of God. They achieved to develop their communication channels, through a Lebanese based TV Channel such as Al Masirah. From 2012, the group controlled al Jawf, Hajjah and Saada territories.[[306]](#footnote-306)

At this period, the group benefitted from the support of Hezbollah and Iran. Iran started to ally with the group when they started to strike Saudi Arabia directly in 2009. Iran began to help Houthis to disturb the southern front of the Gulf States. Between 2009 and 2011 several cargoes of weapons were intercepted full of sophisticated weapons and allegedly destined to the Houthis fighters.[[307]](#footnote-307)

The Quds brigades allegedly started to train the Houthis group at this moment. According to an Israeli source, 400 Quds forces operatives would be working in Yemen. They would be led by Abdolreza Shahlaei. According to Radio Farda, he is the only IRGC commander the United States is tracking. According to Reuters, he was also targeted by US operation to kill him. The US believes that he is one of the most active IRGC officers in the Middle East. However, there is absolutely no photos and information on the existence of this man. The MeK describes him as a former fighter during Iran Iraq war, who is around 60 years, and born in Kermanshah in Western Iran. According to American and Israeli sources, he allegedly ordered the attack against Saudi embassy in 2011. Iran denies any involvement and participation in the Houthis conflict and does not recognize its responsibility in the transmission of weapons to the Houthis.[[308]](#footnote-308)

The Houthis attacked the Yemeni capital Sanaa in 2014 and succeeded in their offensive. The president Hadi fled to Riyadh where he asked the support of the GCC to repel the Houthis. Looking the increasing warfighting capabilities of the armed group, Saudi Arabia launched an international coalition to curb the influence of Ansar Allah in Yemen and to regain control on the territory and support the current president Hadi. The coalition started to launch aerial strikes against Houthis positions. The coalition was composed of Saudi Arabia, UAE, Egypt, Jordan and Sudan with the logistical support of the USA until 2017.

The support of Iran and Hezbollah to Houthis, particularly regarding their missile arsenal, was considered as a serious factor of discord by the American administration and a motive to withdraw from the JCPOA.[[309]](#footnote-309)

The Houthis started to strike Scud missiles against Saudi Arabia in 2015. A big number of strikes were reported during this year. During the first period of strikes between 2015 and 2016, the bulk of the strikes were concentrated near the border. The range expanded progressively to hit UAE targets and deep targets in Saudi Arabia (up to 1000 km from the Northern part and Houthis positions in Yemen). The strikes reached Khamis Mushait, Djeddah and Al Taif bases, Riyad,[[310]](#footnote-310)

The destabilization of the Yemeni region triggered also the development of terrorist groups in the region such as Al Qaeda in the Arabian Peninsula and ISIL which were already present before 2014. The United States launched a coalition to fight against the presence and development of such groups in the Middle East.

**I.2.2.2- Houthis missile arsenal**

Before the conflict, the Saleh government achieved to gather a small missile arsenal in the 1980’s. It was composed of short range missiles such as Scud B and OTR-21 Tochka missiles delivered by the USSR. The USSR delivered the same weapons during the 1994 war to the government forces. [[311]](#footnote-311)

In the 2000’s the governmental stock of missiles was almost empty. In 1999, North Korea exported Scud arsenal to the Middle East such as Hwasong 5 and Hwasong 6. The missiles were first delivered to Egypt. In 2009, several Hwasong were delivered by North Korea to Yemen.

During the coalition operation, the coalition tried to destroy through aerial strikes the presence of these old stocks of missiles. The remaining arsenal which has not been destroyed was guarded by governmental forces under the 5th, 6th and 8th brigades near Sana’a at the base at the Faj Attan Mont. These missiles were seized by the Houthis and the former Saleh forces when they invaded Sanaa in September 2014

Saudi Arabia and Israel accused Iran of delivering missile weapons to the Houthis, transforming this group into a proxy group. Iran always denied their participation in the Yemeni war. However, experts achieved to demonstrate the links between Houthis missiles through their wreckage in Saudi Arabia with the Iranian arsenal, proving their cooperation. [[312]](#footnote-312)

The first sophisticated Houthis missile reported was the Burkan 1. It emerged in 2016 during attacks in the Mecca, Djeddah and Al Taif regions. The Burkan 1 and 2 were allegedly built on the model of Iranian Shahab missiles 1 and 2, and Qiam 1 missiles.[[313]](#footnote-313)

In 2017, the Qaher-M2 missile was reported and strokes the Khamis Mushait aerial base. This missile was allegedly created through a reverse engineering of a С-75 SAM system from USSR, which was transformed after into a surface to surface missile. According to the UN panel of experts,[[314]](#footnote-314) the reverse engineering of Qaher missiles corresponds more to a copy of Iranian Tondar missiles. In 2017, the presence of two new missiles were reported, the Burkan 2 and Burkan 2H with a range estimated up to 1,000 kilometers.

The UN Panel of experts reported also the presence of drones among the Houthis arsenal. The Qasef 1 was the first drone reported and was allegedly designed on the Iranian Ababil, created to commit suicide attacks against radar positions of missile defense systems of Saudi Arabia and against its oil facilities (in Shaybah , Abqaiq, Dawardimi and Afif East West pipeline). According to the Conflict Armament Research, the links between the Qasef 1 and Ababil was established through the study of debris present in Saudi Arabia. The same gyroscopes were found in the 2 drones. In July 2019, 2 new drones[[315]](#footnote-315) were reported by the UN panel of expert such as the Samad 3 and Qasef 2K.[[316]](#footnote-316) According to experts, these drones have an extended range, allowing the Houthis to launch deeper strikes into Saudi Arabia. CAR reported the presence of 2 different versions of Qassef drones. A first one was discovered among a seized weapon shipments with very accurate fabricate demonstrating that the drone was built in a factory. The second one, called Qasef S1 was said to be a hybrid drone, with the same separated components but with a very rudimentary assemblage. The Houthis would thus able to build their own weapons with a weaker industry and imported components.

The UN Panel of experts reported also the existence of a Land attack cruise missile, called Quds and which would be a copy of the TJ 100 turbojet. They would have been used in 2019 against the Abha International Airport.[[317]](#footnote-317)

In 2019, the USS Mason was attacked by Houthis anti-ship cruise missiles. According to intelligence sources, C-802 missiles were used during this attack. They are Chinese manufactured and also delivered to Iran during the 1980’s. Houthis claimed earlier to detain C-704 Iranian version of Nasr Anti-ship cruise missiles but this information could not be proven.[[318]](#footnote-318)

The Houthis missiles were described at the beginning as being inaccurate.[[319]](#footnote-319) Their missile strategy was allegedly to decrease the payload of their missiles to increase their ranges in order to strike deeper Saudi targets, regardless the number of casualties. Missile weapons would have been used as a psychological weapon rather than a “weapon of mass effectiveness”.[[320]](#footnote-320) However, this pattern tends to be reversed. On October 27, 2019, an alleged precision guided weapon called Badr P-1 by Houthis operatives was presented in an attack against a military base in Al Hudaydah, killing 4 Sudanese soldiers, fighting within the Saudi coalition. According to Houthis media, this weapon would have been developed indigenously, information not believed by international experts.[[321]](#footnote-321) According to open sources data, the missile would have been developed with the Iranian Fateh-110 missile. The missile would have hit the basis accurately, letting think that Iran would have developed improved the precision of its Fateh 110 missiles and exported it to Yemen, as it has done with Hezbollah. However, no official information from international experts could have stated for sure that these missiles are precision guided.

The UN panel of experts reported the presence of factories in Sa’ada and Hodeida were the missiles and drones would be assembled. According to experts, the missiles would not be smuggled entirely but only assembled in these factories. The building capabilities of the Houthis are estimated very limited.

According to experts, IRGC operatives would be present in the Houthis territory to teach and advice on the use and assemblage of missiles. [[322]](#footnote-322)According to intelligence sources, they would be present in Sanaa since 2014. Israeli sources reported also the presence of Hezbollah operatives in Sanaa and Saada and near the Red Sea costal forces to teach how to use anti-tank weapons and offensive mine warfare.[[323]](#footnote-323) According to an Israeli source, a training camps led by IRGC and Hezbollah operatives has been reported in Abaad center in Lebanon.

At the beginning of the war in 2014, experts stated that Iran may send weapons and advisors from Tehran to Sanaa trough civilian airlines. During the operations of the coalition, Iran allegedly sent weapons more covertly through maritime ways.

The UN panel of experts estimates that Iran delivers its missile weapons in cut pieces and reassembled later in Yemen. This technique would allow Iran to easily conceal the shipments of missiles. The UN Panel of experts also suspects that the missile shipment would be first delivered to Oman and then to Yemen and then sent through terrestrial ways to al Jawf governorate. According to experts, Oman would participate in the smuggling of components to the Houthis groups and transferred them through Dhofar region.[[324]](#footnote-324) The Panel of experts also explained that Iran was more inclined to send these weapons through very small boats, which can circulate discreetly in the very crowded Straits of Hormuz. An Israeli source reported also to possibility for Iran to ship its weapons through Kuwaiti waters in small ships. This information was not confirmed by a panel of experts.

Since 2014, the Houthis control a large band of ports on the Western coast. They detained Al Hodeida until 2018 and the negotiation of the Stockholm agreement. The Houthis shifted their territory to the Midi port, where experts think that the maritime shipments arrive discretely. Regularly, shipments of weapons are seized in the Red Sea. The most famous operation occurred in 2013 when the United States seized a big weapons shipment on the Jihan 1 near the Yemeni coast. [[325]](#footnote-325)

CAR reported that the components used in the fabrication of missiles and drones were traced back from various front companies in Asia, Europe and Middle East. Some components were traced from a consignment from Hong Kong, shipped to an address through the company Bahjat alleqa’a in Muscat international airport in Oman and then transmitted to Jawf governorate.[[326]](#footnote-326) In November 2018, sensitive components such as the SSPS and serro accurators were reportedly exported from Japan and consigned in Abu Dhabi and send back to Yemen through the company Al Suari trading and Import company. In 2015 components used in the fabrication of UAV engines (3W-110Ib2) were shipped from Germany Company Modell motoren Weinhold from Hanau to Greece and sold to Turkey to Giti Reslan Kala, a logistic company that received shipments from Tehran. The components were of dual use and the German company did not know that they could be shipped to the Houthis. [[327]](#footnote-327)The components were not classified as sensitive since the components used in the fabrication of drones are not regulated.

Other components would have been shipped through Saudi Arabia and Bahrain to Yemen. Iran fuels several Shiite and terrorists groups, particularly in Bahrain, which, according to a CAR study, exports IED components which would be loaded on Yemeni drones and increase their lethality.[[328]](#footnote-328)

**I.2.2.3- Consequences of the Iranian missiles the Houthis**

According to experts, missiles are used with a decreased payload in order to increase the range of the missiles and reach deeper targets in Saudi Arabia and the UAE. Therefore, the lethality was less important by 2015, and the missile arsenal is more used as a psychological weapon with a poor lethality. The drones and fast unmanned boats are often used in suicide attacks and target the radar stations of the PAC systems. The drones and missiles strikes in Saudi Arabia often targets civilian and soft targets or grey targets in order to increase the psychological effect of these weapons. Pipelines, oil facilities and airports are very often targeted.

The ambition for Iran is to transform, as in Lebanon, the Houthis group into a new Hezbollah organization, curbing the traditional Saudi influence in the country. However, it was found more difficult for Iran to transform this non-state actor into a real hybrid force. The Houthis reach more difficulties to gather a uniform social basis, as with the support of Shia population by Hezbollah. The Houthis member composition is more heterogeneous, and a lot of tribes were rallied to the Houthis cause only through bribery, weakening the influence of the group in the population. Some tribes reportedly joined the AQAP ranks and the level of indoctrination and influence on the local population remains weak.[[329]](#footnote-329)

According to experts, Iran does not exert a direct command and control on the Houthis. Among all the proxies supported, Houthis don’t have the same importance for Iran as the Lebanese, Palestinian, Iraqi and Syrian militias. Iran saw more a cheap opportunity to disturb Saudi Arabia on a new front while keeping high level of deniability.[[330]](#footnote-330)

Iran started to become more vocal about the support to the Houthis after the launch of the Saudi coalition in 2015. Actually, the huge sums of money invested by the coalition in the aerial operations, and the impossibility to crush a small non state actor degraded the image of Saudi Arabia and demonstrated its weaknesses to other countries in the region. The reducing of the Saudi credibility is an advantage for Iran in the dispute to win the Gulf leadership.[[331]](#footnote-331)

However, the weak precision and lethality of the Houthi missile arsenal does not allow Houthis group to impose itself efficiently and to win the control of the whole territory. The Houthis did not achieve to defeat the central governmental power. However, the power vacuum let and their attrition strategy allowed the group to increase its relations with Iran and to increase its military capabilities.

**I.2.2.4- Security consequences of the use of Houthis’s missiles**

Iran sees the Yemeni front as an opportunity.[[332]](#footnote-332) It has far less links with the Houthis Shia communities than with Hezbollah and the Iraqi militias. However, if Saudi Arabia increases pressure on the Houthis and if Iran must support more this group due to the degrading security situation; it could lead to a decrease of the Iranian troops and support from Syria and Iraq, which are deemed more necessary for its security.

The presence of this group can be however destabilizing for the security of the region. The Houthis already launched attacks in the Western coast and can endanger the Bab al Mandeb straits which are necessary for the transfer of 3.8 million barrels per day.[[333]](#footnote-333) The daily exports are not as big as in the straits of Hormuz. However, if Iran increases it pressures on the Straits of Hormuz, the Bab al Mandeb and the Red Sea would see their strategic importance to increase. Therefore, rival oil exporter countries could not avoid the presence of Iran and its proxies in the region. If the strait of Bab al Mandeb is closed and the Red Sea blocked by the actions of the Houthis, it could also block the road to the Suez Canal. Shipments of oil and gas would then bypass the whole African continent to reach Europe. The Suez Pipeline built in 1973, could alleviate the pressure put by the proxies in the straits but its capabilities are not sufficient to transfer all energy products from the Gulf to Europe.[[334]](#footnote-334)

The increasing Houthis harassment in the Red Sea pushed the Gulf States to settle military bases in the African Horn to monitor the evolution of the Houthis group and intercept the shipments of weapons. The UAE settled a big military base in Djibouti as well France and China and the US reinforced their naval presence in the Bab al Mandeb. The actions of the Houthis increased the maritime tensions in the Red Sea and in the African Horn. [[335]](#footnote-335)

The Houthis and Iran risk a direct confrontation with the US at sea. This scenario occurred in 2016 when the Houthis launched an attack against the USS with anti-ship cruise missiles. The United States retaliated directly on the Houthis territory and destroyed their radar stations implemented on their Western coast. However, the United States could decide also to retaliate against Iran, estimating that the Iranian power is responsible for the security situation in the Red Sea. For Iran, it is difficult to keep a sufficient level of deniability while encouraging the Houthis to launch attacks against Western and competing powers.

The threat of Houthis missiles increased the dependence of Gulf States on American and foreign aid for armaments.[[336]](#footnote-336) The United States was particularly present at the beginning of the coalition to provide aerial support, logistical help and intelligence. Saudi Arabia became the first importer of weapons in the world in 2016. The increase of weapons from the Saudi coalition could trigger a domino effect in the security of the region. Indeed, the coalition exports sophisticated weapons to Houthis adversaries and Iran could retaliate through fueling tensions among their internal Shia communities in Bahrain and Kuwait.[[337]](#footnote-337)

Israeli sources pointed out also that the Houthis capabilities could maybe strike south eastern parts of Israel. According to Uzi Rubin, the Houthis would have acquired these capabilities already. He clearly stated that these extensions of capabilities are directly in the interests of Iran. Israel would be forced to divide its defense systems between Northern areas against Hezbollah, South Western targets against Palestinian groups and south Eastern areas now with the newly Houthis capabilities. Israel would be therefore encircled in a “ring of fire”[[338]](#footnote-338) and obliged to increase its defensive and expensive arsenal against Yemen.

Experts also estimate that the presence of Iran and Houthis could encourage a growing sectarianism in Yemen. The abuses from the Houthis communities among local population served the interests of AQAP and ISIS to increase their influence in Yemen which would destabilize the security of the region.

Iran seems to prioritize the Levant axis compared to the Gulf allies. The war in Syria, the strength of Hezbollah operatives and the presence of Shia forces in Iraq are the cornerstone of the Iranian defensive use of offensive actors to decrease the security of its enemies and extend a reassuring influence of Iran in the Middle East. The missile arsenal demonstrates the priorities of Iran according to its strategic interests. Hezbollah operatives’ benefits from the most sophisticated arsenal with the export of precision guided missiles through Syria while other actors have more limited capabilities. Iran remains highly concentrated on its immediate neighborhood. However, the Yemeni crisis lures the attention of the Gulf coalition and the increase of their arsenal to fight the Houthis rebellion. The Yemeni crisis was seen by Iran only as an opportunity to encircle the Gulf States and to further extend its influence. If Iran decides to match the offensive capabilities of the Gulf coalition in Yemen, the current war could be transformed into a far greater conflict and trigger a spillover negative security context in the whole Gulf Peninsula.[[339]](#footnote-339) In that case, Iran would not have the capabilities to support a confrontation directly against Saudi Arabia and the UAE, supported by the USA and heavily armed. Moreover, a negative spillover of the Yemeni war in the Gulf could spurs also the division of the Iranian support to proxies in Syria, Iraq and Lebanon, decisive for the Iranian security. The use of proxies in Yemen require a very delicate strategy for Iran denying all involvement in the war but supporting the Houthis group discretely to avoid any direct retaliation from Saudi Arabia and the UAE.

**Part 2- Iranian direct use of missile capabilities**

Since 2018, a worrisome trend started to emerge in Iran through the use of direct missile strikes against regional enemies. This new trend has not been reported since the end of the Iran Iraq war between 1980 and 1988. It started since 2017 through direct strikes against the ISIS positions in Syria in Deir ez Zor, and the strikes against the Kurdish groups in Koya,[[340]](#footnote-340) Iraq, retaliating against previous offensives on the Iranian territory by the two groups. Iran has never stricken directly its regional state enemies and American military assets without a first direct offensive within its own territory and without the use of its proxies. However in 2019 and 2020, Iran is suspected of having launched 2 direct offensive strikes in Saudi Arabia and Iraq against main economic and American military assets[[341]](#footnote-341). The Iranian powers denied its implication in the strikes in Saudi Arabia, despite the evidence gathered by international experts. However, Iran openly struck American assets in Iraq, constituting a U-Turn in the Iranian missile strategy.

