

# Bombing Iran or Living with Iran's Bomb?

Kassem Ja'afar





*Bombing Iran or Living With Iran's  
Bomb?*

*The Price of Military Action and  
the Consequences of Inaction*

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## FOREWORD

Dear Reader,


Since its nuclear programme was exposed in 2002, Iran has defied the international community and doggedly pursued its nuclear goals, turning down tantalizing diplomatic incentives, bearing the brunt of increasing diplomatic isolation and incurring a steep price in economic sanctions. Over the past six years, Iran has ramped up its nuclear programme and fought all attempts to make its rulers desist from its quest. As of July 2008, nothing seems to stand in the way of Iran's successfully completing a nuclear cycle - nothing, except time and technological hurdles its scientists will eventually overcome.

What options does the international community have?

The answer depends on whether Iran can be convinced to change course. If so, the right mixtures of pressures and incentives will, at some point, tip the balance and persuade Iranian decision makers to change course. Regardless, the international community has failed so far to find that perfect point of equilibrium. Iran's nuclear programme, meanwhile, is proceeding apace and time is running out. Before long, the international community might be faced with the unthinkable - the terrible dilemma between launching an attack against Iran before it acquires nuclear weapons (or at least the capability to build them) and coming to terms and living with Iran's nuclear bomb. These are two terrible scenarios - but they may soon become very real.

It is with these considerations in mind that the Transatlantic Institute and Contact J Magazine offer you this report - a study of the unthinkable. What will be the consequences of an attack on Iran? And what is the price of inaction? Our goal is to advocate neither - but to offer our readers a glimpse into the world as it would emerge from either scenario. Hopefully, the cost they both entail will encourage the international community to renew its efforts to avoid them both - and choose a third way between pre-emptive strikes and deterring a revolutionary nuclear Iran.

Brussels, July 2008



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## ABSTRACT

Speaking to France's ambassadorial corps on August 27, 2007 newly elected French President Nicholas Sarkozy endorsed the current international approach to Iran's nuclear programme, based on a mixture of incentives and disincentives. The two-pronged approach, Sarkozy said, "is the only one that can enable us to avoid being faced with an alternative that I call catastrophic: **an Iranian bomb or the bombing of Iran**". Almost a year later, the problem of Iran's nuclear programme remains unresolved, and with time running out, the prospect of confronting Sarkozy's catastrophic alternative is becoming a distinctly realistic possibility. This report will offer a glimpse into what concretely constitutes this alternative in order to help policy makers contemplate the choices still available to avoid such a dangerous course.

## Introduction

The international community continues to seek a political settlement which could satisfy both Tehran's quest to develop a nuclear status and the regional and international requirements of preventing the Iranian regime from obtaining a military nuclear capability. Regardless, this balancing act remains elusive.

Meanwhile, Iran spares no opportunity to reiterate its intention to continue its nuclear efforts. In early June 2008, Iran went so far as declaring that uranium enrichment was its red line and it was not prepared to suspend it, even as the international community offered Iran new enhanced incentives that included Western assistance in building state-of-the-art nuclear light water reactors. By reaffirming its desire to become a nuclear power, while rejecting international offers, Iran remains in violation of its Non Proliferation Treaty (NPT) obligations. For its part, the international community has never denied Iran's right to develop nuclear power for peaceful purposes.

Indeed this is a prerogative enjoyed by any willing nation in the world as long as their programmes are subject to international rules and regulations, including total transparency and verification. This is the job of the International Atomic Energy Agency (IAEA) and it constitutes part of the obligations expected of all signatories to the NPT. The latter has, since 1968, remained the most comprehensive and binding international framework designed to regulate and limit the proliferation of nuclear weapons in the world.

## The History

Iran is a signatory to the NPT. As such it has an obligation to reveal all the details of its nuclear activities to the IAEA and to make them subject to whatever inspection and verification measures are deemed necessary by the Agency. This, Tehran has consistently failed to do. While information about the emergence of Iran's efforts in the nuclear domain remains sketchy at best, it is well established that they pre-date the Islamic revolution and the establishment of the Islamic Republic by the late Ayatollah Khomeini in 1979. In fact, Iran's first nuclear facility, the Bushehr project, was begun under the late Shah in the 1970's.



Picture 1: The Bushehr Nuclear Complex

Iran's nuclear programme must be understood in the context of the traumatic experience of the Iran-Iraq war. During this time, Iran was unable to respond effectively to the missile attacks launched by Iraq against its cities and denied access to arms supplies by the arms embargo imposed on Iran by the United States and other Western nations. It is most likely against this background that Iran initially decided to reverse its 1979 decision to suspend its nuclear programme; the pursuit of non-conventional weapons, including

nuclear weapons, was meant to give Iran the kind of deterrence it lacked during the years 1980-1988.

Initially, Iran's quest to develop its own WMD deterrence capability was characterised by the following main features:

- Domestic development and production of copies of the SCUD missile usually in cooperation with countries such as China and North Korea, both of which quickly became the two most important suppliers of Tehran's re-armament programme during and after the war with Iraq;
- Development and production of a chemical and biological weapons capability regarded as a direct response to Iraq's use of such weapons against Iranian forces during the war;
- A clear ambition to develop a nuclear capability with potential of 'weaponisation' of such a capability if or when the need arises.

At the same time, Iran's military build-up after its war with Iraq was not confined to WMD's. Tehran's top priority during the 1990's was (and still is) to rebuild and develop its military capabilities in all fields. Equally drawing on the experiences of the war, Iran embarked on a continuous programme aimed at improving all aspects of the performance of its military forces on the ground, in the air and at sea. It is estimated that during the period 1990-2000 total military expenditure amounted to no less than 50 billion US

dollars with large quantities of new generation weapons procured from Russia, other former Soviet Republics such as Ukraine and Belarus as well as China and North Korea.

In all these endeavours Iran was particularly interested in avoiding the effects of another potential arms embargo or any other form of sanctions similar to what it had suffered during the war with Iraq. A great deal of emphasis was thus placed on building a domestic development and production base which would provide the regime with a certain degree of self sufficiency both in peace and when at war.

Through its military expansion, Iran also took the decision to regain its strategic position as a regional superpower capable of defending its interests and projecting its power and influence wherever and whenever it deemed necessary.

