

Iran: Looking Beyond the Assassination

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Working Draft:

November 30, 2020

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Important as the assassination of Mohsen Fakhrizadeh may be, it is only one part of the story. Like the killing of Qassem Soleimani, it has a major political impact and makes it even harder for the United States to negotiate with Iran. At the same time, both the assassination and Iran's nuclear program need to be kept in a broader strategic context.

How Far Has Iran Gotten Toward a Nuclear Device?

First, no one scientist dominated Iran's program. It is the cumulative result of efforts that began under the Shah in the 1970s, and which have evolved ever since. It also now draws on some 75 years of data and leaks since the first nuclear weapon – especially data on how France, Israel, Pakistan, India, and North Korea have acquired their nuclear weapons.

By 2013, there already were estimates that Iran had all of the technology it needed to make a weapon within a year if it could devote all of its enrichment activity to producing weapons-grade material. Such estimates were probably exaggerated then, and they may be exaggerated now, but one needs to be careful about the probable success of arms control efforts like the JCPOA.

The Impact of Advances in Iran's Missile Forces

Other aspects of the military balance are shifting. In 2013, the United States and its Arab strategic partners still had a decisive advantage in terms of modern airpower and precision strike capability relative to Iran's mix of missiles and aging or mediocre combat aircraft.

Today, Iran has demonstrated that it has advanced ballistic and cruise missile technology as well as conventional warhead design capability through its strikes on Saudi oil facilities. These advances in conventional strike capability have implications for Iran's potential nuclear capabilities as well.

No official source has discussed whether Iran has used its missile warfare capabilities to test simulated nuclear warheads – something it would need to do before it tested an actual nuclear warhead. However, a mix of telemetry and recovered, instrumented warheads could test many aspects of warhead design on a covert basis that the JCPOA – or even IAEA inspections – could not address.

Equally important, one of the most serious criticisms of the JCPOA is that it did not restrict Iran's missile development. It seems highly unlikely that Iran would now consider expanding the JCPOA. Iran's precision-guided conventional missile gives it a major new capability to strike high-value civilian and military targets throughout the region, and it allows Iran to offset U.S. and Arab advantages in airpower, which in addition makes its potential nuclear threat more serious. It seems doubtful that Iran would trade such advantages away.

Testing Simulated Nuclear Weapons

There also are serious questions about the advances that Iran is making in the aspects of nuclear weapon designs that the JCPOA never covered. The IAEA has repeatedly expressed concern about possible Iranian-instrumented explosive testing of a nuclear weapon design, but it has never been allowed into at least one – of the possible three – suspected facility in time to make a determination of whether Iran has taken such steps. Both Pakistan and India, and possibly North Korea, seem to have conducted such tests using non-fissile material without detection before they actually

exploded test nuclear weapons. Other, harder to detect, simulation tests can address a number of critical aspects of implosion technology and neutron initiation.

There is no unclassified reporting on whether such Iranian activities have occurred or can be detected, and there does not seem to be reliable open source technical data on how far such efforts can take a given country. The answer, however, may be that they could take Iran to the edge of a functional fission weapon, and it seems possible that they could now take Iran to the point where a reasonably reliable design for a weapon of 10 kilotons or larger can be produced without testing an actual nuclear device.

These issues were never addressed in the JCPOA or in the debate over its efforts to limit the production of weapons-grade fissile material. They have never been mentioned in official public references to Project Amad, Projects 110 and 111, and the SPND. They are, however, critical to any real-world assessment of Iran's progress, and they provide an indication of how complex producing an effective nuclear weapon really is, and how limited the impact of killing a certain number of key scientists can be.

Producing Fissile Material

As for the production of fissile material, the JCPOA's constraints may still be negotiable. Iran has not publicly moved toward a 90% weapons-grade level of enrichment or increased its holding of heavy water. However, Iran may have begun to create new covert nuclear enrichment facilities since the United States pulled out of the JCPOA. It also now has some 12 times the total level of enriched uranium permitted by the agreement. This stockpile is also enriched to 4.5% – above the levels permitted in the JCPOA. This is still a long way from 90%, but it does push the JCPOA envelope.

New Centrifuges

Iran is deploying new IR-2M, IR-4, and IR-6 centrifuges, and no public reporting has emerged about their actual efficiency, size, and design features that might allow Iran to deploy a series of small, isolated facilities to conceal its efforts and reduce their vulnerability.

These are all areas where the U.S., Israel, and other nations looking at Iran's efforts have good security reasons not to report publicly, warn Iran how much they know, and provide a "cookbook" for other proliferators. They also, however, raise key issues about renegotiating the JCPOA. This is not 2000 or 2013. Iran has moved on, and it has made major open progress in missile warhead design and guidance. It also has sharply raised Israeli and Saudi concerns over Iran's programs.