Iran always relied on a sub level of warfare against its regional enemies to create mutual Assured Destruction relations in the Middle East,[[342]](#footnote-342) implying that Iran would not hesitate to activate all its proxies in case of offensive attacks from its enemies. This strategy hinges on the use of sporadic attacks or asymmetric confrontation among technologically stronger enemies to curb their influence and degrade their credibility.[[343]](#footnote-343) However, Iran always stated its policy of no first use of the first conventional strike in the Middle East. The recent strikes show a shift in the Iranian use of missiles which were not employed in the framework of a defensive strategy. These strikes also surprised international experts on the increase of accuracy of the Iranian arsenal and trigger new strategic consequences for the region.

**II-1- Iranian strikes in Saudi Arabia**

On September 14, 2019, the Abqaiq stabilization plant from the Saudi state company Aramco was targeted as well as Khurais by 18 drones and 3 cruise missiles. The American Secretary of State Mike Pompeo accused Iran of committing an act of war. This attack showed a high degree of precision and temporarily halted the production at the Abqaiq oil refinery, which supplies 5-7 % of the world’s daily petroleum. The production was disrupted which triggered an increase in the world oil prices by 20% constituting the biggest move since 1980. The Houthi claimed the responsibility for this attack with a drone technology which would have had a range of 1,000 km. However, according to experts, Iran was responsible for this attack. The attack was considered as the worst one against an oil facility since the military action of Saddam Hussein against the Kuwaiti oil fields in 1991.[[344]](#footnote-344)

4 months before the attack, the United States decided unilaterally to withdraw from the nuclear deal and to resume sanctions against Iran. According to various experts, the attacks against the Aramco facilities convey the desire from Iran to retaliate against the American decision. Iran started to increase its military pressure in the Straits of Hormuz by shooting down an IS&R American drone. However, the IRGC allegedly considered that attacking directly a high value American military position in the region would expose the Islamic republic to a direct retaliation from the United States. Contrary to its previous actions through its proxies, the Iranian military decided to respond directly (although it denied its implication later, affirming the responsibility of the Houthis) but on a sub level of confrontation, avoiding the direct retaliation.

Abqaiq is the biggest stabilization plant in the world. Saudi Arabia counts other stabilization plants such as Jubail, Qatif, Ras Tanura. According to experts, Abqaiq was chosen due to its economic importance in the Saudi oil exports and due to the concentration of the different towers conserving oil. This concentration makes easier direct attacks with a limited precise arsenal.[[345]](#footnote-345)

The Iranian militaries needed to balance between the need to find a strong symbolic and strategic target and to avoid striking a too sensitive target to avoid any retaliation. According to experts, Ali Khameini excluded the possibility to kill directly American citizens and Saudi civilians.[[346]](#footnote-346) Striking a big military infrastructure was also deemed impossible with the risk to trigger a direct confrontation with the United States. The Abqaiq facility was already struck in the past through another mean of sub conventional warfare through the Iranian Shamoun cyberattack, destroying the ¾ of the computers of the facility. Iran preferred therefore to strike an important soft target rather than a military or civilian one.[[347]](#footnote-347)

Saudi Arabia was also chosen among all the American allies in the region owing to the already ailing relationship between the two countries after the assassination of the Journalist Jamal Khashoggi and the increasing protests from the American Congress for the export of Saudi weapons to regional proxies against the Houthis in Yemen, creating a dire situation for the civilians in this country.[[348]](#footnote-348) Striking Saudi Arabia was a tactic to pressure a bit more Saudi Arabia and its relations with the United States in a tense context. However, following the attack, the United States decided to send 2,800 troops as well as more fighter jets to counter the Iranian threats against the Saudi oil facilities. The American did not retaliate directly against the Iranian attack, demonstrating a restraint to avoid a spillover escalation in the Gulf where their main foreign military bases are located.

The strike impressed the expert community which witnessed the last direct Iranian attacks in Deir ez Zor against ISIS positions and considered it as a failure due to the lack of accuracy of its missiles. The missiles and drones achieved to damage 17 precise points of the infrastructure. Iranian militaries were thus aware of the presence of these targets and their exact location which emphasize the progresses in reconnaissance targets and intelligence. Moreover, the precision of the attacks highlights the huge technical progresses made by Iran in its cruise missile arsenals. Indeed, in the past, experts already pointed the Abqaiq facility as a sensitive target. But the estimation of its vulnerability hinged on the lack of accuracy of the Iranian missiles and the presence of the Saudi missile defense systems to curb the threat. Past estimations assessed that 160 Fateh 110 sort range solid fuel ballistic missiles were sufficient to strike some targets in the Abqaiq facility.[[349]](#footnote-349) In the recent case, Iran proved the possibility to strike precisely with 18 drones and 3 cruise missiles the 14 very thin towers where was precisely stored oil.[[350]](#footnote-350)

For Anthony Cordesman, this attack represents a real revolution in the use of cruise missiles and UAV against sophisticated Missile defense systems. The two weapons can reach a high accuracy through the use of commercial GPS data and be preprogrammed to fly evasively to reach the targets increasing the deniability of the strikes. [[351]](#footnote-351)The two arsenals can also easily penetrate the sophisticated air defense systems thanks to their low level flight and low observability for the defensive radar systems.[[352]](#footnote-352) These weapons are also very versatile and can be loaded with explosives, sub munitions and weapons of mass destruction. Anthony Cordesman highlighted the limits of the use of chemical agents, too heavy for these weapons but thinks that the use biological agents could be loaded in Iranian cruise missiles in a near future. These agents could be dispersed precisely on civilian areas and would also preserve the deniability for Iran thanks to a versatile flight path. This expert also emphasized the possibility to use cruise missiles and drone sin combination with other weapons. Salvos of inaccurate missiles could be launched to saturate missile defense systems and open the way to the most accurate cruise missiles and drones to reach sensitive targets. These weapons could completely reverse the balance of the Mutual Assured destruction relations between Iran and its adversaries with the assurance from Iran to bypass the defensive systems and hit sensitive targets. The Saudi Air defense could not detect the presence of these weapons despite their lack of stealth capabilities. The PAC 3 batteries could detect the coming threats only on a 120° basis and they are mainly targeting threats from the Yemeni borders.

For Anthony Cordesman, these weapons could be qualified as the new weapons of mass effectiveness.[[353]](#footnote-353) They are used in a gray warfare against soft targets to avoid direct retaliation from the USA and regional enemies. These weapons could be also spread to proxies. Hezbollah and the Houthis could already benefit from the transfer of cruise missiles and drones from Iran, expanding the threats to the whole region.

**II. 1. 1- Consequences of the Iranian direct missile strikes for the security of the Persian Gulf**

The Persian Gulf is packed with very sensitive targets reachable with very short range missiles. The flight time between Teheran and Riyadh for a missile is reportedly 4 minutes. The Persian Gulf comprehends a lot of various strategic grey targets located at shorter ranges which constitutes an ideal environment for Iran to increase its deterrent power. Moreover, the regional neighbors (excepted Saudi Arabia) mainly lack strategic depth and concentrate their urbanized areas on the sea shores, closer to the Iranian potential strikes.

In the context of this grey warfare, Iran could choose several targets which would not hit civilians directly but are highly necessary for the economic life of the country. One of the main possible targets for Iran would be the desalinization plants, the ports and oil and gas facilities. Desalinization plants are particularly sensitive in the Persian Gulf. 43% of the world desalinization plants are located in Saudi Arabia. In 2009, a leaked US state department stated that if the Ras al Khair plant, the largest desalinization plant in the world, located on the sea shores would be closed or destroyed, Riyadh would be forced to evacuate its whole population within one week since the plant aliments in drinkable water the capital.[[354]](#footnote-354) Electric grid could be a possible option for an Iranian strike on the Saudi territory which is increasingly fueling the growing Saudi internal energy consumption. This threat could be multiplied if Iran exports its cruise missile technology to its regional proxies, increasing the threats against Saudi Arabia and Israel whose missile defense systems are estimated far less efficient in presence of stealth capacities and precision guided missile technologies. The alliance between this technology and the grey target doctrine for Iran increases its deterrence power exponentially while avoiding direct retaliation.

For Anthony Cordesman, this Iranian attack and the potential threat posed in the Persian Gulf is a Middle Eastern version of the Mutual Assured Destruction concept.[[355]](#footnote-355) Indeed, Gulf economies (and the world economy as well) are completely reliant on the free flow of energy resources in the Persian Gulf region. With the Iranian strikes against the Aramco facilities and the potential strikes against the main energetic and civilian targets in the Persian Gulf, the economies of the Gulf countries could be severely jeopardized and trigger a worldwide economic crisis. Iran demonstrated that it does not need to launch a massive attritional war against Saudi Arabia to destabilize the worldwide prices of oil. Iran can launch simple sporadic strikes against main economic targets with precision guided weapons to reach such result. Iranian missile capabilities are also intertwined with the Iranian naval capabilities in the Persian Gulf to launch such attacks. Iran has a full arsenal of speed boats with stealth capabilities as well as midget submarines able to launch missile strikes against economic assets of its enemies. The strikes against Aramco are just one share of the potential destructive capabilities of Iran in this geographic area. [[356]](#footnote-356)

**II.2- Iranian strikes in Iraq**

On January 8, 2020, the Ain al Assad Airbase and the Erbil airport in the Kurdish region were targeted by 15 ballistic missiles from Iran. The base hosted American troops on the Iraqi territory in the framework of their operations against remaining ISIS cells. No casualties were recorded on that day.

This strike was openly affirmed and assumed by the Iranian power in retaliation of the killing of Qassem Soleimani, head of the Quds force and Abu Mahdi Al Muhandis, former deputy head of Kata’ib Hezbollah, a strong ally of the Iranian Quds forces to support their Iraqi proxies. These militaries were killed by an American drone at the Baghdad International Airport.

Previously, on December 27, Katib Hezbollah, an Iranian proxy killed a US citizen and attacked on December 31 the American embassy in Baghdad, triggering a spillover reaction from the United States. The US powers did not react however to the Iranian attack against the Ain Al Assad airbase.

These strikes are the first direct use by Iran of a ballistic missile since the end of the Iran Iraq war.

These strikes were also particularly commented for their impressive accuracy, reversing the widespread assumption that the Iranian missile lack of accuracy and lethality could not constitute a major threat in the Middle East. Moreover, Iran assumed a direct and overt strike against a US military asset in the region, risking triggering a spillover situation and a reaction from the United States.[[357]](#footnote-357)

According to experts, Iran intended to kill American soldiers based on the Airbase.[[358]](#footnote-358) The strikes occurred during the night and targeted at the dormitory buildings. The Iraqi government was reportedly warned 90 minutes before the beginning of the operations but not the American forces. It demonstrates the necessity for Iran to avoid to confront with the Iraqi government but not the USA. The American soldiers were sheltered on time before the attack, probably informed by the Iraqi government. The attack against the airbase lasted 22 minutes and was organized in volleys separated by long pauses, giving the impression of the end of the attack to hit more uncovered targets.

The missiles fired were reportedly Fateh 313 and Katuyshas. [[359]](#footnote-359)Some experts suspect also the use of some precision guided Qiam missiles due to the debris recovered in the desert nearby the airbase. According to an analysis,[[360]](#footnote-360) 50 ballistic missiles were deemed necessary to render a US base unusable with a CEP of 50 meters. The Iranian attack demonstrated that its Fateh 110 missiles achieved to reach this level and were not inefficient against precision strikes targets. The Ain Al Assad was airbase paralyzed by the attack with the impossibility to launch drone operations. On the 16 missiles fired, 11 reached their targets.

**II.2.1- Consequences of the Ain Al Assad strikes**

Iran stroke directly and openly a US airbase and expected retaliation form the American forces. It means that Iran deemed that the strike advantage was more important than the blowback. This behavior showed that Iran may be ready to escalate even though the United States has better military capabilities. It means also that it would be more difficult to deter Iran and it could trigger a vicious circle of attacks and retaliation leading to a general conflict in the region.

The second consequence is the possibility for Iran to develop the accuracy of its short range and medium range missiles, changing the balance of terror between Iran and its adversaries. Regional enemies rely heavily on the lack of accuracy of the Iranian missiles to build their missile defense systems. However, if Iran is able to build more capable more accurate missiles, it would lead to the inefficiency of the missile defense systems in the Gulf region.

The second implication is the possibility to export these weapon technologies to regional allies and put at threat the adversaries’ missile defense systems through the use of precision guided missiles.

The last one hinges on the possible direct confrontation of the USA against the Iranian territory, leading to a general conflict in the Middle East with the awakening of the proxies. The USA entered recently in a tit for tat strategy against Iranian strikes. If no refrain is implemented to avoid a direct confrontation, this kind of strikes can constitute real casus belli against international and regional actors. It should be observed if such attack is only sporadic or is the starting point for a general trend in Iranian strategy.

These two ways of offensive missile strikes through the Iranian proxies and the region and through direct attacks against grey targets spurs reactions from regional actors who will shape the security consequences of the Iranian missile program in the Middle East.

**Part 3: Reactions of the regional actors**

“Invincibility lies in the defense; the possibility of victory in the attack.”[[361]](#footnote-361) This quote from Sun Tzu could embody the reaction from the regional actors regarding the threat that represents Iran. Answering from the direct and indirect missile threat posed by Iran, several options are available for Israel and the Gulf States. On the one hand, both regions tried to implement effective missile defense systems to deter and decrease the effects of the missile and rocket attacks against their territories. On the other hand, due to the increasing ineffectiveness of the missile defense systems due to the encirclement of their territories, the increasing precision of the missile arsenals and the saturation of their defense systems, these states decided to improve their own offensive missile systems leading to missile race in the Middle East. Therefore, the use of deterrence by denial through the use of missile defense systems was deemed unsuccessful and offensive means were used to protect their own territory, confronting their zero sum games to the Iranian one.

**III.1- The development of defensive capabilities**

**III.1.1- Missile defensive arsenal in Israel**

**III.1.1.1- Development of the Israeli missile defense program**

The Israeli defensive missile arsenal comes from its collaboration with the United States, under the presidency of Ronald Reagan.[[362]](#footnote-362) The USA started to support military Israel to curb the influence of the USSR in the Middle East during the Cold War and financed research and development programs. Israel was looking for a technological means to defend itself against the growing missile arsenals from its enemies. In 1973, the first missile attack was launched by Egypt with a SCUD missile against Israel during the Yom Kippur war.[[363]](#footnote-363) Israel felt that its lack strategic depth could makes its territory vulnerable from the strikes of conventionally loaded missile weapons. Defensive systems were deemed necessary to cap this dangerous trend.

During the Operations Desert Storm, Israel was again targeted by missiles from Iraq on its territory. Thanks to its collaboration with the United States Israel developed and implemented its first PAC 1 batteries. During this period, the United States included Israel in its research and development programs in missile defense systems and provided Israel economic help to increase its military industry (experts reported the sum of 1.2 billion dollars). However, Israel, not satisfied with the performances of the PAC 1 missile defense systems, started to develop its own missile defense batteries. Experts qualify the Israeli arsenal as a layered missile defense system due to the parallel existence of interoperable missile defense systems targeting different missiles at various stages of their flight path.[[364]](#footnote-364) The emergence of the Iranian missile arsenal and the extension of these weapons to surrogate non sate actors in Levant motivated Israel to extend its missile defense arsenal. In 2000, it deployed Arrow batteries in the wake of the first Gulf war. The Arrow 3 built 2011 was put in service since 2014 against Iranian Shahab 3 and Seijil 2.[[365]](#footnote-365)

From 2011, Israel deployed the Iron dome system, which intercepts rockets from 70 to 200 kilometers. This system was deployed after the second Lebanese war in 2006 which threatened civilian lives through the launch of missile salvos from Iranian-supported surrogates. In 2006, Hezbollah operatives launched 4,500 missiles and rockets and killed 52 Israeli civilians and militaries. During the operation pillar of defense against the Palestinian rockets in 2012, the 6 Iron Dome batteries could stem more rockets launched. [[366]](#footnote-366)The number of batteries increased to 9 following the Operation protective edge. At the beginning, the system was aimed at protecting limited areas and military and sensitive targets. Under the public opinion pressure, the Israeli government decided to increase the number of batteries and to provide protection to the main cities of Israel.[[367]](#footnote-367)

The David Sling System was deployed in 2013 to defend against SCUD missiles, cruise missiles medium and short range rockets from Lebanon and Syria. This system was developed in cooperation between Raytheon and Rafael companies.

In addition to these national defensive systems, Israel also deployed American batteries and systems. Israeli arsenal includes the PAC2 and Pac 3 missile defense systems designed to intercept Scud missiles and longer range weapons such as the Iranian Shahab and several UAV from Hezbollah and Hamas. Moreover Israel also bought American sophisticated radars such as the US TPY-2X.

The Israeli missile defense systems do not include any systems that can intercept very short range mortars.[[368]](#footnote-368) This deficiency was exploited mainly by Hamas operatives to launch very short range rockets across the borders with Israel or from tunnels in Israel. However, Israeli research centers are developing new missile interceptors which could fill this gap. Since 1996, Israel participated in collaboration with the US MIRA-CLE to a defensive program using chemical laser (from the Nautilus laser system) to intercept missiles.[[369]](#footnote-369) The program ended in the 2005 and was resumed by Israel under the Iron Beam name. However, the program remains extremely expensive to deploy.[[370]](#footnote-370) Moreover its efficiency is jeopardized since it needs to keep the laser a few seconds on the targets. However, according to experts, it could be advantageously deployed on Iron Dome Batteries, saving expensive interceptors if the 2 systems can be made interoperable.