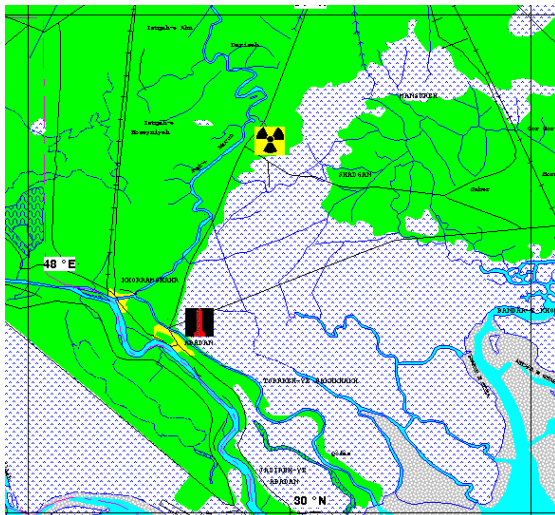
It is from this angle that Iran's nuclear programme should be viewed.

### **The Crisis**

The Islamic government officially put an end to the nuclear efforts pursued under the Shah as soon as it came to power in February 1979. The suspension in nuclear activities was brief - Iran's nuclear activities resumed as early as 1985, followed by clandestine procurement from the network run by Pakistani nuclear scientist Abdul Qadeer Khan in 1987 and the signature, in July 1989, of a cooperation pact between Iran and Russia, by then President Hashemi Rafsanjani. The pact covered the utilisation of nuclear materials and

related equipment for peaceful purposes.

This effort was followed in 1993 by an agreement signed with China to supply Iran with two 300 megawatt reactors under project *Istiqlal* (Independence), located in the *Darkhovin* facility, south of the city of Ahwaz and by China's agreement to supply Tehran with an HT-6B fusion reactor which was installed at the Plasma Physics Research Centre of Azad University.



Picture 2: Location of the Darkhovin facility.

By then Iran's nuclear efforts were going full steam ahead. Bushehr was originally constructed by the German company Siemens during the Shah's rule and had been shut down following Iraqi bombardment during the Iran-Iraq war.

After Germany turned down Iranian requests to complete the nuclear facility, Tehran sought help from Moscow. The Kremlin agreed and by March 1994 Russian experts were scheduled to start working on installing the first unit of a new Iranian 1000 megawatt plant at Bushehr.

Despite these growing activities, Iran's nuclear programme did not come into international focus until 2002, when an opposition group, the National Council of Resistance of Iran (NCRI), revealed the existence of an uranium enrichment facility at Natanz, and a heavy water plant at Arak.

For its part, Iran still insists that its efforts are entirely peaceful and intended to provide the country with its future requirements for energy.

However this argument was not found particularly convincing, for the following reasons:

- Iran is an oil rich country which can provide for its energy supply much more economically and easily from its oil and natural gas reserves rather than through a switch to nuclear power.
- Iran's nuclear programme centres on uranium enrichment, although Iran is not building, nor does it have, any uranium fuelled reactor anywhere in the country, with the exception of Bushehr;
- The Bushehr reactor, however, is meant to be fuelled by Russian-supplied uranium, something that makes Iran's enrichment efforts wholly unnecessary and therefore suspicious.

Added to this is the secrecy in which Tehran managed to shroud its nuclear plans. For nearly two decades Iran did not inform the IAEA of the true nature of its activities, in total contradiction to its obligations under the NPT regime.



In a report released as early as June 2003, the IAEA said that Iran 'has failed to comply with the terms of the Nuclear Non Proliferation treaty'.

Iran eventually signed – but did not ratify – the Additional Protocols agreement with the IAEA in December 2003 and agreed to a temporary suspension of its enrichment activities. Iran and the European Union signed the Paris Accord in October 2004. However, Tehran rescinded these agreements in January 2006 by removing the UN seals at its Natanz enrichment plant and resumed its research on nuclear fuel. By April 2006, Iran publicly announced its enrichment activities. Regardless of whether it was a publicity tool to present a threat, or simply a statement of fact affirming his country's true intentions, Iran's President, Mahmoud Ahmadinejad announced that Iran had enriched uranium to 3.6 percent.<sup>1</sup>



**Picture 3: President Ahmadinejad on a visit to Natanz enrichment facility**

Despite international warnings that this would endanger efforts to reach a compromise on the issue, Iran persisted in its enrichment activities.

The situation slowly deteriorated throughout 2006-2007, with Iran

continuing its enrichment programme and insisting repeatedly that it would not relinquish its right to conduct such activity domestically. Meanwhile, the international community was showing increasing signs of anxiety mixed with growing frustration at Tehran's posture. In June 2006, the UN Security Council Permanent Five powers and Germany (P5+1) offered a list of incentives for Iran to suspend enrichment activities. When Iran turned the offer down, Iran was referred to the Security Council. Four UN Security Council Resolutions have been passed since July 2006 and the IAEA has tried hard to maintain an ostensibly balanced and cautious approach. Unfortunately, U.S. sources introduced a measure of ambiguity to the crisis.

The key findings of a U.S. National Intelligence Estimate made public in December 2007 threw doubt on the possible military objectives of Iran's nuclear programme.<sup>2</sup> The report stated that analysts had concluded that Iran's technical efforts on weaponisation had been 'frozen' in 2003. This was widely interpreted throughout the world, and indeed by Iran itself, as a reversal of the hitherto consistent claim by the Bush administration of Iran's military nuclear intentions. It took several months and numerous explanatory efforts by President Bush and senior members of his administration to retract the perceived conclusion of that report, emphasize that other essential aspects of a military nuclear program – uranium enrichment and missile development - were ongoing, and to go back to the standard U.S. policy line of insisting that Iran's objectives were after all military first and foremost.

There was yet another round of revived diplomatic efforts during the spring of 2008. Iran was presented with an updated version of the P5+1 incentives package aimed primarily at finding a mutually acceptable formula for enrichment which would satisfy both Tehran's stand on the subject and the international requirements for transparency and verification.<sup>3</sup> Another proposal, articulated in a March 2008 article in the *New York Review of Books* by three prominent former U.S. diplomats, even went as far as proposing a compromise whereby Tehran could continue its domestic uranium enrichment programme under international supervision.

Despite a flurry of diplomatic efforts, time is running out for a mutually acceptable solution. The most recent IAEA report, presented in late May 2008, went further than ever before in criticizing Tehran's record. The agency is still deeply concerned with Iran's nuclear programme. The report highlighted Iran's progress in enrichment activities and revealed improved operation of a larger number of centrifuges at the Natanz<sup>4</sup> uranium enrichment plant.