The Other Side of Iran's Activities

At the same time, it is equally important to look at Iran's progress in other areas. Far too much emphasis is being placed upon the JCPOA and Iran's nuclear programs, and far too little emphasis is placed on the real-world damage being done by U.S. sanctions and the "maximum pressure" campaign on Iran's economy and Iran's progress in bypassing sanctions as well as in other areas of security.

Consider how the following developments outside the nuclear arena have evolved since the negotiations for the JCPOA first began, since "Implementation Day" on January 16, 2016, and since President Trump withdrew from the JCPOA on May 18, 2018:

Iran's Other Military Gains

- Iran has demonstrated the ability to conduct precision strikes reliably with conventionally armed ballistic and cruise missiles/drones against key aspects of Saudi petroleum facilities. The same strikes can deprive Gulf states from their desalination plants, electric power, and plants that cost millions of dollars and which have specialized components that can take up to several years to replace. They can also hit critical fixed military facilities or anyone with a cellphone-sized device by gathering precise GPS targeting coordinates or by visiting such facilities without sophisticated intelligence assets.
- Iran is acquiring sophisticated air/missile defense capabilities from Russia through its purchase of the S-300, and it may have access to S-400 missile technology.
- Iran has steadily improved its hybrid warfare capabilities to attack shipping and air traffic in the Gulf – proliferating new attack craft, submersible, anti-ship missiles, smart mines, and sensor systems.
- The UN arms embargo has expired. Russia and China can now sell Iran arms, and China is reported to be considering a massive strategic partnership agreement with Iran.
- Iran is a signatory to the Chemical Weapons Convention but has not reported on its stockpiles. No clear open source data exist on its current biological and chemical weapons efforts.

Iran's Major Gains in the Region

- Iran's strategic partner, the Lebanese Hezbollah, is the dominant security force in a shattered Lebanon and has steadily built up its missile forces, including precision-guided Iranian systems.
- Syria now seems likely to be placed fully under Assad's control in 2021, leaving Iran with a key role in the country, ties to the Hezbollah in the region, and possible links to Russia.
- The U.S. is faltering badly in Iraq. It has sharply reduced its presence after helping to break up the ISIS "caliphate," and so far, it has ceded many potential aspects of its strategic partnership with Iraq after Popular Mobilization Force (PMF) attacks. Iraq may emerge under far more serious Iranian influence.
- The Yemeni civil war is so far being won by the Houthi, Iran's strategic partner. This gives Iran access to the Red Sea and the ability to threaten Saudi Arabia from the South – a threat that also includes precision-guided, conventionally armed missiles capable of striking key Saudi petroleum facilities and other infrastructure.
- If the U.S. withdraws from Afghanistan in May 2021, it will remove the U.S. presence near Iran's eastern border and may expand Iran's influence in Afghanistan, Central Asia, and South Asia – as well as to the Shanghai Cooperation Organization.

Failed Progress in the Southern Arab Gulf States

- Steps like the Saudi-Emirati boycott of Qatar have left the Southern Arab Gulf states even more divided with sharply limited military progress in the Gulf Cooperation Council, and they have restricted progress in creating integrated air and missile defense and Arab

capabilities to defend against Iran's steadily improving hybrid naval-air-missile capabilities in the Gulf and nearby waters.

Uncertain U.S. policies

- The U.S. emphasis on “burdensharing” and arms sales, while reducing its presence in the region, has seriously undermined Arab trust in the U.S. – although military-to-military relations remain good.
- The U.S. has failed to address the strategic importance of the Gulf – which supplies some 20% of the world's petroleum and is critical to importing states like China – in its new military strategy. Many U.S. officials talk about energy independence, but U.S. dependence on manufactured trade with Asian states dependent on Persian/Arab Gulf petroleum is now a far higher percent of total U.S. trade – and of the U.S. GDP – than past U.S. dependence on Gulf petroleum imports.

Iran's Reactions

- Iranian popular distrust and reactions to U.S. sanctions are still a factor, but the Supreme Leader, Revolutionary Guard, and other hardline elements have greatly strengthened internal security forces, excluded all moderate candidates from the recent legislative election, and cracked down on other moderate voices, which clearly dominate the government and may well not allow any moderate voice to run for President in 2021.
- The government has also had significant success in exploiting assassinations like that of Qassem Soleimani to build up popular anger against the United States.

Inheriting Exactly What?

These are not arguments that the U.S. is losing to Iran in the Gulf. Many U.S. and partner military capabilities have improved, sanctions have created problems for the Iranian regime, Israel remains strong, and some Arab arms buys have (or will be) major advances in air power.

They are, however, warnings. First, the Biden Administration cannot simply return to the past in regard to the JCPOA; and second, many aspects of the U.S. position in the region have deteriorated over the last four years. Important as events like the assassination of Mohsen Fakhrizadeh may be in some ways, they are only a small part of the full story.

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