According to the Israeli arms control expert Emily Landau, the Israeli missile defense systems were necessary to free the political power from the pressure to immediate retaliate against all attacks[[371]](#footnote-371). This pressure was particularly present during the Second Lebanese war in 2006, where the political power was castigated by public opinion due to their difficulties to retaliate efficiently against the Hezbollah actions. The decrease of the damages done by the Palestinian and Lebanese groups give more time to the political power to shape a more solid long term strategy against them, and not to be placed in a tit for tat attritional strategy designed by the non-state actors. Moreover, throughout the various conflicts, the presence of the Israeli missile defense systems was correlated to the decrease of the number of casualties among the Israeli civilians, degrading the psychological power of the Palestinian and Lebanese rocket attacks.

According to Israeli experts, the Iron Dome achieved to intercept around 84% of the rockets launched by 2012 and 90% by the end of the operation protective edge. For Uzi Rubin, it is not that important to provide a hermetic shield against the aggression.[[372]](#footnote-372) The presence of the Israeli missile defense systems impedes the actions against Israel. This form of deterrence by denial is aimed at discouraging the actions of non-state actors and Iran from launching any attacks which would be inefficient and risks to lure the Israeli direct retaliation. In this sense, the Israeli shield does not work as during the Cold War deterrence but is aimed at degrading the will and the offensive capabilities of the enemies.

**III.1.1.2- Challenges on the Israeli missile defense systems**

The Israeli defense shield is therefore not perfect. A lot of gaps can be exploited by Iran and its regional surrogates. The main one is the cost of the missile defensive systems. According to experts, each interceptors cost between 40,000 and 50, 000 dollars and two interceptors are needed to stop one arriving missile or rocket.[[373]](#footnote-373) Therefore, the Israeli shield may be under pressure if the Hezbollah and Palestinian groups launch very cheap rockets and missiles in large volleys, saturating the limited Israeli defensive arsenal. The Israeli resources are not infinite and the massive launch of missiles on its territory could degrade its ability to intercept all of them.[[374]](#footnote-374)

The second technical issue hinges on the inability of Israel to intercept very short range rockets below 70 km. This gap can be exploited by the non-state actors’ operatives to pressure more the Israeli population. Moreover, the calculation of the Iron Dome efficiency relies heavily on the inaccuracy of the missiles launched by the Hezbollah and Hamas operatives. Most of weapons fired land in inhabited or irrelevant areas or crash before reaching their targets. Hezbollah operatives are trying with the help of Iran to increase their capabilities in Precision guided missiles. These weapons could bypass the Israeli defensive shield and put a real threat on the Israeli territory. No data are released on the capabilities of the Israeli defensive shield regarding this technological evolution and how it would react if precision guided missiles are fired in salvos.[[375]](#footnote-375) Moreover, some specialists highlighted the deficiencies of the Israeli Iron Dome system. For Theodore Postol and Richard Llyod, the official ratios of efficiency on the Iron Dome are biased and the missile defense system is less effective as it is said.[[376]](#footnote-376)

The building of Israeli capabilities triggered strong debates on the strategic interest of this kind of arsenal. Indeed, according to some Israeli experts, the building of the Israeli defensive system would send a negative signal on the Israeli offensive systems.[[377]](#footnote-377) Israel would build a defensive arsenal due to its lack of confidence in its offensive arsenal, showing an evidence of its vulnerability which can be exploited by hostile neighbors. This debate was strengthened by the wide use during Second Lebanese conflict 2006 of stealth capabilities and the reluctance of Israel to launch ground maneuver warfare against an asymmetric enemy which knows better the geography of the battlefield.[[378]](#footnote-378) This debate was transformed into the misbalance between the Israeli defensive and offensive capabilities, with a huge attention and concentration dedicated to the Israeli defensive systems (which could never attain perfection) and its weak investment into offensive capabilities necessary to launch ground operation. Israel demonstrated its reluctance to sustain long attritional ground warfare against an asymmetric enemy, a type of warfare that is implemented by the neighboring Iranian surrogates.

Finally, the use of the Israeli defensive systems can spur a political problem. Indeed, the missile systems were designed to protect only the sensitive military assets of Israel. However, the population demanded its government to protect the civilian areas, far larger than small military areas, requiring the extension of these very expensive missile defensive systems. The impossibility to defend the whole territory can trigger a political cost for the Israeli power. Hezbollah and Hamas understood these weaknesses and target in priority civilian areas to pressure more the Israeli government.[[379]](#footnote-379) This strategy was economically costly for Israel during its operations against the Palestinian rocket attacks, since it was forced to stop the civilian activities to protect its population from the Palestinian strikes.

**III.1.2- Gulf Missile defense systems**

**III.1.2.1- Development of the Gulf missile defense systems**

The Gulf Cooperation Council (GCC) was created among Gulf countries in 1981 to coordinate efforts to support Iraq during the Iran Iraq war and contain Iran. Following the Iraqi offensive against Kuwait in 1991, the USA started to develop PAC batteries in the Gulf to protect Saudi Arabia and Israel from the threats from Iran. The GCC countries started to develop individually incentives to build missile defense systems to defend themselves against Iraq and the growing Iranian missile arsenal.

The GCC countries deployed PAC 2 and PAC 3 batteries following the beginning of the American intervention in Iraq in 2003. US THAAD missiles are present on the Gulf States since 2008. Patriot missiles can intercept medium range ballistic missiles while THAAD systems are designed to stop missiles from 3,000 to 5, 000 km range[[380]](#footnote-380). Saudi Arabia and the UAE use the PAC missile batteries. The UAE is the first country in the Gulf which has acquired the THAAD missile defense system. Kuwait deployed the PAC missile defense systems as well.[[381]](#footnote-381)

The collaboration with the USA allowed the Gulf States to deploy also sophisticated radar systems, as in Israel such as the AN/TPY-2 radars. The USA started to build permanent military bases in Gulf countries with independent missile defense systems, such as the PAC systems around the Al Udeid airbase in Qatar. The 5th Fleet, deployed in Bahrain allows the deployment of US navies, also armed with missile defense batteries, such as the USS Higgings vessel, with sea-based Cobra Judy radar designed to support the Patriot missiles with tracking capabilities.[[382]](#footnote-382)

In May 2006, the US launched the Gulf security dialogue to enhance the cooperation and exchange of information between GCC. This initiative was aimed to foster the establishment of an institutional framework to coordinate the weapons acquisition of the Gulf States and their purchase of missile defense systems. [[383]](#footnote-383)This trend was strongly encouraged under the mandate of Barrack Obama which tried to foster the coherent weapon procurement to the GCC by addressing the GCC states as a single organization.[[384]](#footnote-384)

**III.1.2.2.- Challenges to the Gulf missile defense systems**

Like Israel, the huge cost of this arsenal hampers the spread of the missile arsenal to a whole territory even though its strategic depth is narrow. On average, 700 billion dollars in contracts of armaments are ratified between the USA and the Gulf countries since 2013.[[385]](#footnote-385) In 2016, Saudi Arabia reached a contract of armament with the USA for an amount of 100 billion dollars for that year constituting the biggest armament contract of the US history. Most Gulf countries spend more than 10 % of their GDP in armament procurement while NATO allies have difficulties to invest more than 2% of their GDP per year in defense and armament procurement. In comparison, Iran spend on average 3,8% of its GDP in armament with far more financial constraints owing to the US sanctions imposed. [[386]](#footnote-386)

Anthony Cordesman emphasized that these huge sums of money are particularly difficult to trace and can encourage the embezzlement of funds or the lack of transparency on the fluctuating money.[[387]](#footnote-387) Moreover, the Gulf economies are particularly sensitive to the Dutch disease and variations of oil prices can spur the decrease of their financial resources and the possibility to invest in armament contracts. The current coronavirus crisis triggered a worldwide drop of oil demand, reducing the entry of devices in the Gulf economy.[[388]](#footnote-388) On the long run, such trend can be catastrophic if no reserves were done. Saudi Arabia is the only country according to analysts that can sustain such economic blow.

The second issue regarding the development of the missile defense system is the political considerations laid behind the acquisition of the armament procurement. According to experts, there is less consideration on the technical capabilities of the system but more an interest to build a political relationship with a powerful military ally. Saudi Arabia already played with the regional competition for the acquisition of offensive rocket weapons to force the US to commit on the Saudi Side and in the Middle East.[[389]](#footnote-389) With the perception that the US are withdrawing from the Middle East, the Gulf countries seem tempted to play with the armament contracts and missile defense systems to keep the US concerned on the security situation in the Gulf and not to let them alone face to the Iranian arsenal.

This situation can create a lack of autonomy from the United States and an overreliance on its offensive capabilities to defend the territories of the Persian Gulf countries.[[390]](#footnote-390) Therefore, the internal and national Gulf countries armament procurement is very limited if the American weapons are withdrawn from the region. Bahrain has never deployed its own missile defense systems or bought American ones, relying on the presence of American bases to deter the strikes of hostile regional enemies.

At the internal level, the procurement of missile defense system is sometimes not integrated in a real operational plan but more to the economic fallout of these military investments. Anthony Cordesman qualified this phenomenon as the glitter effect, the pursuing of the prestige image through the procurement of expensive weapons that can feed the military industrial base of the national economy requiring permanent investment. Therefore, the pursuit of prestige triggers the building of a whole economic system around the weapon procurement and the following investments in the armament procurement are more led to sustain the previous system than to fulfill a real operational mission. For example, the Saudi military Industry (SAMI) expressed the objective to create 40,000 jobs by 2030 under the Vision 2030 plan.[[391]](#footnote-391) The Gulf economies are trying to expand their economic activities to alleviate their overreliance on natural resources. The UAE is also trying to expand its defense industrial base. The number of defense industries in its territory increased by 30% between 2015 and 2030.[[392]](#footnote-392)

The major issue regarding the missile defense capabilities in the Persian Gulf is the absence of cooperation between the Gulf countries to integrate their respective missile defense systems into a coordinated system.[[393]](#footnote-393) This strategy could help to streamline their respective defense expenses, cashing in from the small size of their territories to gather their missile defense systems into integrated command and control structures and increase their efficiency. The current situation shows that all GCC states buy their own missile defense systems individually. The result is incoherent missile defense architecture in the Gulf, opening breaches for potential adversaries. Saudi and Kuwait have PAC 2 from the Post-Gulf War. In 2015, Saudi Arabia bought 600 Pac 3 missiles to replace its aging PAC 2 systems.[[394]](#footnote-394) Qatar is covered by the acquisition of PAC 3 since 2014, deploying 10 batteries. In Bahrain there is no missile defense systems only development of AN/TPS radars and 3 PAC batteries to defend the US base. In Oman, there are no missile defense systems. The United States tried to enhance their cooperation with the Strategic cooperation Forum and also through different centers of interoperability present in the Gulf such as the US combined Air operation center, Integrated Air Missile defense center, or the Gulf Air Warfare.

However, this lack of coordination comes from the political crisis in the Gulf, ongoing since 2017 between the UAE, Egypt, Bahrain and Qatar. [[395]](#footnote-395)The Qatari government was accused of feeding links with Muslim Brotherhood and Iran and was castigated by the Saudi and Emirati powers. In this political context, it is particularly difficult to gather these competing states to strengthen their military capabilities against external aggression. The American administration encouraged the GCC states to resorb this political crisis and to foster the cooperation between the Gulf countries in a collective security organization in the region to create a common front against Iran. This wishful thinking becomes particularly difficult regarding the tense political context between the Gulf States and their reliance on their respective bilateral relations with the USA to palliate their lack of cooperation.

The importance of such cooperation is increasing due to the enhancing of the Iranian and Hezbollah’s missiles accuracy. There is for the bulk of Gulf States no strategic depth in the Persian Gulf. The flying time of a medium range missile between Tehran and Riyadh is 4 minutes.[[396]](#footnote-396) The coordination is particularly important to detect and strike the coming missiles. Some countries can have the radar capabilities, but not enough interceptors or detect the projectile before the targeted country. The sharing of command and control structures, the elaboration of command exercises and the sharing of information are absolutely necessary in the Gulf to counter such threats and determine doctrinal concepts to use efficiently missile defense systems. The case of the strikes in Saudi Arabia in Aramco facilities in September 2019 demonstrated the limits of the non-integrated national PAC batteries.

Finally, the expenses of the Gulf countries into defensive systems hinder the development of efficient offensive capabilities such as maritime forces and ground and infantry forces. None of the Gulf countries have developed a powerful maritime power, and Iran remains the only Persian state with submarines whereas the Gulf States are dependent on the security of the Persian Gulf and straits of Hormuz to survive economically. Of course, the American forces are palliating this gap but if the United States decides to withdraw their forces from the region, the bulk of the Gulf States are deprived from coherent and integrated military forces nationally and regionally.

**III.1.2.3- Opportunities for Iran and its proxies**

For Iran, this uncoordinated missile defense system can trigger opportunities. Its cooperation with Qatar and Oman can help the Iranian powers to limit the cohesion among the Gulf States and limit their ability to design an integrated missile defense system. Iran particularly cooperated economically with Qatar, after the diplomatic crisis triggered in 2017, denying the possibility for Saudi Arabia and the UAE to increase the integration of their defensive arsenal.[[397]](#footnote-397)

Iran can also increase the pressure through the use of proxies and a sub level of warfare through the launch of sporadic attacks. Iran can coordinate its attacks with the proxies to saturate the missile defense systems in the Gulf countries. The Resistance axis has never been deterred by the deployment of the missile defense capabilities. This form of deterrence by denial has not stopped Iran and its regional surrogates to increase the efficiency of their offensive arsenal. The missile defense systems are more relevant to reassure the internal Gulf population that can pressure their own government to increase their protection. Iran can play with the casualty shyness of Israel and the Gulf countries to increase its pressure and degrade their credibility in the region.

**III.2- The development of offensive capabilities**

The absence of the deterrent effect of the missile defense systems triggered the need from the Gulf counties and Israel to increase their offensive arsenal to repel the Iranian forces and increase their military credibility. Since the arrival of the Arab Spring, the Gulf countries and Israel perceive that the USA is progressively withdrawing militarily from the region, preferring to invest in its bases in Asia in the framework of their policy of Pivot to Asia. The ratification of the JCPOA was perceived as a stab in the back and as the abandonment of the security issues in the Gulf by the United States.[[398]](#footnote-398) Iranian adversaries started therefore to invest on offensive systems to counter and deter the possible Iranian strikes on their territory. The Gulf countries are increasingly designing their operation independently from the US commandment such as the launch of the Saudi coalition in Yemen in 2015 under the Salman doctrine. The Gulf States are taking a more aggressive tone, due to their fear of an American withdrawal and the arrival of Iran in the potential power vacuum. The objective is to match all Iranian offensive capabilities and to surpass them. Moreover, it seems easier to invest in offensive systems, cheaper than defensive arsenal and easier to use as a deterrent. The Gulf countries bought the most sophisticated American missile defense systems which were proven insufficient without the elaboration of a coherent military doctrine.

**III.2.1- The development of offensive missile systems**

Saudi Arabia was the first Gulf country to invest in a missile program since 1980’s. Its missile production facilities are reportedly located at the Al Watah base.[[399]](#footnote-399) Saudi powers reportedly imported secretly Chinese missiles, the DF-3A IRBM or CSS-2, under the Sino-Saudi deal reached in 1985. Saudi Arabia aimed at preventing from the Iraqi attack and against the growing Iranian missile arsenal. Saudi Arabia also invested in the production of Ukrainian missiles and imported the Grom 2 missiles by 2014, after the failures of the Saudi negotiations to acquire the Russian Iskander[[400]](#footnote-400). In 2014, Saudi Arabia bought the DF-21 missiles from China, replacing its former aging Chinese missiles. [[401]](#footnote-401) According to American intelligence information, Saudi Arabia would have developed domestic missile factories in Al Watah for solid propellant technology with the help of China in 2017. [[402]](#footnote-402)

Ukraine and China were considered as non-political or ideological partners and Saudi Arabia could design its strategy without taking into account the interests of the exporters. [[403]](#footnote-403)The USA did not encourage the building of offensive missile arsenal in Saudi Arabia. Saudi Arabia saw however this arsenal as a deterrent means against hostile adversaries and as a mark of prestige and present itself as the guardian of the Muslim places. For experts, Saudi Arabia has already a huge conventional superiority compared to Iran. However, Saudi Arabia seems to estimate such weapons necessary due to the presence of a growing Iranian arsenal and due to the existence of the Israeli nuclear power in order to answer at any level of threats. In order to keep the balance of power advantageous, Saudi Arabia needs to expand its offensive means of warfare to keep its place of leader of Sunni communities and avoid any encirclement from Iran and its proxies. [[404]](#footnote-404)This rationale is present among the UAE, aiming at increasing its regional prestige and internal defense industries, using the Iranian threat to increase its defense contracts with other international defense partners. The use of offensive arsenal by these two states is also explained by their commitment through the Saudi coalition on the Yemeni ground against the Houthis.

According to experts, the UAE started to import missile technology from North Korea in 2015 in the framework of the coalition against Yemen.[[405]](#footnote-405) The UAE’s June 2015 arms deal with North Korea was conducted through an Emirati company called al-Mutlaq Technology, which acts as an intermediary for weapons transfers between states. The goal of this deal is allegedly to provide North Korea a new interesting market to avoid the shipment of these weapons to Iranian surrogates in Yemen.[[406]](#footnote-406)

In May 2018, the US administration asked the Congress to review the selling of 120,000 precision guided missiles to Saudi Arabia the UAE and Jordan in the framework of the coalition against the Houthis insurrection.[[407]](#footnote-407) According to this agreement, Raytheon would obtain the authorization to transfer the technological knowledge and support the domestic production of some guidance components. According to experts, this deal could increase the risk proliferation of advanced missiles in the Middle East through the internal production of these weapons in Saudi Arabia and the UAE.[[408]](#footnote-408) The transfer of the building of precision guided missiles can trigger the evolution of the Saudi technology to transform any weapons to a precision guided system for cruise missiles, nuclear weapons and ballistic missiles. In May 2019, the Trump administration declared an emergency and sold these weapons to Saudi Arabia and the UAE[[409]](#footnote-409). The transfer of such offensive technology can trigger a spillover situation with Iran and the Houthis and increase the level of confrontation. Saudi Arabia is endeavoring to expand the domestic manufacturing of weapons. It was reported in 2019 that 40 engineers were recruited to work on the Saudi short range ballistic missile and laser bombs programs at the King Abdulaziz city, one main center of research and development.[[410]](#footnote-410)

Israel is also looking to expand its arsenal of precision guided missiles to strike Hezbollah and Iranian positions in Syria. According to American sources, Israeli forces requested since 2014 the USA to help it to increase its arsenal in case of generalized conflicts against its enemies.