Picture 4: Iran's Shahab 3 missile

This IAEA report also presented, for the first time, intricate details of Iran's military programme, including evidence of Iranian experiments with detonators specifically designed for nuclear weapons, efforts to install nuclear warheads on an operational ballistic missile, the Shahab 3<sup>5</sup> (which Iran recently tested during military exercises in the Gulf), studies of the effects of nuclear blasts, and the central role of military institutes and industries in the nuclear programme.

The evidence referred to puts to rest the confusion triggered by the NIE: Iran's military programme appears to be developing rapidly without much difficulty, aside from tepid sanctions and technological hurdles, which Iran will eventually overcome.

### Sanctions

While sanctions have yielded important results, it may soon become manifest that they fall short of persuading Iran to desist from its nuclear ambitions. Even the mild sanctions so far agreed by the UN Security Council have been reached with great difficulty and any expansion looks difficult. There is little likelihood that Russia would be prepared to join such a scheme and an even lesser chance in the case of China, which depends heavily on its commercial ties with Tehran with regard to oil and gas supplies vital for its economy. In return for the supply of crude, vital Chinese military assistance is awarded to Iran. Even positions within the Western alliance itself are far from united in their approach towards dealing with this crisis. The US and to a lesser extent

Great Britain have often indicated their total opposition to Iran's nuclear activities. France has expressed her resolute solidarity with the Anglo-American policy stance. But with other EU countries favouring continued dialogue over direct confrontation, and powerful economic interests acting as a deterrent to the push for tougher sanctions, the carrot-and-stick policy may fail to achieve the desired goals, unless it is greatly enhanced. While it may still be premature to talk about a schism within the Western alliance on this issue, the prospects for a compact transatlantic front able to apply and sustain heightened pressure on Iran may be dim.

Equally problematic will be any efforts to reach a unified political or economic sanctions regime against Tehran by its regional neighbours. While the members of the Gulf Cooperation Council (GCC) may be extremely apprehensive of Iran's nuclear ambitions, they also feel deeply reluctant to be seen as openly antagonistic to Tehran. The same would probably apply to other pro-Western governments in the region such as Egypt and Turkey.

The timing of the Iranian efforts and of any measure aimed at countering them is also proving to be particularly significant. With the United States in the midst of a Presidential election campaign, and with the present Bush administration nearing the end of its term, it becomes evidently difficult to predict US policy beyond January 2009.

If these problematic features surround any possibility of viable international

pressure on Tehran, and they eventually lead to a virtual paralysis, wouldn't this inaction be seen by the Iranian authorities as essentially a 'green light'? If that is the case, would that encourage, even by default, the emergence of a possible 'worst case scenario' whereby the military option becomes the only effective way of tackling this problem? If so, then perhaps it is wise to consider what choices are available, including military intervention.

Is there an effective military option to solve this crisis? In discussing the possibility and prospects of any military action against Iran's nuclear programme, a variety of points seem to be unanimously agreed upon by both diplomats and defence analysts.

### **Options**

There is no doubt whatsoever that the Iranian nuclear programme constitutes a dilemma of major proportions both to countries in the Middle East and to the international community as a whole.

Regardless of the specific details of this programme and its multi-faceted potential intentions and objectives, the simple fact is no one can be absolutely certain of the ultimate goals that Tehran is trying to achieve through its nuclear ambitions. One thing is certain, and that is, as put by the Iranian President himself, Iran is determined to acquire 'a nuclear posture'.

While this might not necessarily mean a traditional path to develop or even explode a bomb, as done by countries such as India and Pakistan, Tehran's

objectives could be perfectly satisfied with a rather more ambiguous status whereby uncertainty about its nuclear potential becomes the key word. This view has been repeatedly articulated by Iranian official and semi-official literature referring to the idea of a 'bomb in the basement' preferred by Israel and to a lesser extent South Africa under its former apartheid regime.

As such, Iran might believe that it can quite plausibly follow a path of nuclear development shrouded in enough secrecy to render all possible verification efforts by the international community of its true intentions and/or capabilities essentially redundant, if not outright useless. Thus, through that approach Tehran would not even need to publicly announce that it had reached weapons-grade uranium or plutonium in its enrichment activities and it certainly would not require to test a 'device' as a way to prove its nuclear-military capability. All it needs to do, and perhaps that is precisely what is intended by the whole current process, is to keep everyone else guessing.

Can the region and the world tolerate, accommodate and ultimately accept such a scenario? And if that is the case, what could be the consequences politically, militarily and strategically?

If not, what options are available to pre-empt Iran's quest for its long sought 'nuclear posture'?

The problems facing any accurate assessment of the present situation and the various options required to

deal with it are manifold. They can be summarised as follows:

*There is very little certainty surrounding the exact number of Iranian nuclear facilities, the precise nature of activities going on in those facilities, their location and actual functions and objectives.*

While it is commonly accepted that there are no fewer than twenty major nuclear sites spread practically all over the country, it remains quite possible and even probable that there are as many 'shadow' facilities whose functions are to duplicate the activities of the publicly known plants.

The 'known' Iranian facilities engaged in nuclear efforts at the moment include:

- Anarak
- Arak (an important heavy water 40MW reactor with another smaller facility thought to be capable of producing up to 9kg of weapons grade plutonium per year according to Western Intelligence sources -- enough to produce one bomb)
- Ardakan
- Bonab
- Bushehr (a major site which includes two reactors and is scheduled to be completed with Russian help by the end of 2008)
- Chalus
- Darkhovin
- Isfahan (various facilities mostly engaged in research and uranium conversion)
- Karaj
- Lashkar Abad

- Lavizan (military installation under Ministry of Defence control, referred to as The Physics Research Centre)
- Natanz (another important site with several facilities under both military and civilian control engaged in uranium conversion)
- Parchin (military installation under Ministry of Defence control specialising in high explosive research)
- Saghand
- Tehran (various sites in and around the city mainly engaged in research and development)
- Yazd

The list of confirmed and suspected locations above illustrates the formidable obstacles faced by the international community in its efforts to verify in any credible way what is happening in Iran's programme at any particular time.

The IAEA has publicly criticised Iran for denying it access to several of the above mentioned sites, particularly those under military control. And the agency also made it clear that documentation related to activities in those sites has not been made available to its inspectors. It also constitutes an operational nightmare for intelligence gatherers, not to mention military planners if or when the need might arise to resort to the 'military option'.

*No military option effectively or hypothetically being discussed, at present or in the foreseeable future, would include a physical invasion of Iran as such.*

An invasion is regarded out of the question for numerous reasons, above all the formidable challenge of performing and maintaining such a task. Iran is a huge country with an area of more than 1.6 million square kilometres and a population close to 70 million people. Iran's regular armed forces (including the regular units of the IRGC) are estimated at some 500,000 in total. These would be augmented by no fewer than two million 'volunteers' (Baseej) and local militia members (Kommittas).