According to the Research Congressional services,[[411]](#footnote-411) Israel tried in 2015 to acquire 14,500 Joint Direct Attack Munitions (JDAM) including MK-84s, MK-83s, MK-82s, BLU-113 bombs and GBU-39s. According to Israeli sources, the IDF aims at elaborating a real surface to surface missile arsenal to answer the threats from the precision guided missiles from Hezbollah and Iran.[[412]](#footnote-412) The arsenal would be put under the commandment of the Israeli ground Forces. The IDF aims at reducing its dependence on the Israeli Aerial Forces (IAF) to improve its reactivity in case of confrontation against Hezbollah’s or Iranian operatives. Moreover, in the context of the war in Syria, the use of precision guided missiles was deemed less risky for Israeli forces which are afraid to confront directly Russian aerial forces. In 2019, the American Congress accepted to increase by two years the authorization to the Defense Department to sell weapons to Israel in order to fight Hezbollah and Iranian operatives in Syria.

**III.2.2- The threat of the development of nuclear capabilities**

Saudi Arabia always stated that if Iran gets nuclear weapon, the Saudi Araba will get it too. According to a statement from the Prince Turki al Faisal, the former head of intelligence services, Iran could be embolden by the possession of nuclear weapons to launch more offensive attacks in the region.[[413]](#footnote-413) In order to balance this Iranian threat, Saudi Arabia stated that it will develop nuclear weapons if Iran decides to develop its one too.[[414]](#footnote-414) However, the Saudi powers seem to understand the risks of such policies in the Middle East and always fostered the NWFZ in the Middle East. According to experts, Saudi Arabia could find the support of Pakistan to build nuclear weapons, since the Saudi power helped financially Pakistan to build its own one. Saudi Arabia was also reportedly approached by the A.Q. Khan network in 2005.[[415]](#footnote-415)

The withdrawal of the USA from the JCPOA in May 2018 triggered the progressive reactions from Iran such as the enrichment of its uranium stocks and its decreasing compliance of the JCPOA terms. With the increasing nuclear enrichment in Iran, Saudi Arabia fears not to be ready for the development of the Iranian nuclear weapon. However, the clear development of Saudi nuclear capabilities could foster more aggressiveness from Iran and foster growing tensions in the region.[[416]](#footnote-416) It could also further the development of nuclear weapons in the Gulf as in the UAE, Egypt, Jordan and Qatar, and Turkey spurring a negative domino effect.[[417]](#footnote-417)

Following the declaration of Iran on the enrichment of its uranium stocks, the GCC started to develop their demands to expand the civilian nuclear sectors in their countries. Under its Vision 2030 Plan, Saudi Arabia aims at increasing its nuclear civilian sector and build 16 nuclear reactors by 2030.[[418]](#footnote-418) In 2020, intelligence sources reported that Saudi Arabia almost completed its first nuclear reactor. This one is reportedly built near Riyadh, at the King Abdulaziz City for Science and Technology (KACST). The facility is reportedly being built by INVAP, a nuclear reactor construction firm which is owned by the government of Argentina. At least six American companies have been authorized by the US Department of Energy to participate in the project in various ways. However, Saudi Arabia is member of the NPT but refused to sign the 123 agreement and is still under the small quantity protocol, reducing the inspections from the IAEA on its territory.[[419]](#footnote-419)According to a report, the ability for the IAEA to detect very small nuclear research is complicated and Saudi Arabia could lead some tests for military purposes. This hypothesis was not confirmed by the IAEA. [[420]](#footnote-420)

Some experts fear also that Saudi Arabia would circumvent the issue of developing military nuclear capabilities within its own territory but ask instead the help of Pakistan to outsource such program. Saudi Arabia financed the Pakistani nuclear program and was approached by the A.Q. Khan during the 2000’s.[[421]](#footnote-421)However, there are no proof on the current collaboration between the two states on this field.

In the UAE, four nuclear reactors in the Barakah nuclear station were built in March 2020. The UAE employed the South Korean Electric Power Corporation, KEPCO.[[422]](#footnote-422) The project to build this facility started in 2009 and was put under the attacks of Yemeni Houthis cruise missiles, trying to strike the Barakah plant in 2017. The facility was reportedly lacking security infrastructures to defend it against potential missile and aerial strikes.

The building of nuclear capabilities can be justified regarding the necessity for Saudi Arabia to curb the use of limited oil resources to match the energy demands of its growing population. However, experts find it particularly suspicious that Saudi Arabia and the UAE are launching such projects in this context. This trend could convey the will from the Gulf countries to build nuclear threshold capabilities, acquiring all the separated elements to build a nuclear weapon if the security context in the region is degrading.[[423]](#footnote-423)

**III.2.3- The development of intelligence capabilities**

Israel used and developed another means to counter Iranian missile threat through a grey tool. Israel improved significantly its intelligence apparatus to decrease the threats of missile strikes in its territory under its war between wars doctrine. The goal is to correlate its performant precision guided weapons with its precision intelligence to counter the potential threats from Iran and its regional surrogates. “The integration between Military Intelligence and the Israeli Air Force has created an intelligence factory for the State of Israel that has no equivalent in terms of the level of accuracy, the ability to remain up to date, flexibility, and reliability.” the chief of the Military Intelligence Directorate, Maj.-Gen. Herzl Halevi, explained.[[424]](#footnote-424)

Gabi Siboni reported that IDF’s intelligence tools are “continuously and consistently improving.” According to him, “the ability to accurately strike a target is derived not only from an operational ability, to bring munitions to a particular point at a particular time, but mainly from the ability to locate the target”[[425]](#footnote-425). This doctrine was developed since the Israeli strikes against the Syrian nuclear facility in Deir ez Zor, in the framework of the operation Outside the Box in 2007. This strategy was tentatively implemented against Hezbollah operatives and called the “war between wars” in order to detect their underground facilities and ease the precision of the aerial strikes against the Hezbollah positions.

The aim is to increase the deterrent effect of Israeli defense forces of its offensive arsenal through the massive use of intelligence, and missions of reconnaissance. This strategy was proven particularly efficient in Syria, where Israel achieved to destroy the Quds forces positions near the Golan Heights. Correlating the use of precision guided munitions and the development of “precision guided intelligence” could heighten the offensive effects of the Israeli missile arsenal. If Israel collaborates with the Gulf countries on the exchange of technology and doctrinal concepts, this Israeli tool could become increasingly formidable against the Iranian proxies in Yemen and in Iraq.

**III.3- Proliferation of offensive missile systems to the regional terrorist groups**

The increase of offensive weapons triggered the spread of missiles and rockets among non-state actors in the region. This issue is not only triggered by the export of missiles to Iranian surrogates in Yemen, Syria and Iraq but also by the spillover reaction the Gulf countries which armed Iranian adversaries in the region. The Iranian responsibility in arming non state actors in the region is very often pointed out in the region but the spread of the Saudi and America weapons among non-state actors can also trigger serious security consequences for the region. The increase of conflicts in the region spurred the growing presence of dangerous missile and rocket arsenal which can be captured or sold to other non-state actors and end in the wrong hands.

Yemen is considered by experts as a thriving weapons market where any non-state actors can buy sophisticated weapons from the Saudi coalition.[[426]](#footnote-426) The Saudi and Emirati troops and local mercenaries allegedly sell weapons from the coalition on the black market to increase their revenues. The Saudi coalition has thus very poor control on the use and transmission of the weapons in Yemen. The biggest arms bazaar in Yemen is reportedly the Jihana bazaar at 40 minutes from the capital Sanaa. According to experts, ATGM, assault rifles, SAM SA-7 can be reportedly found on this market as well as drones and communication devices.

The weapons from the Saudi collation are mainly bought from American and European companies. In February 2019, the Arab Reporters for Investigations and Journalism[[427]](#footnote-427) reported that some weapon systems sold by the Western allies to the Saudi coalition felt in the hands of ISIS, Al Qaeda and Houthis terrorists in the region despite the ban to transfer these weapons to other groups. The investigation reported that Saudi Arabia airdropped US TOW ATGM near Al Qaeda positions in October 2015 and the Houthis captured MRAP from USA for example whereas the United States has never allowed to hand such missiles to non-state actors in the Middle East.

Germany was the first country to raise alarm in 2018 and pressured European States to stop to sell weapons to Saudi Arabia. The bulk of the coalition weapons come from the US, France and Germany and the UK which find their interests in sending such equipment and obtain weapons contracts with Saudi Arabia and the UAE. Saudi Arabia and the UAE are accused of breaching the user certification law. According to the Conflict Armament Center[[428]](#footnote-428), some weapons can also be diverted from Syria to Yemeni Saudi-backed coalition. In 2016 AQAP was found in Taiz with M 79 Osa rocket launcher and M80 Zolja, weapons from Yugoslavia. According to the Balkan Investigative Reporting Network, these weapons were used on the Syrian battleground and bought by Saudi Arabia in 2016.

According to the CAR, in 2017, Saudi Arabia would have received 50,000 mortar shells from Serbia Krush factory (according to anonymous sources) which would have been transmitted from Bulgaria to Azerbaijan and then UAE through aerial ways. Saudi Arabia and the UAE always denied the misuse of these rockets and missiles and always assured that the weapons are controlled by the coalition troops.[[429]](#footnote-429)

However, the troops used by Saudi Arabia on the Yemeni ground are unstable.[[430]](#footnote-430) A lot of splinters among the groups were reported, increasing the risk to lose control on the arsenal of the coalition. Moreover, these weapons can also be resent to other terrorist groups in the African Horn, increasing the instability in the Red Sea and West Africa.[[431]](#footnote-431)

The missile and rockets arms race can also trigger the proliferation of weapons among ISIS terrorist groups in Syria and Iraq.[[432]](#footnote-432) The massive presence of missiles and weapons on the battlefield increases the chances for ISIS to capture them. According to a report from the CAR, ISIS achieved to seize ATGM manufactured in Eastern Europe and sold to the USA and retransferred to Syria and Iraq. According to this report, the USA and Saudi Arabia are the main providers of these weapons. Most of these weapons were manufactured in Eastern Europe, Russia and China. According to the USA, they would have sold these weapons to Turkey and Jordan and ended into the hands of Syrian rebels without their consent, violating the sole aid user. The Iraqi federal police already found PG-7T 40 mm from ISIS caches near Baghdad.

Saudi weapons were also found on the battlefield. According to the CAR report, they would have been imported from Bulgaria and they would be found then in Syria. The Saudi weapons recovered included 9MA73mm rockets from Bulgarian origin (exported to Saudi Arabia in 2014) from ISIS positions in Ramadi and Falluja. Some Iranian weapons were also recovered from ISIS positions such as the Zafar 73 mm rocket in Baghdad 2016 and in Syria.

**Conclusions**

Several consequences can be highlighted regarding the Iranian missile program in the Middle East.

The first one, concerns the use of proxies in the Iranian missile program. It appears that the two programs are intertwined. Iran needs to strengthen its allied partners in the Middle East to carry out sub-level of warfare against the regional actors and to decrease the potentiality of a direct retaliation against its own territory. The use of the proxies is included in the Iranian hybrid warfare. Reducing the level of warfare through irregular means allows Iran to decrease its vulnerability and improve the deniability of its actions in the Middle East through a lax control on the various non-state actors. Exporting its missile weapon capabilities and collaborating with the proxies having a common enemy with Iran, to train them and increase their autonomy, ensures to Iran to have reliable and loyal partners, without having to suffer of all the drawbacks linked to a direct control.

The use of proxies is a question of survival for the Iranian regime. Iran invested more its resources and weapons to the improvement of the proxy groups in the Levant Axis rather than the Gulf Axis. Hezbollah is considered as the most integrated and loyal ally of Iran in the region, and keeping the Syrian regime is a matter of survival for Iran to keep fueling its main regional partner. However, the Houthis, and Iraqi proxies are increasing the attention of Iran on this region, as the Saudi coalition troops are bogged in uncontrollable attrition warfare against a non-state actor. Iraq gained recently more attention from the Iranian regime due to the growing confrontation with the USA in this country, and the possibility to oust it from its military bases in Iraq. If Iran aligns its means in the Gulf axis on the Levant Axis, the level of confrontation in the Middle East can reach an unprecedented level.[[433]](#footnote-433)

The Iranian use of proxies in the region has an influence on the structure of the state armies in the allied countries. Iran reproduces in the region its own model of its military structure. Iran implements internally a dual military structure with the Artesh and IRGC separating its regular means of warfare and irregular tools such as the Quds forces within the IRGC. Iran set up the same rationale with its proxies, cashing in from the weaknesses of the regular armies in Lebanon, Iraq and Syria to increase its influence through the use of irregular actors using powerful missile capabilities.

Through the export of the missile weapons to non-state actors and the training to learn how to use them, the previous disorganized groups transformed into hybrid forces using unconventional and regular forces to fight their enemies in the region. This phenomenon was particularly true regarding the formation of the Hezbollah group and the Hamas. This influence of the proxies decreases the relevance of the previous regular armies and the power of the executive powers in the states hosting the Iranian proxies. Therefore, Iran has an interest to see Syrian, Lebanese and Iraqi governments weak in order to keep going its actions in the Middle East. This trend is very visible in Syria, where Iran and Hezbollah are endeavoring to decrease the power of Bashar al Assad to keep control on its territory and ensure the survival of the resistance Axis.

Hezbollah became a force multiplier in the region, sharing its experience in Syria, Iraq and Yemen. Iran can therefore spread its warfare experience through a non-state actor and export its missile without interfering directly. The Iranian and Hezbollah’s experiences in asymmetric warfare are extended to other non-state actors and proxies in the region, increasing the level of confrontation in the Middle East. In Iraq, the presence of the Iranian trainers unified the warfare techniques of the various groups under the umbrella of the PMF. In Yemen, the export of missile from Iran changed the warfare of the Houthis. Moreover, Iran relies on the attritional nature of the current conflict in Yemen to extend its control on the Houthis actor and transform it into a new Hezbollah for the Gulf region.

The presence of such proxies threatens the security of the Iranian enemies in the region. Through the acquisition of precision guided missiles, Hezbollah jeopardizes the efficiency of the Israeli missile defense systems, creating a unique situation of balance of terror between the two actors. In Yemen, the Houthis developed also precision guided missiles as well as drones, and launched strikes directly against Saudi Arabia. Iraqi militias hit directly American military and diplomatic assets across the country. Through the export of missiles and the use of various proxies, Iran encircles all its regional enemies in a “ring of fire[[434]](#footnote-434). In this sense, Iran established its strategy according to its zero sum game conception of international relations, decreasing the security of its enemies to increase its own one.

Moreover, Iran is changing its former strategy of deniability and non-first use missile strike policy. Iran is increasingly using direct missile strikes against its regional enemy’s facilities and American bases. Moreover, the strikes in Abqaiq and Ain Al Assad demonstrated that the Iranian missile capabilities are increasingly more precise and Iran is able and willing to strike American military assets without using its proxies.

These evolutions trigger reactions from regional actors in the Middle East. The first one was to increase their own missile defense systems. However, these systems were found particularly expensive regarding the weak cost of the attackers’ weapons. In Israel, these systems were found politically constraining for the Israeli power, forced to deploy them in all parts of the country to defend its military assets and all the civilian population, increasing the casualty shyness of the Israeli public opinion. Besides, Hamas and Hezbollah operatives could bypass these missile defense systems through the use of shorter range weapons or precision guided missiles. Moreover, in the case of the Gulf Cooperation Countries, the missile defense cooperation lacks interoperability and doctrinal alignment to answer efficiently all the possible missile threats from Iran, Iraq and Yemen, explaining the failure to counter the strikes against the Aramco facilities in September 2019.

The Iran’s regional enemies are increasingly investing into offensive missile systems to answer the current threats imposed by Iran and its proxies in the region.[[435]](#footnote-435) The Saudi Arabian deal with the USA allowed the country to indigenously produce its own missile systems. Israel developed its precision guided weapons. Israel is developing more and more precision guided missiles to alleviate its reliance on aerial forces. Saudi Arabia is negotiating to produce on its territory missile capabilities and precision guided munitions. Moreover, answering the withdrawal of Iran from the JCPOA, the Gulf countries are suspiciously increasing their demands to develop their own nuclear civilian program, increasing the risks of diversion into military programs. The result is the growing missile race in the Middle East[[436]](#footnote-436)and a risk of nuclear proliferation triggering a domino effect among all the regional actors. The probability to use such arsenal increases therefore with the presence and development on these weapons in the Middle East.

Finally, the current missile race in the Middle East triggers negative consequences in the possibility to divert weapons from their original buyer. Saudi Arabia and the UAE were particularly castigated for the export of the weapon systems bought from European and American manufacturers to their own proxies in Yemen. These weapons were found in the hands of AQAP operatives as well as Houthis. In Syria, the current conflict opened opportunities for ISIS to acquire such weapons, which were sold primarily by the United States and Iran. If these groups use also missile and rocket arsenal, it would also participating in the general increase of violence in the Middle East.

**Chapter 3: Role of International actors in the Middle East missile race**

On May 8, 2018, Donald Trump announced the withdrawal of the USA from the JCPOA, triggering a wave of criticism from Western partners and a real outcry among the Iranian political class. The decision, justified by the USA by the lacunas in the treaty to treat the Iranian missile arsenal and the collaboration of Iran with regional proxies was accompanied by the resuming of constraining sanctions. The American power hoped that Iranian regime will be so economically pressured that the population will overthrow the regime, replacing it by a more friendly power for the USA. However, the last Iranian Parliamentary elections in February 2020 demonstrated that Iranian hardliners are taking more influence and shaped the Iranian maximum resistance policy of Iran, increasing the confrontational tone against the USA and its regional allies[[437]](#footnote-437). The wave of confrontation between Iran and the USA increased when Iranian forces shot a reconnaissance US Global Hawk drone in 2019 and with the downing of the USS Boxer, an amphibious American assault ship in the Persian Gulf, launching the American operation Sentinel in July 2019.[[438]](#footnote-438)The confrontation reached an apex with the execution of the former heads of the Quds forces and its Iraqi ally on January 3, 2020 and with the withdrawal of Iran from the JCPOA. The coronavirus crisis which could have opened a window of opportunity did not bring a détente between the two states.