Picture 5: a Revolutionary Guards' Poster

Iran's military capabilities have grown exponentially over the last few years. Tehran has acquired advanced combat aircraft such as the MiG-29 multi-role fighter, MiG-31 long range interceptor, Sukhoi Su-27 air superiority fighter and the Sukhoi Su-24 long-range tactical and maritime strike bomber. It has also developed new types of air defence systems, including the long range SA-5 Gammon (S-200) and the SA-10 (S-300) and the multi-layered Pantsir S-1 SAM systems.<sup>6</sup>

Tehran was also particularly keen to obtain a 'blue-water' capability for its naval forces with particular emphasis on controlling and blocking - if need be - the vital maritime routes in the

Persian Gulf. This included the acquisition of, amongst others, Russian (kilo-class) submarines, missile-armed Fast Patrol Boats's and long-range surface launched and air launched anti-ship missiles from China.

Even if - in terms of conventional warfare - those armed forces are still not a match to a modern technologically-advanced war-machine such as the US Army or other Western armies, they would nevertheless constitute a huge challenge if they were to be deployed and operated by Tehran in a Low-Intensity Warfare campaign against a potential occupation force by foreign powers, rendering the whole exercise essentially unviable.

Even if the military odds were more favourable, an invasion would almost certainly require an amount of operational, human and equipment resources which are simply not available at the moment. For a successful land invasion of a country the size of Iran, historical experience indicates that no fewer than half a million troops would be required, with the corresponding complement of armour, artillery and other support equipment. This has been proven time and time again in major confrontations since the 2<sup>nd</sup> World War with 'Operation Desert Storm' in Iraq during 1990-91 being a prime example.

More than 500,000 Coalition troops were deployed at the time in what was not even a full scale invasion. The example of 'Operation Iraqi Freedom' in 2003 remains to this day a case study of how the lack of adequate resources on the ground would

eventually turn a successful initial conquest into an ongoing quagmire.

There is very little doubt that an Iranian scenario would be far more difficult and costly than the Iraqi one. With the US Armed Forces currently stretched to their near limits as a result of their engagement in both Iraq and Afghanistan (and the same applying to varying degrees to the British forces and other European armies), the resources crucially required for any invasion in Iran are simply not available and probably will not be any time soon.

### **The Military Scenario**

*An outright land invasion of Iranian territory can then be ruled out. Assuming a failure of ongoing political and economic punitive measures to yield a change of behaviour on the part of Iran's regime, the only plausible military option available to destroy or at least severely downgrade Iran's nuclear programme is a surgical strike aimed at vital Iranian installations both directly and indirectly related to it.*

There is a general consensus that such a military option is both available and possible. Military analysts agree that in the face of a concerted operation involving air force, naval and missile assets, coupled with the probable deployment of teams of Special Forces capable of operating on search and destroy missions for short periods deep inside Iranian territory, Tehran might have very limited capabilities of engaging or countering such an operation effectively.

However, what constitutes a 'surgical' military strike remains itself open to debate. It is unclear for military planners and analysts alike whether

such an attack can be defined as a single overwhelming operation using the maximum level of firepower quantitatively and qualitatively, and whether such an operation on its own would be capable of achieving its objectives.

If the answer to the above were negative, then another possible scenario would emerge, still within the domain of air operations, but no longer restricted to one strike. This would require a strategic offensive campaign, which could take days, perhaps even weeks, aimed at destroying Iranian targets which are deemed of relevance to the objective of halting Tehran's nuclear activities. A strategic offensive air campaign would be reminiscent of the one to which Iraq was subjected during the opening stages of 'Operation Desert Storm', when some 1,500 Coalition combat and support aircraft were engaged in a sustained series of air attacks against Iraqi targets over a period of several weeks in preparation for the land invasion that led eventually to the liberation of Kuwait.

The Iranian Air Force and the air elements of the ICRG have been rebuilt and modernised considerably since the end of the Iran-Iraq war. Iran's estimated order of battle currently comprises around 500 combat aircraft, half of which are considered of high quality. These include such recent Russian-made aircraft as the MiG-29, as well as some of the remaining US-made F-14 Tomcat fighters supplied under the Shah. Iranian air defences have equally been updated with Russian-made

SAM systems which would pose a threat to any attacking force.



**Picture 6: The Russian-made Pantsir S-1 SAM system**

These assets cannot be regarded, however, as a fully integrated defensive shield capable enough to obstruct or prevent a concerted effort from taking place. As such it would be safe to assume that an attacking force comprising modern strike aircraft, strategic bombers and stand-off long range cruise missiles, both air launched and sea launched, would almost certainly be able to reach and destroy its designated targets inside Iran.

If the United States, with or without its Western allies, were to attack, it would almost certainly resort to using a combination of all the above mentioned assets including land-based F-15 E Strike Eagles, carrier-borne F-18 E Super Hornets, B-2 Spirit Stealth bombers and other land-based long-range strategic bombers such as the B-1 Lancer and the B-52 Stratofortress. This attacking force would also be augmented and defended by multi-role and air superiority fighters such as the F-15 Eagle, F-16 Falcon and even the new F-22 Raptor Stealth fighter.



**Picture 7: The B-52 Stratofortress**

While the numbers required to launch an attack of this magnitude remain debatable, it would be likely that the figures involved would reach several hundred aircraft. Undoubtedly, the US would also deploy large numbers of long-range air-launched and sea-launched (both ship and submarine) cruise missiles such as the Tomahawk with ranges up to 2,500 kilometres. Also of note would be the almost certain use of various air-launched special munitions such as the JDAM and similar weapons designed specifically for precision-guided deep penetration attacks against fortified targets.

With these assets, the US and its allies could inflict serious damage on the known targets related to Iran's nuclear programme. They could also inflict serious and perhaps debilitating damage on other Iranian vital installations.

Depending on the exact objectives of any military operation, the list of potential targets would extend from those immediately and directly related to the nuclear programme, such as those listed above, to a much wider range of centres and institutions. While a 'limited' strike would be expected to concentrate on nuclear-

related targets per se, a more elaborate offensive would hypothetically extend to include the following: targets of general military significance, such as air bases, air defence sites, naval bases, military production facilities, troop concentrations, military command and control centres, intelligence headquarters etc.

Rather than being merely aimed at halting Iran's nuclear plans, this would be directed at paralysing its armed forces and preventing any meaningful conventional retaliation by Tehran.



**Picture 8: The strategically located Bandar Abbas Port is a likely target in a broader campaign aimed at neutralising Iran's military capabilities and minimising Iran's retaliatory actions.**

A particular emphasis in this scenario would naturally be placed on attacking the assets of the IIRCG. Over the years, Tehran heavily invested in re-organising and re-equipping as well as training and expanding the regular units of the IIRCG. Sustained efforts were made to improve the battlefield coordination and operational integration of these units, and between the IIRCG and the regular armed forces, characterised also by the



formation of several 'Special Operations' (S-Ops) units dedicated to commando, sabotage and behind-enemy-lines operations. In case of an attack, the elite units including Al Quds Corps, ballistic missile launchers, anti-ship and coastal missile launchers, air elements and naval bases used to launch its notorious fleet of speed boats armed with anti-ship weapons, would be targeted. The latter fleet is reportedly composed of several hundred vessels ranging from rubber dinghies carrying squads of suicide commandos and armed with portable rocket launchers to fully fledged FPBs (Fast Patrol Boats) armed with long-range anti-ship SSMs.

An even wider ranging campaign would include targets of economic and political significance, such as industrial complexes, energy generating facilities, oil refineries, sea ports and airports, communication networks and transport installations. Obviously this would be aimed at inflicting as much economic damage on Iran's infrastructure as possible and paralysing its economic output, hence creating a general sense of anarchy which the regime might find difficulty to contain and control.

If the campaign were to include 'regime change' as one of its objectives then its targets would include the institutions of the regime itself. This would entail attacking central and provisional governmental offices, leadership headquarters, administrative networks and official media outlets. Of course, if the US and its allies chose to incorporate these targets into their strategy, a military strike against Iran would no longer be

exclusively focused on its nuclear facilities. This eventuality would certainly change the 'rules of engagement' and turn the offensive into an all-out conflict directed at destabilising and ultimately unseating the regime founded by the Islamic Revolution in 1979. Consequently, such a broadened objective would have profound political and strategic implications both within and beyond Iran's borders with no guaranteed outcome.

*How could an attack be done?*

On a numerical level, the US can theoretically deploy up to 1700-1800 combat and support aircraft on missions ranging from air superiority, escort, area and point air defence, strategic and tactical strikes, deep penetration interdiction, air defence suppression to close air support. Moreover, it is widely believed that the US Air Force and the US Navy would almost certainly be capable of eliminating any viable threat posed by the Islamic Republic of Iran Air Force (IRIAF), the air elements of the IRCG and the Iranian Navy within hours. It is also believed that American C4-I (Command, Control, Communications, Computers, and Intelligence), as well as AEW (Air-Borne Early Warning), ECM/ECCM (Electronic Counter/Counter-Counter Measures), Aerial Refuelling and other forms of Force-Multiplication assets would be able to support the main combat elements and achieve total air supremacy over Iranian airspace and the surrounding areas within a very short time.

If other Western allies decide to take part in the operation, those coalition

assets could be increased by some 10-15% and would also provide considerable political and logistical backing.

One thing would remain profoundly problematic, however.

While there is no disputing the fact that such an air campaign would have a devastating impact on Iran and its nuclear programme as well as its political and military command and control structures and capabilities, there remains no guarantee that it would be totally successful. On the other hand, an expansion of targets beyond nuclear installations could prevent some, but not all, of the worst fallout expected from an attack.

This poses the question of whether the outcome of such an attack must be by definition a 'total success', or whether it would suffice to achieve any degree of 'partial success'. The pitfalls here are numerous:

*How would anyone be absolutely certain that the known targets attacked are the only targets that Iran depends on in its nuclear endeavours?*

If the other unknown shadow targets remain intact, what impact if any would such an attack have in obstructing or stopping the Iranian nuclear programme in the long run?

*How 'surgical' can such an attack actually be, notwithstanding all the latest advances in precision guidance and pin point accuracy?*

It has become commonly accepted that even in the most careful planning and intelligence-gathering operations

mistakes still occur, particularly when targets under attack happen to be mixed with civilian populations and infrastructures, and when many of them are intended for dual purpose in the first place. Collateral damage in this case has always been and will always be inevitable, generating potentially unacceptable political ramifications.

*How accurately can Iran's likely responses be anticipated and effectively contained?*

It is generally agreed that while Iran might not be able to confront an attack with overwhelming superior forces against it conventionally, it would almost certainly resort from the outset to 'unconventional' methods in responding to what it would naturally consider as an aggression.

*How severe will the political fallout be?*

Ideally any military strike would hypothetically include the US and at least some West European allies such as Great Britain and France. This would add valuable assets to the Allied air effort and would demonstrate wider political support. However, the converse is also true: Absent of minimal international participation would have severe political repercussions, beside which the 2003 crisis over the Iraq war would pale by comparison.

*What if Israel does it alone?*

An added complication, of course, is the 'Israeli Dimension'. Iran's President, Mahmoud Ahmedinejad has repeatedly called for the Jewish State to be 'wiped off the map'. And

regardless of whether such reiterations are made purely for propaganda purposes as some would claim, or whether they constitute an integral part of Iran's foreign policy, it would be impossible to ignore the potential threat that Israel would feel if or when Tehran acquires nuclear weapons. This situation adds another source of strategic tension and poses the inevitable question: could Israel ever tolerate a nuclear-armed Iran as a threat, and if the world does not act would it then feel obliged to act on its own?

The absence of other participants and the possible non-US involvement as a result of a potential change of policy in Washington leaves the prospect of 'Israel going it alone'. Here the necessary question becomes whether the Israelis are indeed capable of such a task on their own. While hypothetically this might be the case, operationally speaking it would be an extremely difficult and complicated operation even for the Israeli Air Force.

If Israel were to launch an attack against Iran on its own, its reported military assets would include up to 300 high quality combat aircraft, including F-15 E Strike Eagles, F-16 Falcons and F-16 I Super Falcons as well as Phantom-2000 Kurnas Air-Superiority and Strike aircraft. They would also be supported by a large network of Force Multipliers including Electronic Warfare and Aerial Refuelling tankers.



**Picture 9: An Israeli Phantom 2000 Kurnas**

But the operational challenges are not insignificant. Firstly, Israel's distance and lack of geographic contiguity with Iran requires Israel to fly over a number of regional players, complicating the mission at the political and operational level. Secondly, distance requires additional resources for refuelling purposes – something which would stretch Israel's capabilities to the limits. Thirdly, an Israeli attack would necessarily be much more limited in scope and may aspire only to downgrade Iran's nuclear programme, while leaving its military might – and consequently its ability to retaliate – practically intact.