However, the American policy in the Middle East is shaped by the political will to decrease the direct American military commitment on the ground. The American influence and its strategy to counter Iran becomes more and more reliant on the use of sanctions and on the participation of regional states to help the USA to counter the Islamic Republic. This offensive tone against Iran and the American reliance on foreign partners may increase tensions in the region, due to the increasing worries from Persian Gulf countries. Besides, the USA fosters in large part the building of the arsenal of its regional allies as a part of its policy to contain the reginal enemies. It should be determined whether this policy of maximum pressure against Iran achieves to isolate and pressure the country to accept any concessions from the USA and if this policy would improve the security climate in the Middle East.

The USA is not the only international actor playing in the region. Russia and China cashed in from the isolation of Iran to obtain more leverages on the international stage. Moreover, the criticisms from the Persian Gulf countries against the American policy in the Persian Gulf region pave the way for the increasing defense relations with China and Russia, fueling the current regional arms and missile race.

This chapter is divided into three parts. The first one deals about the American maximum pressure policy against Iran. It explains the historical background of the American policy in the Middle East, explaining the criticisms of the regional allies, perceiving the USA as an erratic ally. It exposes then the American strategy and tools to contain the Iranian missile and proxy capabilities in the region. The second part treats the Russian and Iranian relations explaining the background of their collaboration and their ideological common points. It exposes then the interests for Russia to support such ally and its opportunities in the Middle East to expand its influence and the security consequences. Finally, the last part on the Chinese-Iranian relations and cooperation will follow the same structure.

**Part 1- Consequences of the American policy against the Iranian missile program**

* 1. **Context: American Strategy in the Persian Gulf**

The American presence in the Gulf region dates back from the second half of the 20th century. At the beginning, the USA aimed at protecting the free circulation of cheap oil from the Persian Gulf and to keep the Straits of Hormuz open to fuel the Western and American economies[[439]](#footnote-439). For the USA, the issue remained since the beginning on the presence of absence of the military force to ensure this objective. Its strategy relies on two opposite conceptions on the place of the USA in the Gulf region swigging between interventionism and isolationism. The first theory, called the offshore balance, aims at avoiding any direct intervention in on the ground and reducing the presence of the USA in regional conflict.[[440]](#footnote-440) This conception advocates for the reduction of regional forces to redeploy them in advantageous theater of operations for the USA. The second theory is named the forward engagement and advocates on the contrary the complete engagement of the USA in the Persian Gulf region[[441]](#footnote-441). It postulates that the military absence of the USA in the Middle East would lead to a complete chaos. The USA would like to avoid the internal collapse of its regional enemies who are surrounded by aggressive neighbors and need the protection of the USA.[[442]](#footnote-442)

When Iran was an ally of the USA, the American power relied on regional partners to avoid the direct deployment of American forces on the ground. The president Nixon launched the Twin Pillar strategy relying mainly on the Iranian forces and its wide army as well as Saudi Arabia to ensure the security of the Persian Gulf region. Iran led by the Shah became the guardian of the American interests in the region, benefitting in exchange of the military and technological transfer from the West. The Twin Pillar strategy was implemented before and during the Viet Nam war, when the American public opinion saw the deployment of American troops abroad negatively.[[443]](#footnote-443) The USA provided to its allies all the military equipment necessary as well as complete training, transforming regional states into regional powers. This strategy also awoke the rivalry between Iran and Saudi Arabia competing to obtain the attention of the USA and all the advantage’s correlated.

However, the Iranian population identified the negative policy of the Shah with its alliance with the USA. When the revolutionary Shia regime toppled the Shah, they completely rejected the USA as a potential partner due to the strong alliance between the Shah regime and the US powers. The US powers cut its ties with the Shia revolutionary regime and turned its eye on the Saudi partner.

From 1980 to 1991, the USA implemented a light presence in the region Presence in the Middle East under the mandate of the president Jimmy Carter.[[444]](#footnote-444) The USA implemented a light military presence in the Persian Gulf region with limited interventions. The Twin Pillar strategy was deemed impossible to sustain due to the growing pressure from the USSR trying also to control strategic parts in the Persian Gulf region, particularly in Iranian oil reserves in the Khuzestan and the invasion of USSR in Afghanistan. Under the Jimmy Carter period, a Special Task force was deployed in 1980 which was then transformed into a permanent military force. On January 1, 1983, the American CENTCOM was created. It is one of the eleven unified combatant commands of the US Department of Defense and its area of responsibility is targeted on the Middle East.

The relevance of the American forces in the Persian Gulf was confirmed during the Iran Iraq war in 1980’s and the request from the Gulf States to protect their oil tankers from the Iranian attacks during the Tanker war and the escorting of the Kuwaiti tankers.

The death of the Ayatollah Khomeini triggered a period of détente between the USA and Iran with the arrival of the moderates at the head of the Iranian regime. In 1989, Iran collaborated with the USA in the liberation of the Hostages in Lebanon.

The end of the Iraqi war and the arrival of the President Clinton in power in 1990 are marked a new era in the conception of the American strategy in the Persian Gulf. On May 18, 1993, Martin Indyk, an American diplomat working in the Middle East region, announced at the National Security Council the launch of the dual containment policy,[[445]](#footnote-445) containing both Iraqi and Iranian powers to avoid any interference from these two states in the Israeli-Palestinian peace process. At that time the Iranian power supported Hezbollah and Hamas operatives which could have influenced the final agreement with the Israeli powers. Iran and Iraq were denied from obtaining new weapons and the Iraqi regime was struck by sanctions. This policy also aims at pleasing the American regional allies, by taking concrete steps against their regional enemies. Iran was rejected from all the security organization from the region and more politically isolated. At that time, 5,000 American troops were deployed on the ground and the American presence increased in Bahrain and Oman, through the building of new maritime and aerial bases.[[446]](#footnote-446)

The war against Iraq in 1991 marked the apex of the US strategy in the Gulf and the maximum military presence in the Persian Gulf. The USA implemented a heavy military presence in the Gulf region and obtained direct access to regional military bases, expanding their foreign influence. The war against the Iraqi invasion of Kuwait demonstrated that it was particularly needed to deploy directly permanently military troops on the ground. In the case of the 1991 war, the American troops took 6 months to gather forces to join the Persian Gulf.[[447]](#footnote-447)

The 2003 war in Iraq triggered the massive American military presence in the region and a destabilization of the balance of power in the Gulf. 200,000 American troops arrived on the ground in Iraq to fulfill very large Coin operations.[[448]](#footnote-448) The American presence destroyed the Iraqi Army to reduce it to a small contingent defending the Iraqi borders. 110,000 American troops remained commissioned for a long period on the Iraqi operations. While Iran and Iraq remained on the same equal footing under the Clinton era, the destruction of the Iraqi Army and the implementation of the no fly zone on the Shia Iraqi zones gave Iran an opportunity to extent its influence in Iraq, through the creation of militias.

The Iranian regime started to be targeted in turn by American sanctions after the revelations of the IAEA on the Iranian nuclear program.[[449]](#footnote-449) Their relations were eased under the Obama era and his relations with the moderate president Rouhani and the negotiations on the nuclear issue. The objective under the Obama administration was more to contain all the rival forces from Iran and terrorist groups to take advantages from the withdrawal of American troops from Iraq and from the power vacuum of the failed Iraqi state. The two powers collaborated in operations against ISIS and Al Qaeda.[[450]](#footnote-450) The president Obama pledged the complete withdrawal of the American troops from the Persian region. In 2014, with the war in Syria, he was forced to order the redeployment of troops to fight against the ISIS. Under his mandate, the presence of American troops on the ground strongly decreased to 35,000.[[451]](#footnote-451)

The Obama administration saw the massive deployment of American troops in the ground as a threat for the American security, fueling sectarianism and anti-American feelings leading to direct attacks against its forces in the region or against its own territory directly. Once again, the American policy shifted from the direct involvement of the American troops in the Gulf to the reliance on regional partners to avoid any retaliation and drawbacks. With this fear in mind, the Obama administration withdrew its forces from the Saudi military base, which fueled the rallying of Sunni extremists in the region to redeploy it to the Qatari Al Udeid airbase.

The Obama administration shaped a new strategy aiming at the deployment of American forces on Asian maritime theaters and allies in the framework of the policy of Pivot to Asia.

The current US administration shifted from the previous strategy of negotiation with the Iranian regime tearing the previous JCPOA treaty and triggering a cycle of confrontation with the Iranian power. However, the Trump administration seem to rely on the same limited American presence in the Gulf and relying more on regional partners to ensure their own security. The isolationist policy of Donald Trump sees the involvement of the USA in the region as irrelevant due to the growing production of American shale oil and gas, which does not need to ensure the free circulation of energy resources in the Persian Gulf. For the American administration, the presence of American troops in the Gulf is just a useless cost which should be withdrawn since it does not increase the advantages of the USA in the region. “I say it so much and it’s so sad, but we have $7 trillion in the Middle East. You might as well throw it out the window. Seven trillion dollars,” said Donald Trump on June 21, 2018, emphasizing the intent for the USA to decrease their financial commitments in the Middle East.

This discourse triggered visceral reactions from its Gulf partners which are trying to expand their own offensive arsenal and look for new defense partners to ensure their security. However, it was found very difficult for the Trump regime to see the shift of the complete American commitment from the US withdrawal from the region. Therefore, the US current administration is pressured between internal demands from the Congress to decrease the American military presence from the Gulf and the demands from its regional allies seeking for a stronger commitment.[[452]](#footnote-452)

The current American presence in the Gulf is visible through the existence of American troops in regional bases helping and training local forces.[[453]](#footnote-453) American forces are present in Israel, in the Negev Desert to support the operation of the US radar and interceptors for the Israeli Iron Dome. American presence is also visible at the Jordan King Faysal airbase to launch special operation at the border with Syria and secure the Jordanian territory. American forces were also reported in Yemen until 2015, at the Amad operational base in south Yemen. In Iraq, the American presence withdrew their forces from the biggest airbase in Ain Al Assad in 2020 and Kirkuk and Fallujah to redeploy their forces to Abu Ghraib, Kadhimiya, Ninewah and Tajji airbases. [[454]](#footnote-454)The American forces withdrew after the strikes launched by pro-Iranian Shia militias and the following the outbreak of the coronavirus.

The headquarters of the CENTCOM operations is currently located in Qatar as well as the biggest US foreign military base in Al Udeid after the withdrawal in 2016 of the American base from the Prince Sultan airbase. Bahrain hosts the 5th fleet since 1995 at the Manama Naval support base. Kuwaiti powers hosts also the Ali Al Salan airbase since 1991. The American presence is also visible at the Emirati al Dhafra airbase, operational under the aerial refuel pact since 1994 and the Omani al Thumrait airbase and al Mussanah airbase in Seeb. US always refused to recognize their presence in Lebanon. In Syria, the USA under the Obama administration pledged for the deployment of limited Special Forces against terrorist groups.

It is still interesting for the USA to expand its influence in the Persian Gulf, regardless the current criticisms among the Trump administration and the Congress to withdraw the forces from the region.

Although the USA produces its own shale and oil gas, the American economy is still dependent from the oil and energy flow in the Persian Gulf where 30% of the world energy products transit. The international process of energy depends on the flow of oil in this region and the stability of the Persian Gulf. [[455]](#footnote-455)A brutal increase of prices could be detrimental to the American economy as well as a brutal drop. Maintaining an average price on the oil market makes possible for the USA to predict the evolutions of its economy on the long term and stabilize its own oil prices internally and externally. The second reason hinges on the indirect dependence of the USA on the Persian Gulf. Although the shale energy production can satisfy its domestic consumption, the USA relies on the import of cheap manufactured goods from China. China imports 44% of its oil consumption from the Gulf region, energy imports needed to fuel its industries on which the USA and Western economies rely.[[456]](#footnote-456) The last reason is geopolitical, the Gulf region is very important for the Chinese imports of energy and for its economy. The massive presence of the USA in the Persian Gulf region could be used as leverage against China and its military actions in the Chinese sea. [[457]](#footnote-457)

The correlate advantage to keep its military forces would be the possibility for the USA to bargain a free access to regional military bases in exchange of security cooperation (training, weapon procurement) to the regional allies, maintaining the US presence for a limited cost. The alliance between the USA and regional Gulf allies allow the USA to gain contracts of armament with rich economies, willing to maintain the presence of the USA in the Persian Gulf[[458]](#footnote-458). With the training of regional forces, the USA can contain Iran and fight terrorist organizations with the least boots on the ground possible and to restraint the American forces at the maximum. Moreover, the increased training of American forces in the region increases their needs for defensive and offensive weapon systems and therefore, fueling the American defense industries by the reach of large armament contracts.

However, since the end of the Iraqi conflict, the objective of the USA in the region is becoming more blurred and less definite. Under the Obama administration, the fight against terrorism became the key priority and rapidly shifted to the establishment of democratic regime with the Arab spring and less definite and operational objectives. Under the Trump mandate, the definition of the American strategy in the Gulf became less definite with the increased tensions against Iran and the contradicting withdrawal of the American troops from Iraqi bases and in Syria which worry the Gulf partners in the region.

* 1. **American tools to contain the Iranian missile program and security consequences for the Middle East**

The Obama administration was heavily criticized for its weak stance in the Middle East during the Arab spring. Gulf countries castigated the American power due to the lack of support when the Egyptian president Mubarak was toppled and the absence of reaction of the USA when the allegations on the use of chemical weapons by the Syrian regime emerged. The negotiation of the JCPOA was the last straw for the Gulf allies and more specifically for Saudi Arabia which fears that the USA would be less concentrated on the building of relations with the Saudi regime but more willing to negotiate with the Iranian enemy. They accused the USA of not considering the increasing influence of Iran on the regional proxies and be too concentrated on the fight against terrorism. The concessions made under the JCPOA were considered as a green light from the USA for the Iranian regime to develop its economy and finances its network of proxies.[[459]](#footnote-459)

The Trump administration tried to reverse this trend through the increase of contracts of armaments on the Gulf region and with its first diplomatic visit to Saudi Arabia. The withdrawal of the USA from the JCPOA reassured the Gulf countries on the choice of allies the USA. With the maximum pressure policy against Iran, Donald Trump became a more popular leader than Barrack Obama and could reach historical contract of armaments with the Gulf countries.

The withdrawal of the USA from the JCPOA on March 8, 2018, was accompanied with the 12 claims addressed to Iran from the secretary of state Mike Pompeo.[[460]](#footnote-460) According this statement, the USA would agree to resume negotiations with the Iranian power and reach a new agreement if Iran addresses the 12 specific worries of the USA and the regional Gulf allies. The 12 points include the demand to end the nuclear enrichment program from Iran (which was not confirmed by the IAEA and not declared by Iran at that time), the increase of inspection accesses to the Iranian military sites, the halt of the missile proliferation of Iran, the stop of the Iranian ballistic missile program, the end of the Iranian support to regional proxies and the release of dual nationals imprisoned in Iran. The US administration particularly criticized in the JCPOA the lack provisions on the Iranian missile program and the role of the proxies destabilizing the security of the region. These aspects are considered by the Iranian regime as crucial parts of its protection and security in the region which is perceived as full of powerful enemies. For Iran, the negotiations of these aspects are merely impossible.

Moreover, the USA pressured more the internal Iranian stability through the increase of economic sanctions against the Iranian banking system and its exports of energy products.[[461]](#footnote-461) The USA implemented the policy of maximum pressure and considered the security issues in the Middle East as a zero sum game against Iran. To increase the security of American assets and regional allies in the Persian Gulf, the security of Iran must decrease until the overthrow of the Iranian regime. The US sanctions were estimated to pressure internally the Iranian regime and to overthrow the regime through civilian internal upsurge. The recent demonstrations in October 2019 demonstrated that Iranian civil society may be sensitive to the evolutions of economic life of Iran.[[462]](#footnote-462) For the USA, only economic concessions could foster the Iranian regime to negotiate with the American power on the use of proxies and the advancement of the ballistic missile program. However, the USA does not take into consideration the Iranian security claims in the region and the defensive dimension of the Iranian missile program internally and through its proxies. The USA does not want to extend the security guarantees to Iran, which were addressed under the JCPOA and were crucial in the negotiation process with Iran.

The Iranian regime is thus left with no other possibilities than to increase its offensive arsenal to put pressure on the American and European partners to stop the sanction cycle against the Iranian regime. The Iranian maximum resistance[[463]](#footnote-463) opposes to the American maximum pressure policy and the confrontation of the two zero sum game policies can lead to a negative cycle of confrontation in the Middle East.[[464]](#footnote-464) One year after the withdrawal of the USA from the JCPOA, the Iranian power announced the resuming of uranium enrichment. This measure aims at enriching the uranium up to 3,6% and then increase very progressively the level of enrichment.[[465]](#footnote-465) This decision is also reversible. However, if the negotiations with the USA reach a lockdown and does not resume, the Iranian decisions may become more and more anchored and difficult to change. The Iranian regime may also choose to give up this strategy of patience and rejected the whole JCPOA in January 2020 after the death of Qassem Soleimani and Abu al Muhandis in Iraq.[[466]](#footnote-466) The Iranian resistance policy became visible through the attacks by the Iranian proxies which also confront the USA troops in various theaters of operations and through the testing of new missile systems such as the last testing of the Iranian SLV by the IRGC in April 2020[[467]](#footnote-467). Also, the maximum resistance policy targets American regional allies which were seen at the origin of the US withdrawal of the US Trump administration from the JCPOA due to their fear of the expansion of the Iranian proxies due to the growth of the Iranian economy during the implementation of the JCPOA. The reactions from the USA and Gulf partners triggered exactly the opposite effect on the whole security architecture of the region.