The regional fallout of a solitary Israeli action would resemble the one expected from a US-led strike – only more amplified. Politically, one can expect little difference, because in terms of public and government perception in the region, Israel and the US are so closely associated as to make few people doubt that an Israeli attack, even if launched alone, would enjoy US support. Furthermore, the geographical challenges of such a mission would make it unlikely that Israel would attack without some degree of advance warning to and coordination with the US.

## The Fall-Out

Perhaps the main downside of any military option against Iran lies in the eventual outcome which may result from such a development, not on the battlefield or even within Iranian territory, but on a broader regional and strategic level.

The first and perhaps spontaneous Iranian reaction to any attack on its territory would be expected to rely on retaliation through its arsenal of ballistic missiles.

There are various estimates of Iran's capabilities in this domain. The most reliable information available indicates that Tehran currently possesses more than 1,000 surface-to-surface ballistic missiles with ranges between 300 and 2,500 kilometres.

They include:

- The Shehab 1, believed to be a locally produced copy of the Soviet-era SCUD-B missile with a range of 300km. Some sources indicate that the Iranians with North Korean help have managed to increase this range to 500km with a 500kg warhead.
- The Shehab 2, believed to be a locally produced copy of the North Korean developed SCUD-C with a reported range of 1,000 km and a warhead of 750kg.
- The Shehab 3, locally produced with North Korean help and Chinese technology with a reported range of 1,500 km and a 750kg warhead. It is believed

that Iran currently has around 100 of these missiles in stock.

- The Shehab 4, currently being developed and supposed to be a copy of the North Korean No Dong-1, with a range of 2,500 km and a warhead of 1,000 kg. Some estimates put the number of missiles produced of this type at 30-40, with production continuing.
- The Shehab 5, a missile with a reported range of 5,000 km which Iranian sources claim is being developed as a space delivery vehicle for Iran's planned satellite launch within the next 2-3 years, but with obvious military applications as an IRBM.

Other Iranian missiles believed to be operational include the X-55 long-range (2,500 km) cruise missiles, 12 of which were reportedly obtained by Tehran from Ukraine after the downfall of the Soviet Union. Also, Iranian sources speak of the Fajr-3 missile with a range of 2,500 km. This was reportedly tested by the Iranians a few years ago, but it is not entirely clear whether it is a new type or just another name for one of the already existing Shehab missile family.

There is very little doubt among officials and analysts alike that if Iran were to be attacked its first priority would be to retaliate by launching its missiles against a network of what Tehran perceives as 'legitimate' targets in the region. These would evidently include Israel as well as US and other allied bases in the Middle East and the neighbouring Gulf States.

If Iran were to resort to non-conventional means to respond to an attack on its nuclear facilities and other targets, it would have multiple options. Operations by Iranian forces and Iranian proxies could reach across the whole Gulf area, as well as to other parts of the Middle East. Indeed such operations might cover the whole world and take the form of terrorist activities against US, Israeli and other Western interests both military and non-military. Possible scenarios could include the following:

1. Attempts by Iranian forces to interrupt or even cut off oil supplies in the vital maritime routes in the Gulf and the Strait of Hormuz, using dispersed, highly mobile and lightly equipped elements of the IRCG, in suicide attacks against shipping activities in that region. That was a tactic which proved reasonably efficient and cost effective for Iran during the Iran-Iraq war. Tehran could well resort again to using it in the face of overwhelming odds which it would face in a direct naval confrontation.
2. Suicide and other forms of attack against US and Western targets in the neighbouring Gulf States, aimed at spreading a general sense of instability and crisis in the whole region. Again such tactics might not be confined to direct military targets but could include other symbols of Western presence such as embassies, educational facilities, banks and other commercial institutions,

multinational corporations and commercial aircraft activities.

3. Tehran is expected to retaliate against a US attack through its allies and proxies in Iraq, where Iranian influence has become a prominent factor amongst Iraq's Shiite community. This would obviously mean additional burdens for US forces in Iraq, and further complicate efforts to stabilise the country.
4. Iran could choose to unleash its pro-Iranian Hezbollah (Party of God) militia in Lebanon. Tehran has gained considerable influence in Lebanon in recent years, mainly through the political and military presence of Hezbollah, and its strategic alliance with neighbouring Syria. Hezbollah is now considered the major military power in Lebanon and its armed element is regarded as an operational extension of the IRCG, enjoying common training, equipment, operational doctrine and strategic objectives. The leadership of Hezbollah itself takes pride in describing the party as a 'regional player and inseparable part of Iranian strategy in the area'. It would be inconceivable, therefore, for Hezbollah to remain inactive in a situation in which Iran is subjected to an attack by the US or any of its allies. The expected course of action for the organization would most likely take the form of an attack against Israel in order to

reignite their conflict - in a much more vehement and widespread fashion and without ruling out the possibility of direct Syrian involvement.

5. Tehran could also embark on, or at least encourage and sponsor, acts of violence by various terrorist organisations and cells directed against targets in many parts of the world. While such acts might be predominantly aimed against US and Israeli targets, terrorist attacks might also target other cities and nations, particularly those supporting any attack on Iran, hence creating a general feeling of insecurity on a global level.
6. The uncertainties and instability triggered by an attack on Iran and Iran's retaliatory actions would no doubt have economic repercussions both regionally and worldwide. Some analysts go so far as to describe such an impact as potentially catastrophic, particularly if it were to have a long-term effect on oil supplies from the Gulf. They believe that it would lead to further steep increases in oil prices which are already at record levels, pushing the world into a deeper economic crisis.

### **The Price of Non-Action**

Needless to say the grim fallout would be sufficient for many to view any military option against Iran and its nuclear programme with deep

scepticism, and for some to consider that option an exercise in futility. In light of the anticipated range of responses and their consequences, military planners would endeavour to mitigate at least some of the worst expected effects of an attack.

Regardless, some argue that whatever the political, economic or military cost of such an option, it would still be less dire than the consequences of Iran acquiring a nuclear posture, let alone deliver a nuclear weapon. This view has been repeatedly advocated by Senator John McCain, the presumptive Republican nominee for the US Presidency. And more recently it had been articulated by his Democratic rival, Senator Barack Obama, who has pledged to prevent Tehran from obtaining nuclear weapons, whatever the cost.