This situation was made impossible for European partners to save the nuclear deal due to the constant pressure form the USA to follow the sanctions regime. France, Germany and the UK were caught between the increasing nuclear pressure from Iran and the American sanctions on the banking system, banning companies to reach economic deals with Iranian partners. Seeing the impossibility of the European states to support the European deal, Iran may turn to its traditional international partners as Russia and China to palliate the absence of support in Europe. The common block on the Iranian issue formed by the USA and European partners can also disintegrated leading to a more isolated position of the USA in a period of vulnerability with the current coronavirus crisis and economic crisis.

Anthony Cordesman reproached the lack of clear strategy of the USA in the Gulf region and its erratic behavior which decreased the credibility of the USA to address the security issues in the region. [[468]](#footnote-468)Therefore, the policy of Donald Trump tried to demonstrate more force and power on the diplomatic level against Iran without providing a full military strategy on the long run. The policy of Donald Trump is therefore characterized by an offensive diplomatic strategy without the increase of the American contingent on the ground to protect its own military assets and its regional partners. Although the USA uses a strong offensive diplomacy, it remains characterized by an offshore strategic choice, relying on intermediary tools to put pressure on the Iranian regime. [[469]](#footnote-469)

The first tool used by the USA remains the sanctions[[470]](#footnote-470). American powers always used sanctions against the Iranian regime since the revolution in 1979. In 1992, the Iran Iraq nonproliferation act implemented during the Clinton mandate banned the two countries to acquire WMD and C4 and electronic warfare systems. The counter proliferation act was waived under the JCPOA.[[471]](#footnote-471)

The pace of sanctions increased since the withdrawal of the USA from the nuclear deal with the inclusion of the IRGC on the foreign terrorist list on April 22, 2019[[472]](#footnote-472). Moreover, the USA revoked on May 2, 2019 the oil sanction waiver allowing foreign partners to import Iranian oil without suffering from American sanctions. The US rationale was to force the contraction of the Iranian economy and pressure the internal regime through the possibility of demonstrations in Iran and also to foster the import of oil of the Asian economies from the Gulf allies such as Saudi Arabia and Qatar.[[473]](#footnote-473)

However, these sanctions backfired against the policy of the USA. These sanctions increased the role and importance of Iranian hardliners.[[474]](#footnote-474) The parliamentarian elections in February 2020 increased their influence on the Iranian politics with the decrease of the potential negotiations with the USA on the long run. Moreover, the civil public opinion seems to coalesce more with the Iranian stance against the USA and strengthened the regime whereas it was aimed at decreasing it. [[475]](#footnote-475)The Iranian regime may survive under this pressure but become more and more hostile and aggressive. Moreover, experts highlighted the absence of correlation between the sanctions of the USA and the stabilization of the security of the region or the containment of Iran. Iranian policies were estimated independent from the American pressure put on its regime. For example, Iran developed its proxies in the aftermath of the Arab Spring between 2011 and 2015 when the maximum of sanctions were implemented to limit the Iranian capabilities.[[476]](#footnote-476)

Increasing tensions were reported in the Gulf between Iranian and American forces with tit for tat actions which can trigger spillover situation in the Gulf. The Centcom launched the Operation Sentinel to increase the survivability of the Gulf tankers following the attacks from Iran against American drone and an amphibious ship. On April 15, 2020 11 IRGC speedboats harassed US warships in the Gulf. [[477]](#footnote-477)The increased tensions with Iran can trigger miscalculations and a negative spillover situation in the Persian Gulf region.

The second tool used by the USA to contain Iran without engaging too much its troops on the ground is the use of regional partners and armament contracts. However, as Anthony Cordesman highlighted it, this tool is used without any long term strategy and can spur more difficult situation for the security of the region[[478]](#footnote-478). Israeli forces are for example used as the boots on the ground to fight the Hezbollah operatives and Iranian Quds positions in Syria. The USA also rely on Saudi Arabia to act as the only guardian of the Persian gulf security and act more and more independently since the arrival of the Saudi leader Bin Salman and the elaboration of the first Saudi military doctrine.[[479]](#footnote-479)

As it was explained in the chapter 2, the American regional allies are becoming more and more offensive with their increasing perception that the US forces are withdrawing from the Middle East and the American policies are less interested in the security files in the region. The absence of reaction of Donald Trump after the Iranian drone attack and the regular statements from the American administration claiming that the regional actors should pay more for their own security triggered a negative perception from the Gulf partners which are seeking to expand their defense and military ties to increase their security. However, it should be noted that the American troops haven’t decreased since the arrival of the Trump administration and 60,000 American militaries are still present for operations in Iraq in the Middle East. [[480]](#footnote-480)According to experts, this situation is more triggered by the statements done by the American situation rather than the real operational context.

This change was embodied by the emergence of the 1st Saudi foreign policy elaborated by Bin Salman shifting its role of quiet competition with Iran to a direct confrontation against it and its proxies in the region and the launch of the military operations in Yemen. This policy advocates for the use of hard power against what it considers as the Iranian proxies in Yemen and in the region. It was designed in reaction of the Obama policy in the Gulf and its dialogue with Iran which was perceived as an opportunity for the Iranian enemy to extend its influence in the region. This doctrine was found in ad equation with the US objectives in the Middle East under the Donald Trump era. It hinges on the building of regional military allies and the massive procurement of sophisticated weapons in order to contain Iran and become the uncontested spearhead of the Gulf powers.[[481]](#footnote-481)

For the USA, it was seen as an opportunity to sell more weapons to their rich Gulf partners. Moreover, according to some researcher, the US strategic culture relies more on the development of technological means rather than on the elaboration of long term strategies. [[482]](#footnote-482)This vision is also encouraged by the American administration which fosters the armament of regional allies as a way to stabilize by themselves the region through the procurement of offensive and defensive systems. According to an assessment of SPIPRI, the USA is the biggest arms exporter in the Middle East. During the first year of the Trump presidency, the total weapon exports to the Middle East increased by 8%.[[483]](#footnote-483)

For the Trump administration, the use of weapons are in line with the American interest in the region through the decreasing need to send directly American troops on the ground and let the Gulf countries to ensure their security by themselves. Moreover, the defense contracts are also particularly appreciated by the defense industrial complex in the USA which represented 929 billion dollars in 2018.[[484]](#footnote-484)

However, several experts criticized the lack of political control on the licenses to export the American weapons on the Middle East. Since 9/11, under the arms exports control acts, the White House must deliver risk assessments on the delivery of weapons to the Congress which can technically accept or refuse the armament contracts. According to a study form the CATO institute,[[485]](#footnote-485) there is a very low risk for the congress to refuse arms exports since most of US Congressmen are approached by their regional defense lobbies which have an important economic weight in the USA. This study estimated that there was no real effort to limit the exports of weapons to the Middle East, regardless the consequences on the ground and the possibility to capture the American weapons by terrorist groups. Moreover, the USA is also fostering the export of UAV and pushed for the change of categorization of the unmanned systems under the MTCR to compete with Chinese exports.[[486]](#footnote-486) In that sense, the President Trump erased a requirement from 2016 which forced American intelligence institutions to release publicly the number of collateral victims when American drones are used against terrorists.[[487]](#footnote-487)

According to a study between 1950 and 1995, the proliferation of weapons in the Gulf would increase the risk of launch of a preemptive war among Gulf countries increasing the probability to launch internal and external conflicts and therefore, a potential direct confrontation with Iran.[[488]](#footnote-488) The problem increases when the regional American partners are taking a more independent approach with the launch of offensive operations in Yemen or implementing a blockade against the Qatari power. For the USA, the export of weapons was involving the political and security cooperation with regional partners and is not considered as a neutral tool. For the Gulf countries, increasing their relations with Russian and China could pressure the USA to give them more freedom in the use of these weapons and blackmail the USA to export more sophisticated weapons. However, the poor results from the Saudi experience in Yemen and the international outcry for the crimes committed against civilian during the war launched by Saudi Arabia pressured a bit more the USA where the American Congress restricted the support of the USA to the Gulf regimes. Moreover, the murder of Jamal Khashoggi by Saudi agents finished to erode the cooperation between Western powers and Saudi Arabia.[[489]](#footnote-489) An increasing criticism from the American Congress against the actions of the Bin Salman regime led to the end of the American logistical support to the Saudi coalition. The American Congressmen invoked the War Power resolution; an act that was countered by the veto of the President Trump[[490]](#footnote-490) The case of Saudi Arabia triggered therefore a mounting division between the American political classes and renders the former American support more difficult.

With the mounting independence of the GCC and the isolation of Iran, the Gulf region becomes open to the influences from China and Russia, which were perceived as attractive partners due to the absence of ideological coloration in their security deals in the region.

To sum up, the USA is seen as an erratic and unreliable partner for the Gulf countries which see in the brutal shift of the American discourse and attitude a lack of credibility of a long term strategy. This situation can lead to a more confrontational and offensive approach due to the increasing worries from the Gulf States to lose their American partner and to be forced to tackle their security by them.

Iran may not react positively to external pressure like economic sanctions. Iran reacts when the security of the regime is jeopardized but is not threatened by the economic breakdown or the pressure from the USA.[[491]](#footnote-491) Iran may grow more offensive and aggressive, a result that could have been avoided by the Trump administration.

Experts question the rationale behind the American strategy in the Persian Gulf region. On the one hand, the absence of real control on the exports of weapons to the Gulf can trigger tough security consequences. On the other hand, it is not clear to determine the potential final victory behind the maximum pressure policy implemented by the Trump administration. If this policy achieves to oust the current Iranian regime, it remains unclear on the potential positive outcomes that can be found from the fall of the Iranian regime. It could lead to the same destabilization as during the Iraqi conflict and lead to the proliferation of terrorist groups from Iraq, Syria and Afghanistan on the Iranian regime with a more offensive stance against the USA. The American direct intervention in Iraq in 2003 had a big political cost and economic consequences. More than 3 trillion dollars were spent during that campaign. [[492]](#footnote-492)

To solve this stalemate, the US administration could also ensure security guarantees for Iran, before negotiating and claiming the implementation of the 12 points. For the Iranian regime security guarantees are considered as the cornerstone of the Iranian negotiations with the USA. The USA could renew the Algiers agreement which ensure the absence of interference in the Iranian internal affairs. The American powers could also pledge the guarantee to maintain current the Iranian border and make this gesture to increase the confidence of the Iranian regime on the good intentions of the American administration. Some experts also advocated the implementation of a direct hotline between Iran and the USA to increase the communication tools and avoid very costly miscalculations in case of confrontation.

Then, the US and Iran could collaborate and start to negotiate on limitations of the Iranian arsenal that would not have political impact for the Iranian regime. Enshrining in legally binding provisions the Ayatollah’s limit of the missile range to 2,000 km could help to reassure the US and provide them an economic and military advantage through the decommissioning of the European missile defense bases in Romania and Poland. This gesture could also ease the tensions between the USA and Russia and foster the Russian government to pressure the Iranian government to reach other concessions with the USA regarding its missile program.[[493]](#footnote-493)

However, these potential negotiations could be particularly difficult to reach for the USA and Iran. For the American administration, giving up the policy of maximum pressure could be badly construed by the Gulf allies and definitively characterize the USA as a very erratic partner, unreliable without any serious strategy for the region. For Iran, negotiating with the USA could be seen as the legitimization of the American presence in the Middle East and blurs the Iranian stance against the Great Satan which has now a structuring effect on its internal policy. It is therefore easier for Iran and Gulf countries to find new partners that can furnish external solutions against the present lockdown between the USA and Iran.[[494]](#footnote-494)

**Part II- Russian-Iranian cooperation and influence in the Middle East**

**2.1- Historical background and context**

The presence of Russia in the Middle East was complicated during the USSR period. All former Soviet allies in the region such as Egypt, Iraq, Algeria, Libya and Syria shifted their alliance with the Soviet power except Syria. The 1950’s were the apex of the Russian influence in the Middle East with the growing partnerships in the building of facilities and infrastructures as well as with the weapon supplies. During this decade, Russia was the main weapon supplier in the Middle East.[[495]](#footnote-495)

During the 1980’s, the USSR supported its main regional ally, Iraq in the war opposing Iran and provided an unconditional support to the regime of Saddam Hussein during the invasion in Kuwait in 1990. During the same decade, it supported the Iranian regime during the 1990’s and sold Iran military hardware such as missile technology and armored vehicles, fighter jets and submarine. The fall off the USSR curbed the influence of Russia in the region and limited its confrontation with the Western interests in the Middle East. Russia invested more its foreign policy in the development of the CIS countries and Caucasus rather than Middle Eastern allies.[[496]](#footnote-496)

The relations between Iran and Russia resumed under the first mandate of Vladimir Putin with an increasing military cooperation with Syria and Iran. Russia reportedly sold more military hardware to Iran at that time and implemented military bases in Syria in Tartus. Under the mandate of Medvedev, Russia increased its cooperation with Western powers, reducing its relations and military cooperation with its Middle Eastern allies.[[497]](#footnote-497)

The Arab Spring was a milestone in the Russian presence in the Middle East. It perceived the democratic popular revolutions as plots organized by Western powers and identified them as the European colored revolutions, which were also seen as a conspiracy to curb the Russian power in Europe. [[498]](#footnote-498)These events triggered the strengthening of the relations between Vladimir Putin and Iran which is seen as a very stable and conservative country since 1979. Russia allegedly fostered the repression of the Iranian Green Movement in 2009, seeing all the internal democratic protests as a sign of Western internal influence that must be destroyed.[[499]](#footnote-499) The second mandate of Vladimir Putin revived the relations with its Middle Eastern allies and the involvement of Russia in the Syrian war. Russia integrated more and more Iran in the framework of its regional dialogue such as during the summit on the Caspian Sea in 2014 and its negotiations in Bishkek and Dushanbe in the framework of the SCO. Iran and Russia increased their cooperation on the Syrian and Afghan conflicts.[[500]](#footnote-500) In 2014, the Russian Minister of Foreign Affairs, Sergei Lavrov, qualified Iran as the natural ally against extremism in the Middle East.

The rapprochement of Iran and Russia could be explained by the very same perception of International relations and International law. Both construe International law from a voluntarist perspective, valuing the preservation of their national sovereignty from any foreign influence. This vision opposed to the European vision of Natural law and objectivist interpretation of international law reducing the importance of the national sovereignty to value the protection and respect of Human rights.

For Russia and Iran, they both share that their historical identity is not properly respected on the international stage while they both are conscious of their brilliant civilizations which are not considered as such by the Western powers.[[501]](#footnote-501) According to their visions, it triggers a misbalance in the International order, shaped by the fear to be dominated by the imposition of the political will from the USA and Western countries. According to Abdolrasool Divsallar[[502]](#footnote-502), they both suffer from a “thick misrecognition” on the international stage: where Russia and Iran are not considered as indispensable and stabilizing powers important in the regional and world orders. Russia suffers from its decreased image on the international stage in the wake of the falloff the USSR and seems to be considered as an inferior partner by Western powers.

Both countries opened to the collaboration with Western powers in period of vulnerability during the1990’s decade and were upset by the results of such collaboration. Iran collaborated with the USA to repel the influence of the Taliban in the 1990’s[[503]](#footnote-503). However, the president Bush did not hesitate to qualify the Iranian regime as a member of the axis of evil afterward, disappointing the expectations of the president Khatami to obtain a better relation with the US. The same disillusion occurred when the President Trump announced the tear up of the JCPOA, blocking the Iranian regime in the position of inferiority and forced to fulfill its obligations without any counterpart and with sanctions from the USA.[[504]](#footnote-504)

Both countries were attacked by sanctions and are isolated on the international stage. Russia was looking for new Eastern partners to palliate its lack of allies among the West and to tackle the economic consequences of the American sanctions against the Russian regime after the Ukrainian crisis. Iran is also forced to develop new relations and no longer rely on the help from European partners.[[505]](#footnote-505)

The policy of maximum pressure from the USA against the Russian and Iranian states threatens their internal regime through the economic pressure triggered by the unilateral sanctions. For Western powers, they are trying to shape the Iranian regime and to force the Russian state to adopt a more consensual approach or even to change their whole regimes. This identity threat pushed them to develop their relations in order to balance this threat imposed by Western powers and to adopt a more hardline position in response of the desire of the West to meet friendly and weak regimes.

Therefore, Russia and Iran have both a feeling of encirclement in their respective areas of influence. Russia suffers from the advancement of the NATO troops in the former USSR countries. Iran suffers from the massive presence of the USA and its powerful regional enemies near its borders in Iraq, Syria, and Afghanistan. Both aims at extending their regional network of alliances to protect their borders and avoid the interference of their enemies in their internal politics.[[506]](#footnote-506) The Iranian regime developed its network of proxies while Russia encourages the integration of post-soviet republics into the regional economic and security organizations. The NATO advances in Caucasus, pushes Iran to develop more ties with Russia to protect these areas and curb the American presence in Eastern Europe, Central Asia and in the Middle East.[[507]](#footnote-507)

Both countries also are threatened by the terrorist groups in the region. Iran was directly stricken by ISIS during a military parade in Ahwaz in 2018,[[508]](#footnote-508) which forced the republic to retaliate directly against the ISIS positions in Deir ez Zoor, in Syria. Russia also fears that the Russian and Caucasian and Central Asian terrorist fighters come back from the Syrian front and will attack the Russian territory directly due to the Russian commitment on the ground on the side of Bashar al Assad.

**2.2- Russian interests to support the Iranian regime and security issues for the Middle East**

Russia will adapt its cooperation with Iran according to the interests it can cash in from the Western powers. Russia can foster its military cooperation for instance and use it as leverage afterwards with its negotiations with the West. For instance, Russia agreed to stop fulfilling contracts with Iran to export military supplies such as within the Gore Chermonyrdin agreement in 1995 . In 1998, Russia accepted not to export research reactors to Iran in exchange of financial and economic help from Europe.[[509]](#footnote-509)

Under Medvedev, Russia increased its cooperation with the USA. When international criticisms grew against the Iranian nuclear program disclosed in 2000’s, Russia supported the UNSCR 1929 and refused to sell the S-300 missile defense system to Iran under the pressure of the USA. At that time the protection of Russian interests in the CIS countries were deemed more important for Russian foreign policy rather than fostering the Iranian power.[[510]](#footnote-510)

The Russian support to the Iranian regime in the Syrian war is even a better leverage that can be used in the negotiations with the USA and to increase it status of international power. Russia provided since 2015 aerial support for Iranian and Syrian ground operations, which was justified as the fight against the ISIS positions in Syria.[[511]](#footnote-511) Russia and Iran increased their military cooperation when the head of the IRGC and Qassem Soleimani, the head of the Quds forces visited the president Vladimir Putin in Moscow in 2015.

In 2016 Russia launched its aerial operations against the Syrian opposition forces from the Iranian Hamedan airbase. It was the 1st time that a foreign power use the Iranian bases since 1979.[[512]](#footnote-512) Iranian and Syrian forces became the boots on the ground and coordinated their operations with the Syrian aerial support. Both parts need each other to fulfill the operations on the Syrian battlefield. Moreover, Russia, Syria, Iraq, Iran and Hezbollah started to launch a new intelligence cooperation based in Baghdad in the fight against ISIS positions in December 2015, increasing the capabilities of the main actors of the Resistance axis.[[513]](#footnote-513) The center is run by staff from the 4 parties and increases the cooperation capabilities between them. Russia also increased its cooperation with Turkey in the framework of the Astana agreement with Syria, allying the former American ally within its area of influence in the Middle East.[[514]](#footnote-514)

However, the support of the Syrian regime in the war does not mean that the Russian interests are perfectly aligned with the Iranian objectives in the Syrian war. For experts, the opportunistic nature of the Russian support to Syria and Iran reveals more the Russian expediency than a real strategic alliance between the two countries.[[515]](#footnote-515) For Iran, keeping the regime of Bashar al Assad is a question of survival to maintain its regional resistance axis. For Russia, the commitment in the war allows it to increase its status of international power and to regain a foothold in the Middle East. Therefore, the vision of the Syrian conflict is more international while the Iranian stakes are more regional and these two levels of understanding mismatch on the battlefield. The Syrian conflict could be used by Russia to highlight its international stance on the international stage and to force the Western powers and the USA to maintain a dialogue with it and maybe to negotiate concessions on the current sanctions regime. Russia wants to depict itself as a real international power, not submitted to the USA and the West.[[516]](#footnote-516)

For Russia, maintaining the Syrian ally is not the first objective in the war but more to become the unavoidable negotiator in the negotiations in the West and to gain a permanent foothold in the Syrian territory and in the Middle East. Although Russia contains the Israeli preventive strikes, it does not hinder it from sticking the Israeli aircrafts against Hezbollah positions in the Middle East.[[517]](#footnote-517)

Russia does not always act in favor of the Iranian interests on the Syrian battlefield. It is not against the degradation of the Hezbollah position as the clashes between Russian troops and Hezbollah operatives demonstrated at the northern borders. Iran and Syria cannot be saved if Russia is not on their side. Moreover, Russia would be able to squeeze the Iranian influence in Syria. For example, the Syrian constitution proposition written by the Russian power aimed at institutionalizing the foreign militias on the Syrian ground, a measure that is countering the Iranian interests in Syria. Iran has more interests to see the Syrian regime on place but with a weak power, letting Iranian and Hezbollah operatives to use the Syrian territory to maintain the activities of the different proxies in the region; Moreover, Russia has not intervened when the 13 IRGC operatives were killed and attack launched by Jabhat al Nusra in the town of Khan Tuman near Aleppo neither when the Quds forces positions were bombed by the Israeli airstrikes during the operation House of Cards in 2018.[[518]](#footnote-518)

Finally, Russia can showcase through the Syrian conflict its consistency as an international partner as well as its commitment and values against destabilizing non state actors and under any circumstances.[[519]](#footnote-519) These values can be found particularly attractive for the Gulf countries which see the support of the USA erratic and inconsistent and would try to increase their cooperation with a Russian conservative and consistent partner, willing to sell powerful weapons.

Russia capitalizes on the US attitude in the Middle East to increase its own power: Russia is in position of power broker in the Middle East and cash in from the perception of the American allies in the Middle East, seeing the USA as an erratic power. The US gave up the Iraqi and Syrian Kurdish troops and face mounting criticisms in Iraq after the strikes against Qassem Soleimani. The Iraqi government castigated the US intervention as a violation of their sovereignty.[[520]](#footnote-520) If Russia achieves to decrease the influence of the USA in Iraq through a tighter collaboration with its former ally, the US won’t be able to send any troops in Syria. Russia can therefore fill all the potential power vacuum left by the USA in the Middle East and take all opportunities to increase their own influence. Russia also achieves to increase its collaboration with Turkey on the Syrian ground through the establishment of the Idlib agreement and collaborate to manage the northern part of Syria.[[521]](#footnote-521)

The goal of Russia is to be depicted as a reliable partner for everybody with the least ideological coloration possible to extend its network of influence and cash in from the weak perceptions of the USA in the region. Russia tries to present itself as a strong, consistent power and conservatist, which echo with the values with the Gulf countries after the destabilizing period of the Arab Spring.[[522]](#footnote-522)

It was very difficult for Russia to start relations with Gulf countries, the main allies of Western countries in the region and where the bulk of the American bases in the Middle East are located. During the 2000’s decade, Russia depicted the Gulf countries as supporters of terrorist groups in the region and accused them of financing terrorism. This stance softened after the Gulf crisis in 2017, when Russia saw an opportunity to increase the cooperation with the Gulf States and with their perception that the USA is less committed on the regional policies. [[523]](#footnote-523)[[524]](#footnote-524)The prince Bin Salman visited the Russian government in Moscow in 2017. It was the first visit of a Saudi leader in Russia. Russia endeavored also to foster the cooperation with all regional countries regardless their political competition between them. The Prince Hamad bin Khalifa Al Thani from Qatar visited also Moscow in 2018.[[525]](#footnote-525)

Russia particularly increased its relations with Saudi Arabia and more specifically on the energy and security cooperation. Saudi oil resources are decreasing and the Saudi powers which set up the Vison 2030 try to expand their international relations to get out from their traditional alliance with the USA relying on the exchange of energy resources against the ensured security of the state at the international level. The death of Jamal Khashoggi and the cooler relations between Saudi Arabia and the West regarding the Yemeni war opened a window of opportunity for Russia to increase its relations with the Saudi state.[[526]](#footnote-526)

Russia also achieved to reverse its tense relations with Qatar. The relations between the two countries were blocked with a first crisis in 2011 with the murder of the former Chechen president in Doha in 2004 and the ambassador assault Titorenko in Doha in 2011. Moreover, Russia saw Qatar activities in Syria and its support to the rebel groups as a threat for its expansion in the Middle East. However, the Gulf crisis in 2017 offered a good opportunity for the 2 isolated states to increase their cooperation. An agreement was reached with Roseneft and they increased their cooperation in the field of culture and education.[[527]](#footnote-527)

Russia also achieved to increase its arms exports in the Gulf countries, where the defense market was previously saturated by the Western offer.

For Russia the Middle East is a crucial market of its weapons. For example, the Middle East and North Africa markets represent 40% of the Rosoboronexport’s exports in 2018, representing an increase by 20% compared with the previous years.[[528]](#footnote-528) It helps Russia to maintain its image of international power and to increase its influence on the receiving countries. Experts often correlate the defense cooperation with Russia with the increased extraction and economic concessions among the weakest countries in the region. Russia could reportedly sell weapon systems to Syria in exchange of the oil exploitation in fields between Tartus and Banias.[[529]](#footnote-529) The Syrian conflict showed the performance of the Russian weapons where 200 types of missiles were tested on the battlefields. Russia could expand its arms contracts among 23 countries in the MENA region since 2015.[[530]](#footnote-530)

The Gulf countries increased their imports of Russian weapons despite the Russian military support in Syria. During the last visit of Bin Salman in Moscow in 2017, a package of 3.5 billion dollars was negotiated between the two leaders to buy the S 400 missile defense systems, the TOS 1A systems and Kornet EM anti-tank guided missiles.[[531]](#footnote-531) On February 18, 2020, Saudi Arabia will reportedly start to domestically produce Russia’s Kalashnikov AK-103 assault rifle under an agreement reached with the Russian state defense company Rostec.[[532]](#footnote-532)

Russia achieved also to pursue negotiation with Qatar to sell S-400 missile defense systems.[[533]](#footnote-533) In October 2017, Russia and Qatar signed a Memorandum of Understanding. According to TASS, a Russian news agency, the Qatari regime would have expressed the intention to buy such weapons.

Russia already fed defense cooperation with the UAE before. In August 2000 Russia and the UAE reached a research and development cooperation agreement to develop the Pantsir S1 project. [[534]](#footnote-534)In 2017, the UAE committed to but Su35 fighters to Russia in the framework of another defense agreement. At that time, China was the only country that bought this aircraft. The UAE also bought the BMP-3 infantry combat vehicle. In February 2017, the UAE and Russia reached an agreement $1.9 billion worth of military contracts, with the selling of 5,000 anti-armor missiles as well as logistics and training facilities. [[535]](#footnote-535)Moreover, Rostec, the Russian defense company was also negotiating with the UAE for the development of MiG-29 aircrafts, increasing the technological transfer between the two countries. The Russian exports to the Emirates pursued in 2018 in the field of cybersecurity and artificial intelligence. The Ministry of trade, Denis Manturov announced in July 2018, that Russia and the UAE would extend their previous agreement on the cooperation in the field of cybersecurity. Moreover, he announced that the Russian government would help the UAE to develop an industrial zone in the territory of Egypt as it was agreed in 2014, in exchange of a better tax regime for Russian resident companies in the region of Port Said.

In 2019, 50 Russian defense companies were present during the International Defense Exhibition and Conference (IDEX) which was held in February 2019 in Abu Dhabi. This defense event is the Middle East’s largest defense summit. Russian companies could more specifically display potentially interesting weapons systems for the Gulf countries such as the Pantsir-ME shipborne air defense missile and artillery system. During that event, the United Arab Emirates bought more than $5.4bn of military equipment despite the current tense context in the Yemeni conflict.[[536]](#footnote-536)

Local media reported that the Rosoboronexport Director General Alexander Mikheev said that Russia obtained a request from the UAE to modernize its Pantsir-S1 systems. Moreover, the Emirate would also be willing to buy new Kornet E ATM for more than 40 million dollars during the IDEX event in 2019. In exchange, Tass, a Russian news agency reported that Saudi Arabia and the UAE invested 2 billion dollars in Russian projects in 2019.[[537]](#footnote-537)

Russia achieved to be perceived by these leaders as a reliable defense partner while Russia is fighting in their enemy camp. This big evolution conveys the growing independence of the Gulf monarchies toward the American interests in the Middle East and on the Syrian ground and the growing place of Russia in the defense cooperation with the American regional allies.

Finally, Russia can use the attitude of the USA against Iran to isolate it from its Western and European allies. The USA has not warned European partners on its plan to kill Qassem Soleimani and Muhandis. [[538]](#footnote-538)The withdrawal of the USA from the JCPOA triggered an outcry among Western powers which were confided the burden to keep the JCPOA alive. Russia can cash in from the disunity between European partners and the USA to isolate the USA on the International stage. With the Iran withdrawal from its obligations under the JCPOA in January 2020, the USA would be held responsible if the Iranian powers decide to build nuclear weapon. This situation could trigger a real political gap between the USA and European partners on the way to solve the Middle Eastern arms race.

**Part 3: Chinese-Iranian cooperation and influence in the Middle East**

**3.1 Historical background and context**

Chinese and Iranian relations started on the very same basis as the Russian Iranian relations. Their relations were barely inexistent during the Shah era but started to develop right after the revolution in 1979. The Iranian regime expressed the same fears against the links with China due to the threat to be exploited by a new superpower after having suffered from the influence of Russia, the UK and the USA. However, Iran suffered from a more isolated position on the international stage, forcing it to accept the diplomatic cooperation proposed by the Chinese republic. The Chinese regime also suffered from the status of pariah state during the second half of the 1960’s with the rupture of its relations with the USSR and the USA and the launch of the Chinese nuclear weapon program.[[539]](#footnote-539)

The revolutionist communist stance of China as well as its anti-imperialist discourse transformed this power to an attractive state for Iran. Both countries suffered from the invasions during the 19th century by foreign powers and have the will to preserve their national sovereignty from any external interference. Both countries wanted to roll back the American presence from their areas of interests. China became the only international ally of Iran during the Iran and Iraq war, accepting to sell sophisticated weapons to protect its territory (although China also sold weapons to the Iraqi regime at that time). During the 1980’s, China became the third largest arms exporter in the Middle East after the USA and Russia.[[540]](#footnote-540) China developed its contracts of armaments with a lot of different regional actors in the region such as Jordan, Oman, and Saudi Arabia (which obtained missile technology from China). China became the ideal arms exporter since it never asks concession in return as Russia might be tempted to do.

During the 1980’s China softened its revolutionary communist ideology and adopted a more neutral stance which reassured greatly the Iranian regime which opened after the death of the Ayatollah Khomeini in 1989. Under the regime of the Iranian pragmatist president Ali Akbar Hashemi Rafsanjani, the Iranian regime sought to extend its foreign ties, particularly with non-Western nations. The Chinese regime never tried to impose its vision of human rights and democracy on the Iranian regime. In 1989, China was more isolated on the international stage due to the repression of the Tianmen movement in June 1989, which was particularly criticized by the Western powers.[[541]](#footnote-541) The isolation of the Iranian regime under the double containment policy implemented under the administration of Bill Clinton increased the isolation for the Iranian regime which found support from the Chinese government. The Iranian president Rafsajani expected however to develop its foreign relations.

In 1990’s, China became a more important economic partner for Iran. [[542]](#footnote-542)Under the presidency of Jiang Zemin, the Chinese economy exponentially developed with an acceleration of the Chinese growth rate. China shifted from its position of net exporter of oil to a position of net importer since 1993. From that period, China sought to develop more its economic partnership with the Iranian economy, which includes large reserves of oil.

China increased the defense partnership with Iran through the export of missile technology, more specifically cruise missiles and naval weapons. From 1984 to 1996, China provided Iran with nuclear support. Chinese technicians allegedly participated in the building of the Esfahan Nuclear Research center, operational since 1984 and Chinese staff helped to train the Iranian engineers in the mining of Uranium.[[543]](#footnote-543) In 1990, China signed with Iran a nuclear cooperation agreement. In 1991, China reportedly exported one ton of uranium hexafluoride (UF6) to Iran. According to Iranian sources, China would also have exported some anti-riot weapons during the 2009 protests as well as surveillance technology.[[544]](#footnote-544) China exploited therefore the isolation of the Iranian regime provoked by the International criticisms against it. China was considered as a neutral partner, respecting the Iranian sovereignty in any circumstances while European states often balance their support with some human rights demands. Moreover, China became more and more independent from the US reaction since the bombing of the Chinese embassy by the USA in Belgrade during its operations in ex-Yugoslavia in 1999 and when China integrated the WTO, withdrawing a potential leverage from the USA and allowing China to develop its controverted relations with Iran.[[545]](#footnote-545)

Likewise Russia, China defended its Middle Eastern ally from international sanctions launched under the UNSC in the 2000’s. Iran became more isolated on the international stage due to the discovery of the Iranian nuclear program in 2002 and the sanctions against the regime increased the reliance of Iran on the Chinese support. In 2008, China reportedly exported more weapons to Iran than Russia. From 2002 to 2009, China became the main weapon supplier to Iran, exporting mainly anti-ship and anti-aircraft missiles.

The newly elected president Rouhani declared just after his elections that the development of the Chinese relation would become the cornerstone of the Iranian foreign policy[[546]](#footnote-546). Iranian power often states the importance of the Iranian and Chinese relations. However, on the Chinese side, there is more reluctance to recognize officially the strength of its relations with the Islamic republic. China develops relations with Iran but also has wider goals in the region and declaring Iran as a strategic partner could impede its relations with the Gulf countries or trigger the discontent of the USA which could still use powerful economic leverages against China. [[547]](#footnote-547)

This traditional Chinese policy did not impede the building of strong economic relations. The Chinese President Xi Jinping’s visited Iran on January 22-23, 2016 a week after the withdrawal of sanctions under the JCPOA. The meeting was finalized by an agreement on a 25 year duration called the “Comprehensive Strategic Partnership Agreement.” This treaty aimed at increasing bilateral trade to $600 billion in 10 years. [[548]](#footnote-548)In 2017, trade between China and Iran reached $37 billion. The bilateral relations also concerned other sectors of the economy. In 2017, China and Iran signed a first contract for the reconstruction of the Arak heavy water reactor. [[549]](#footnote-549)Moreover, the building of the Chinese Belt and Road projects launched since 2014 aims also at integrating Iran within its plan of investments. Iran could become an interesting partner for China to decrease the geographic isolation of the central Asian republics to link them to the Gulf countries. Iran could be the bridge between these two regions under the aegis of the Chinese plans.[[550]](#footnote-550)

However, the presence of China in Iran triggered also internal criticisms, particularly among reformists and clerics. China was castigated for the treatment of the Muslim Uyghur population by senior Shi’a clerics in Qom. The official stance of Iran however refrained from criticizing the Chinese regime directly. More recently, the emergence of the coronavirus crisis in Iran was identified with the relations between Iran and China and was criticized by reformists claiming that Iran is more preoccupied by its economic ties than the sanitary risks for its population. According to Israeli intelligence information, the IRGC-own Mahan airlines would have kept working in China, far after the outbreak of the virus in Iran. The Israeli Besa Center and the INSS center reported that the IRGC and the Iranian government refused to block the aerial connection in China due to its strategic partnership with this country. [[551]](#footnote-551)

Finally, more general criticisms concern the asymmetric nature of the relationship between Iran and China and the growing economic dependence of the Iranian regime on the Chinese economy. Under its cover of neutrality, China would foster its national expediency trough the exploitation of the Iranian vulnerability to obtain economic and geopolitical advantages. It must be analyzed the interests of China to maintain such controverted relationship.