Is it at all possible for the region and the world to envisage the emergence of a nuclear-armed Iran? And will it be an acceptable option to tolerate such an eventuality? Perhaps the most pressing question of all is how a nuclear Iran would change and affect the strategic correlation of power regionally and globally.

### **Tehran's nuclear shadow**

Iran's objectives have become quite clear and it would be no exaggeration to say that, first and foremost, they are focused on establishing its position as a major regional superpower with the ability to project, defend and consolidate its influence and strategic interest throughout the area. In order to achieve that paramount objective, Iran recognises the need to reinforce its military and strategic position with

a credible deterrence capability which would pre-empt, in Tehran's view, any aggression against it, or any attempt to destabilise the regime, as well as any threat to its vital interests in the Gulf or in the Middle East as a whole.

It is obvious that Iran's nuclear programme constitutes only one major element in Tehran's quest to achieve these goals. There are also other elements which might not have enjoyed the same amount of attention but are nevertheless still vital in that equation.

Tehran already possesses a considerable arsenal of chemical and biological munitions and has been engaged for many years in developing and deploying a credible offensive capability based on ballistic missiles which are destined to reach ranges of up to 5,000 km in the next few years. If current assessments of this programme prove accurate, this would coincide with a similar dateline for Iran's success in acquiring a weapons-grade nuclear capability.

Such a combination would undoubtedly give Iran the credible nuclear deterrence that it seeks, regardless of whether Tehran declares such a capability or not. Needless to say, this would be a fundamental turning point in the strategic map of the Middle East, and would have crucial ramifications for the world as a whole.

Iran would have achieved parity with all its regional present or potential foes, and consequently enjoy unprecedented leverage in its relationship with its immediate

neighbours. It might even be argued that Tehran would actually envisage such a development as a guarantee of impunity against any threats - military or otherwise - in the future.

In a highly volatile and inherently unstable region like the Middle East and its immediate surroundings, such a situation can only lead to further instability. It will also enhance the feeling that trying to avoid a confrontation at a particular stage of a crisis only serves to pave the way for a further and far worse conflict at a later date.

Iranian influence in the Gulf and the wider Middle East would be enhanced to unprecedented levels. Tehran already enjoys a strategic alliance with Syria. It also sponsors local groups with significant political and military assets in countries stretching from Iraq to Lebanon and the Palestinian Territories as well as several of the neighbouring Gulf States.



Picture 10: Iran's President, Mahmoud Ahmadinejad and Hezbollah's Secretary General, Hassan Nasrallah

Iranian authorities do not hide the importance they attach to these groups and their potential impact on their respective societies. This applies to organisations such as Hezbollah in Lebanon, the Palestinian Hamas

movement, a large section of the Shiite community in Iraq and significant Shiite constituencies in both Kuwait and Bahrain and the eastern parts of Saudi Arabia. If Tehran could be expected to use its influence with these groups as part of its retaliation against a military attack, it is equally plausible that such influence would be correspondingly enhanced by Iran's newly acquired nuclear posture.

For some in the Gulf and the Middle East, the prospect of a nuclear Iran would lead to 'unthinkable' consequences. While such sentiments are usually kept private, they are widely shared in the region, not only in official government circles, but also amongst the general public. In what was later retracted as a 'slip of the tongue', King Abdullah II of Jordan warned in 2004 of 'a Shi'ite Crescent'<sup>7</sup> extending from Iran on the Persian Gulf to the Mediterranean shores of Syria and Lebanon and its consequences on the situation in the Middle East. With sectarian tensions growing, fears that a nuclear Iran could escalate the Shi'a-Sunni divide run deep among regional rulers and the public alike.

Iran's ascendancy indeed coincides with rising tensions in the Muslim world amongst Shi'ites and Sunnis. Although these tensions were exacerbated by the conflict in Iraq in the wake of the downfall of the regime of Saddam Hussein, they are not confined to the Arab world. Similar conflicts are currently simmering in Pakistan, Afghanistan, Bangladesh and even predominantly-Muslim areas in Africa. These rivalries have always been endemic to Islam since the days

immediately following the death of the Prophet Mohammad in the 7<sup>th</sup> century. However, they are now taking a far more political and socio-economic dimension than simply matters relating to faith. The Islamic Republic presents itself as the 'guardian' of the Shi'a and a representative of its interests - similar in many ways to what Saudi Arabia regards itself as vis-à-vis the Sunni world. The potential for conflict between these two countries along sectarian lines can only increase, particularly if Iran succeeds in establishing itself as a regional super-power extending Shi'ite influence in the neighbourhood.

The destabilising effects of Iran's influence and power projection capabilities in the region cannot be overestimated when it comes to the Arab-Israeli conflict. Hezbollah in Lebanon has recently been granted veto power over Government decisions after a long stalemate which had previously prevented the election of a new President. The May 2008 'Doha Agreement' managed to resolve that crisis, bringing about the election of former Army Commander, Gen Michel Suleiman, as President.

However, this came at the price of Hezbollah and its allies becoming the single most influential force in the country. Hezbollah's influence is not merely political. It also constitutes the most powerful military force in Lebanon - even more so than the army. Thanks to direct Iranian and Syrian support, Hezbollah's leadership is able to boast an arsenal comprising more than 20,000 rockets and missiles which it describes as 'a strategic deterrent' against Israel. For its part,



Israel considers Hezbollah's military wing as in fact a direct extension of the regular units of the IRCG. If these assumptions are correct, it would mean that Iran has managed for the first time in the history of the conflict to become a direct player in the Arab-Israeli arena with forces actually deployed along the Israeli border and in their vicinity. And with its growing links to Hamas and other Palestinian movements, Tehran will not be coy about actively playing such a role.

Indeed, its officials habitually declare the 'liberation of Jerusalem' as a central priority for Iran's policies. Although this ideological commitment does not necessarily reflect an actual obligation by the Islamic Republic to engage in an active pursuit of Israel's destruction, it remains nevertheless a powerful tool which Tehran can always resort to whenever it deems it in its interest. And with the hard line elements within the regime led by President Ahmedinejad repeating those sentiments, a nuclear Iran would undoubtedly add to Tehran's leverage on the conflict and its future developments - to the extent that, under a nuclear umbrella, one cannot rule out the possibility of Iran claiming a veto power on any possible peaceful settlement which it might deem detrimental to its interests.