**3.2- Chinese interests in supporting the Iranian regime and security consequences in the Middle East**

The first interest for China to develop its relations with Iran is economic. China is the first oil importer from the Persian Gulf, representing 44% of its consumption needs. In 2014, the Iranian oil production representing 10% of the Chinese national oil consumption. In 2019, China was the main importer of Iranian oil, although the US sanctioned foreign companies trading with Iranian entities and waiving the exemption of these sanctions in 2019. China imported in 2018 one third of the whole Iranian oil production. [[552]](#footnote-552)

China tries to invest in the oil infrastructures in Iran. Since May 2011, China launched wide industrial development programs and investments for mining industries of around 20 million dollars. China planned to develop the National Offshore Oil Corporation to exploit the North Pars gas field. However, by 2012, the Iranian regime was forced to temporarily suspend the Chinse projects due to the huge delays taken by China to implement these projects. Iran was not seen as an economic priority for China and suffered from this lack of consideration. In April 2014, Iran canceled a $2.5 billion Azadegan oil field deal with China because of delays.[[553]](#footnote-553)

Moreover, Iran increased its dependence on China to develop its petrochemical industry necessary for the extraction industry. Iran became the largest petrochemical customer of China and relies on the Chinese investments to upgrade its extraction industries. However, China helped Iran to develop its infrastructures such as bridges, dams, railroads and tunnels, railways (such as the one which connects with Xinjiang). China is at the origin of the Tehran metro, giving the occasion to showcase to the other Chinese partners on the reliability and the advantages to cooperate with China in the framework of the Belt and Road project. [[554]](#footnote-554)

On the trade field, China filled a void left by the Japanese customers and the European companies, refraining from reaching trade agreements with Iran due to the American sanctions. For China, Iran represents a huge market of 80 million inhabitants with untapped energy resources.[[555]](#footnote-555) Moreover, trading with a weak and isolated Iranian regime is interesting for China. Chinese companies do not pay cash for Iranian oil, because of financial sanctions, which have expelled Iran from the International financial system. Iran was forced to accept to trade its oil production against the import of the Chinese goods on its market. Iran is forced to accept Chinese items, which were criticized for their poor quality and cheap prices, destroying the internal domestic market.[[556]](#footnote-556)

The Chinese support to Iran has not always been perfectly consistent. Like Russia, it depends on its relations with the USA. Following the withdrawal of Donald Trump from the JCPOA, China has frozen its relations and business activities with Iran. China is dependent on the USA for the development of its economy. In comparison, in 2018, China’s trade reached 737 billion dollars with the USA while it reached barely 42 billion dollars with Iran on the same year. Many Chinese companies feared to unpleased the American partners and preferred to withdraw from the Iranian market to avoid potentially detrimental sanctions. [[557]](#footnote-557)

The main interest of China in keeping its relations with Iran hinges more on the geopolitical interest. Indeed, China was also very afraid by the more conciliatory tone that adopted Barrack Obama with the Iranian power which led to the formation of the JCPOA. Released from the pressure of the Iranian file, the USA concentrated more on its policy of Pivot to Asia designed under the Obama’s administration and aiming at containing the Chinese influence on the naval space of the Chinese sea. For China, it would be interesting to see the confrontation between the USA and Iran to distract the American administration from the area of interest of China. The selling of weapons could be done to fulfill this goal and fuel the confrontation between Iran and the USA. According to Wang Jisi,[[558]](#footnote-558) a professor from the Pekin University School international studies, the period of war of the USA in Iraq during the 2003 benefitted for the expansion of China in Asia. Likewise, the current confrontation between the USA and Iran and the isolationist tone adopted by the Trump’s administration could be beneficial for China.

China could also use its relation with Iran as a powerful leverage and bargaining chip with its relations with the USA, accepting to follow the American stance against Iran if China can obtain itself some concessions. Therefore, China accepted to abide and support the last UNSC resolution 1929 implemented in 2010 against the Iranian development of missile weapons, paving the way for the American and other international sanctions. According to Manochehr Dorraj, China also fostered the increased pressure strategy from the P5+1 against Iran and was relatively passive during the P5+1 decision after the withdrawal of the USA from the JCPOA. Kenneth Katzman reported that “Iran is essentially on a junk for-oil program, “demonstrating the instrumental use of the Iranian interests for China.[[559]](#footnote-559)

Likewise Russia, China exploited its image of stable and neutral power, supporting authoritarian regimes against revolutionary movements. This policy reached a positive echo among the Gulf countries and contrast with the more ideological stance from Western powers or the economic concessions that Russia is trying to obtain under bilateral relations. Many countries in the Gulf see the Chinese power as a good alternative among the other international players.[[560]](#footnote-560)

China particularly developed its relations with Saudi Arabia. Crude oil imports increased from January to April 2018 by 60%, reflecting the need for China to look for other regional partners and investors and to find new oil suppliers instead of Iran. The Saudi company Aramco signed a supply contract with Chinese refiners Hengli Petrochemical and Zhejiang Rongsheng. In February, Aramco signed a deal to develop a petrochemical refinery complex in Panjin, in northeast China.[[561]](#footnote-561)

This collaboration extended to defense relations, security and political spheres. In 2016, the President Xi’s visited Riyadh and negotiated with the King Bin Salman the “comprehensive strategic partnership” as well as the creation of the China-Saudi Arabia High-Level Joint Committee. This visit was returned through the visit of the King Bin Salman in March 2017 and in 2019 to reach trade and investment contracts with China. The King Bin Salman aimed at harmonizing its Vision 2030 policy with the interests of the Chinese Belt and Road projects in order to benefit also from the wide Chinese investments that are planned across Central Asia and the Middle East;[[562]](#footnote-562)

Finally, China became a niche for the export of weapons in the Middle East. China sell weapons to the regional Gulf enemies with the possibility to fuel conflict in the region. Its main customers are Iran, Saudi Arabia and the UAE.

In February 2019, China Shipbuilding Industry Corporation (CSIC) and China North Industries Corporation (NORINCO) presented their newly created weapons systems at the IDEX show in 2019 in Abu Dhabi. Following this event, CSIC implemented set up a new office in Dubai, in order to extend its trade relations in this region. [[563]](#footnote-563)

China became also the world leader in armed drone sales and gained the domination on the Middle Eastern market. According to experts, the curb of the export of American drones left a vacuum in the defense market that was filled in by China in the Middle East. According to the USA, the imposition of a restraint to sell these systems would hamper their proliferation in the Middle East. However, the Teal Group demonstrated that the UAV market is exponentially increasing and Chinese companies are investing in this very dynamic aerospace sector. In the Middle East, the demand increased with the Iranian strikes on the Saudi oil facilities in Khurais and Abqaiq.[[564]](#footnote-564)

China reportedly exported drones to Iraq, Saudi Arabia, and the UAE, as well as to Egypt and Jordan. During the last visit of the King Bin Salman in Beijing in March 2017, King Salman and President Xi Jinping reached an agreement allowing the building of a Chinese factory in Saudi Arabia, which would manufacture drone weapons in the Kingdom. Therefore, Saudi Arabia is susceptible to increase its UAV arsenal thanks to the transfer of technology that would result from such collaboration.[[565]](#footnote-565)

**Conclusions:**

The American strategy of maximum pressure against Iran backfires for the stability of the Middle East. On the one hand, the maximum pressure policy against Iran aiming at curbing its financial assets and avoiding the financing of the Iranian missile program and proxies has not triggered the mounting popular pressure against the Iranian regime, as it was expected. The USA has not addressed the Iranian security worries and considers that Iran would react only to economic pressure. Iran faced particularly difficult economic times during since the revolution but it has not destroyed the regime. Iran proved already its resilience amid very difficult economic and political times during the Iraqi war. Direct security assurances with Iranian could sit up the Iranian political class to trigger negotiations with the USA.

However, the choice of the maximum pressure policy reflects the implementation of a new zero sum game in the Middle East, confronting the Iranian one. To increase the security of the American regional allies in the region, the security of the Iranian regime must be degraded. This strategy is faced by the Iranian maximum resistance policy which increased the confrontation tone against the American presence in the region. This policy fostered on the contrary the presence of hardliners among the Iranian decision making and increased its confrontational tone against the USA.

Moreover, the American strategy relying more on the actions of its regional allies through the selling of weapon systems and the negative perception of the Gulf states on the consistency of the American policy, may increase the security issues in the Middle East and lead to a regional arms race. The decreased military commitment of the USA on the Middle Eastern ground triggered the worries from the regional allies to see the US presence erasing, letting them alone to manage all the very challenging security threats in the region, specifically, the growing Iranian military presence through its proxies and the building of their missile capabilities. Middle Eastern allies of the USA may develop independent strategies to tackle these issues that may be rendered less controllable by the USA and multiply the probability to trigger direct confrontation against Iran. Moreover, the reliance of the USA on the export of sophisticated weapons to its regional allies further the proliferation of these systems in the Middle East and increase the same risk of a direct conflict against the Iranian regime, which in turn, will develop a more offensive stance, triggering a negative spillover situation in the Middle East.

The American policy has not achieved to completely isolate Iran on the international stage completely. The vacuum let after the end of the diplomatic links between Western powers and Iran was rapidly filled in by a tighter collaboration with Russia and China which may use the Iranian missile program and its commitment in the Syrian conflict as leverage against the American presence in the Middle East.

China and Russia, sharing the same conception of international relations with Iran, cashed in from their ideological links to obtain concessions from the Iranian regime to increase their own power and foothold in the Middle East and against the USA. Moreover, these two states achieved to use their relations with Iran and their positive image in the Middle East (as non-ideological partners and highly reliable) to gain more influence on the Gulf defense market, decreasing the limits to the exports of sophisticated weapons to the Gulf countries. China accepted to transfer its drone technology to Saudi Arabia, decreasing the possibility to limit the export of technology and sophisticated weapons in the Gulf countries. Russia is endeavoring to increase its presence on the Gulf defense market as well fueling the current arms race in the Middle East.

Therefore, the maximum pressure policy implemented by the USA is not helping to stabilize the relations with Iran and to decrease the current arms race in the Middle East. The resuming of the negotiations between Iran and the USA could allow stabilizing the region and help to stop the present cycle of confrontation.

**CONCLUSIONS**

The security consequences of the Iranian missile program in the Middle East stems from the action of Iran itself and its regional proxies and the answers from the regional actors creating a negative cycle of violence. The foundation of the Iranian action is based on its perception and fear to be surrounded by too powerful enemies that are willing to overthrow its regime. The ground of the Iranian attitude hinges of its zero sum game perception. To increase the security of its regime, Iran will try to degrade the security of its regional neighbors.

The Iranian technological, institutional and economic means shaped the tool necessary to achieve to reach this objective. The result is the Iranian missile program which is defensive in nature but offensive in its use. Iran recently expanded its missile capabilities to precision guided missiles, cruise missiles and drones and more specifically to solid fueled technology which are integrated with other Iranian means of hybrid warfare. Although Iranian missile technology is only loaded with conventional payloads, their efficiency is increasing. Thanks to the improvements of its cruise missile and drone technologies, Iran is currently able to strike directly sensitive grey targets and keeping a sufficient level of deniability to avoid any direct retaliation against its territory.

However, the Iranian zero sum game perception is confronting to the very same attitude from the neighboring countries. When these two perceptions are confronting, the level of violence expands and trigger a tit for tat style of confrontation. This level of violence is arising particularly in the Persian Gulf region where Iran can implement an equivalent of a mutual assured destruction on the economic assets of its regional enemies, jeopardizing the most important oil chokepoint of the world.

Iran is trying also to encircle its enemies by opening different fronts through the use of proxy groups. Iran exports its asymmetric means of warfare to hybrid actors in order to increase its deterrent effect in the region. It ensures the deniability of its missile strategy through the export and support to the proxies, fostering their autonomy in the design of their agenda and the missile tactics they want to implement.

Two categories of security consequences stemming from the Iranian missile program can be distinguished.

The first category of consequences are related to the Iranian transmission of missiles to its regional proxies

On the one hand, it was made visible that these exports and cooperation with Iranian operatives transformed the Iranian proxies from weak, disorganized non state actors to hybrid forces mixing regular and irregular warfare tools and increasing the level of violence and confrontation against the regional enemies. This trend is the result of the merge between the Iranian missile programs, used in the asymmetric warfare with hybrid actors. Hezbollah is the best example of this evolution, due to the maturity of its cooperation with Iran and its warfare experience against Israel. This shift was visible on the battleground through the improvements of control and command structures, the organization of the hybrid actors and the tactics used to bypass the technological superiority of their adversaries. The transformation of these actors into hybrid threats increases the level of violence and the duration of the attritional conflicts in the Middle East. The involvement of Iranian proxies in the Syrian conflict to support the troops of Bashar al Assad is a case example of this phenomenon. The repeated confrontation between Palestinian troops and Israel is an example of the increasing level of violence between the two parts. The Saudi coalition, bogged in the conflict against the Yemeni Houthis striking the Saudi territory, is the last example of the extension of an asymmetric conflict due to the spread of the Iranian missile weapons, supporting the Houthis forces against the Saudi coalition.

On the other hand, the Iranian proxies enabled the spread of the war experience and the use of the missile technologies between them. Hezbollah became the force multiplier of the Iranian proxies, using the organization and its leadership to gather more operatives while increasing the deniability of the operations. Hezbollah and the bulk of the Iranian proxies in the Levant largely benefitted from the Syrian conflict to improve their cooperation and increase their networks, increasing their efficiency. Hezbollah shared its missile experience with operatives in Syria, Palestine and Yemen, expanding the use and proliferation of the Iranian missile arsenal in the Middle East.

The combined use of proxies and Iranian missile capabilities can design a new mutual assured destruction balance in the Middle East. Thanks to the export of the Iranian weapons, the Houthis became able to lead a sub level of warfare in the Red Sea area. Combined with the same Iranian capabilities in the Persian Gulf, the use of the missile systems in the two areas can lead to a major economic and energy blockade in the world and a major economic blow for the Gulf countries.

The other consequence is the increasing development of precision guided missiles among proxies, and drones particularly among Hezbollah and Houthis operatives, increasing their lethality and the potential threats against the missile defense from the regional opponents. These capabilities can reverse the balance of threat between the regional states and Iranian hybrid forces. Hezbollah’s capabilities in precision guided munitions threatens Israeli defensive arsenal and hamper the direct confrontation of Israeli forces against the Lebanese proxy due to the threat of retaliation. The Houthis forces are endeavoring developing such arsenal which could also reverse the balance of threat with Saudi Arabia and the UAE.

The second category of the security consequences of the Iranian missile program in the Middle East hinges on the answer from the regional actors from the Iranian missile threat.

Reacting from the Iranian zero sum strategy, Iranian enemies expanded their arsenal. On the one hand, they tried to implement a strategy of deterrence by denial, using defensive weapons to avoid the possibility to Iran and its proxies to hit their territory. However, due to the lack efficiency of these defensive capabilities regarding the expansion of the Iranian and proxies precision guided weapons, the use of stealth capabilities and shorter range rockets, these arsenals were proven insufficient to protect their territories. In the Persian Gulf countries, the lack of interoperability hampers the building of an efficient defensive arsenal. The Iranian regional adversaries were forced to spend huge sums of money to hope to protect their civilian population from the attacks from proxies using cheap weapons.

Therefore, Iranian enemies developed offensive arsenal, increasing the cost for a possible Iranian attack against their territory. For Iran, keeping a sufficient sub level of warfare is turning particularly difficult in the context of increasing violence.

With the domestic production and import of precision guided missiles and drones in Saudi Arabia and Israel, the confrontation with Iran and its proxies can become more violent than before. Israel is increasing its precision guided arsenal with the help of the USA and seems to be willing to replace some of its aerial forces by the use of offensive missile systems against Iranian and Hezbollah positions in Syria. Saudi Arabia and the UAE are becoming more independent from the USA and design by themselves their own military doctrine. With the help of the USA, European, Chinese and Russian partners, they are building the most sophisticated arsenal possible, aiming at attacking Iran in case of direct confrontation. Saudi Arabia and the UAE are pushing to the development of domestic missile and drones capabilities, fueling their own defense industry, improving their autonomy in order to keep an advantageous balance of power in the Middle East. These trends can trigger security issues regarding the current conflict in Yemen and increases the risk to see these weapons used in the current conflicts in the Middle East.

Moreover, with the end of the JCPOA, these Gulf States are building civilian nuclear capabilities on their own territory. Although, they are part of the NPT regime (except Israel), the existence of such facilities within their territory in this context can be seen as worrisome and the newly produced nuclear facilities could be diverted for military purposes. Saudi Arabia could also collaborate more narrowly with Pakistan in order to obtain the necessary technology to handle a nuclear military program.

For Iran, maintaining a sub-level of warfare to degrade the security of its enemies to increase its own one is becoming more and more challenging. Moreover, the international isolation of the Iranian regime due to the American withdrawal from the JCPOA increases the fears from the regional neighbors and the aggressiveness of the Iranian regime and the arrival of hardliners. This trend increases the probability of a direct confrontation between the different regional actors. The direct strikes in Saudi Aramco facilities in 2019 demonstrated this possibility.

The offensive missile arms race in the Middle East triggers the risk of diversion of missile capabilities to terrorist groups and uncontrollable militias in Yemen and in Syria and Iraq (such as AQAP and ISIS as well as Al-Shabaab if the African Horn is included). These groups can capture the weapons on the battlefield or acquire them directly from Saudi Arabia and the UAE, increasing the security threats to see these terrorist groups using these weapons during confrontation, raising again the level of violence in the Middle East.

Finally, the reaction of the USA to answer these threats from Iran increases the level of tensions in the Middle East and paves the way for Russia and China to increase their influence in the Middle East and complicate the current security architecture in the region. The reaction of the USA through the sanctions increased the aggressiveness of the Iranian regime. The use of regional allies to confront Iran on the ground and the direct export of sophisticated weapons with little regard to the security consequences on the region raises the current level of violence in the Middle East and amplifies the existing missile race in the region.

It could be observed that China and Russia are cashing in from this situation to increase their own leverages in the region against the USA and expand their influence in the region. These two states achieved to build an image of reliable partners and managed to increase their presence in the Gulf defense markets, fueling the current missile race in the Middle East and the level of violence.

Beyond the scope of this dissertation, it could be emphasized that the reconnaissance of the Iranian demands could be the starting point to decrease the level of confrontation in the Middle East. Iran is a rational actor acting on a basis of a clear identified threat to see its regime overthrown by external powers or to suffer from a direct confrontation on its own territory. Dialoging on the reduction of these threats for Iran could allow decreasing the current confrontations in the Middle East and could stop the current missile race in the Middle East.

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