Another source of potential destabilisation would be the detrimental effect of a nuclear Iran on the situation in post-war Iraq. Tehran already enjoys close ties with several Shi'ite Iraqi factions including SCIRI and its armed wing, the Badr Brigades, and the opposition led by cleric Moqtada al-Sadr and its affiliated

militia, the Mehdi Army. While relations between these groups oscillate periodically between relative cooperation and outright confrontation, it would be quite feasible for Tehran through its financial support and political influence to control their future behaviour. This would ultimately affect the policies and attitude of any future Iraqi Government, particularly in view of the fact that any such Government is expected to be Shi'ite dominated. Iran no doubt aspires to consolidate its position as a major power-broker in post-Saddam Iraq. Its nuclear ambitions can only serve to facilitate that objective.

A nuclear Iran is also poised to become a major arbiter of energy prices. Iran is currently the fourth largest producer of oil in the world and it holds the second largest known reserves of natural gas. Despite predictions that Iranian oil reserves may be dwindling and might not last for more than 50 years (in fact, an argument used by Tehran to justify its nuclear programme), there would still be still ample scope for Iran to play a central role in influencing oil politics on a global scale for at least several more decades. With an enhanced political and strategic posture, a nuclear Iran would be able to affect energy policies in the neighbouring Gulf States and the Caspian basin, in addition to asserting its control of the adjacent maritime routes vital to oil supplies worldwide. A confrontation which would be avoided over Iran's nuclear programme now might become inevitable if or when oil supplies became subject to a dispute

between the international community and a nuclear Iran at a later date.

Over and above these considerations is the fact that a nuclear Iran will trigger a renewed and, probably far more dangerous, arms race in the Middle East, this time centred on acquiring nuclear capabilities, by other states in the region. Such a race, if nothing else, would put the final nail in the coffin of the NPT regime.

It is no longer a secret that already the ongoing crisis has rejuvenated the long-dormant nuclear ambition of several neighbouring countries. As a recent study by the International Institute for Strategic Studies indicates, 13 regional powers are seeking nuclear status as well – and Iran looms large in their calculus. Egypt is a prime example, with the regime expressing renewed interest in developing nuclear energy for peaceful purposes, after it forfeited such plans for several decades. Egypt may feel robbed of regional power status by Iran – and it may not be the only one. Another case in point is Saudi Arabia, which enjoys a long-standing relationship with nuclear Pakistan, and whose regional status would be seriously challenged by the rise of a nuclear Iran. A third candidate is Turkey – a NATO member whose decision to balance Iran's nuclear status with its own nuclear programme could have negative repercussions for the future of the transatlantic alliance.

An argument sometimes expressed in favour of allowing Tehran to pursue its nuclear ambitions has made the point that Israel is already widely believed to possess such weapons.

However, a nuclear Iran poses a completely different challenge to Arab powers – not to mention Israel, whose policy of nuclear ambiguity might be forced to change to respond to Iranian advances.

The threat of a nuclear Iran is of a different magnitude because, unlike Israel, whose nuclear arsenal is widely perceived to be geared to exclusively deterrent and defensive purposes, Iran is a revolutionary power and its aspirations by definition are to change the status quo in the region and shape the area in its own image and according to its revolutionary worldview. In light of its revolutionary fervour, a nuclear status may become an extraordinary tool to promote its revolutionary ambitions across and beyond the region.

That Iran may use its nuclear status only indirectly in order to project power in the region does not rule out the possibility that it might choose to lend nuclear weapons to its terrorist proxies or to proliferate nuclear technology by helping allies in the region and across the world to either build their own indigenous programmes or become equipped with Iranian supplied nuclear weapons. Given Iran's aspirations to supplant the now-defunct Soviet Union as the beacon of anti-Western movements across the globe, a repetition of the Cuban missile crisis – this time involving countries such as Venezuela – is not inconceivable.

The time frame for such efforts is not long; though intelligence assessments vary on the timeline of Iran's nuclear progress, past experience suggests that

nasty surprises are in order. This requires accelerating any non-military effort designed to delay Iranian progress, deny Iranian access to the required technology, and increase the sense of vulnerability and insecurity of the Iranian regime vis-à-vis the international community.

### **Conclusion**

There is no perfect solution to the nuclear standoff with Iran. The two scenarios hitherto described – bombing Iran or living with Iran’s bomb – are equally frightening and therefore require policymakers to

concentrate on alternatives to prevent both.

Whether Iran can be persuaded to halt its enrichment activities, fully disclose its nuclear facilities to IAEA inspections, abide by its NPT commitments and assuage international concerns about its nuclear activities is yet to be seen.

The international community should not relent in its efforts to induce a change in calculus in Tehran. The hour of a choice between two equally frightening scenarios is fast approaching.

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<sup>1</sup> Financial Times. *West May Bring Forward Date of Possible Iran N-Bomb*, 19 May, 2008, <http://www.ft.com/cms/s/0/12654090-e690-11da-a36e-0000779e2340.html>

<sup>2</sup> National Intelligence Estimate, *Iran: Nuclear Capabilities and Intentions*, November 2007

<sup>3</sup> *Iran to be Offered New Incentives*, 2 May 2008, [http://news.bbc.co.uk/1/hi/world/middle\\_east/7380804.stm](http://news.bbc.co.uk/1/hi/world/middle_east/7380804.stm)

<sup>4</sup> BBC News. *Iran Withholds Nuclear Details*, 26 May 2008, [http://news.bbc.co.uk/1/hi/world/middle\\_east/7420737.stm](http://news.bbc.co.uk/1/hi/world/middle_east/7420737.stm)

<sup>5</sup> IAEA Report, 26 May 2008, [http://www.isis-online.org/publications/iran/IAEA\\_Iran\\_Report\\_26\\_May2008.pdf](http://www.isis-online.org/publications/iran/IAEA_Iran_Report_26_May2008.pdf)

<sup>6</sup> Military data in this report have been compiled from a variety of published sources including The International Institute for Strategic Studies’ Military Balance and Jane’s Defence

<sup>7</sup> Washington Post, *Iraq, Jordan See Threat to Election from Iran*, 8 December 2004.

## *About the Author*

Kassem Ja'afar currently works as a diplomatic consultant in Qatar. During the early 80's he co-edited *Strategic Review*, a specialized newsletter on defense issues. He spent more than 10 years as a Middle East correspondent for the BBC. He also worked as Defense and Diplomatic Editor at *Al-Hayat* and *Al-Wasat*. He has authored and co-authored several books and articles on Middle Eastern and defense related affairs. He served for two years as a member for the Board of Governors of *Al-Jazeera*. He holds a BA from the American University of Beirut in Middle Eastern History and an MA and MPhil in War Studies from Kings College in London.

