



PERSPECTIVES

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Iran's Nuclear and Military Efforts in the Shadow of Coronavirus and Economic Collapse

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EXECUTIVE SUMMARY: Notwithstanding the difficult challenges of the coronavirus crisis and a deteriorating economy, Iran is pushing ahead with its uranium enrichment and missile and space programs as well as its activities in Syria. It also has yet to concede to the US in their clash over sailing in the Gulf. Tehran fears that any sign of weakness might endanger the Islamist regime, particularly as resentment continues to grow among ordinary Iranians. With that in mind, it is doing all it can to flex its muscles for both domestic and international audiences.

In July 2019, Iran began to explicitly violate the July 2015 nuclear agreement. The recent IAEA report (March 3, 2020) addressed the following breaches by Iran on uranium enrichment:

- Iran pledged to reduce the number of centrifuges in the Natanz enrichment plant to 5,060 IR1 units and to limit its uranium enrichment to a 3.67% rate. However, as of July 8, 2019, it began to enrich up to a 4.5% rate.
- The agreement demands that the Fordow underground uranium enrichment facility, containing 2,710 IR1 centrifuges including 696 active centrifuges, be converted into a "Nuclear Research, Physics and Technology" center with 1,044 centrifuges cut off from the UF₆ feed pipeline (UF₆, or uranium hexa-fluoride, is a uranium-fluorine compound that is fed in a gaseous state into centrifuges for enrichment). In addition, 348 unused centrifuges for uranium enrichment were to be used to separate stable isotopes for use in medicine, agriculture and industry, while the remaining centrifuges were to be transferred to storage at the Natanz plant. However, on November 9, 2019, uranium enrichment was

renewed at Fordow with 1,044 units in operation. They include centrifuges that were intended for stable isotope separation.

- The agreement stipulates that the amount of uranium Iran is permitted to enrich at 3.67% is limited to 300 kg of UF₆ (the uranium content of which is 202.8 kg). But as of February 19, 2020, the amount of uranium enriched by the Natanz plant and Fordow facility totaled 1,020.9 kg, or more than five times what is allowed. Its content is 806.3 kg uranium enriched to 4.5% and 214.6 kg enriched to 3.67%.
- On September 7, 2019, Iran began to violate the limit to which it had agreed regarding the operation of advanced highly enriching centrifuges. Contrary to the agreement, Iran is enriching uranium with about 400 centrifuges of advanced models (IR2m, IR4 and IR6). The enrichment capacity of the IR6 centrifuge is over eight times that of the IR1 centrifuge.

The latest IAEA report says the agency continues to liaise with Iranian authorities regarding IAEA inspections of natural (non-enriched) uranium particles of an anthropogenic (i.e., man-made) source from an Iranian site that has not yet been declared to IAEA: the warehouse in Turkuzabad, a suburb of Tehran, which was unveiled by Israeli PM Benjamin Netanyahu in a speech to the UN General Assembly on September 27, 2018. According to the BBC on March 3, the IAEA dispatched a document to several member states claiming that Iran has rejected a request to allow inspection access to three other unidentified sites as well. According to the document, the inspectors want to find out if natural uranium is being used at any of the sites from which they are being barred. At another site, the IAEA says there have been activities that are “consistent with efforts to sanitize part of the location.”

Iran’s violations of the nuclear agreement—its raising of the uranium enrichment rate to 4.5% and accumulation of uranium in excess of the 300 kg UF₆ limit—does not currently have a military aspect. This is because uranium enriched at a rate of less than 5% is suitable solely as a nuclear fuel for power reactors and cannot be used for nuclear weapons (for which the enrichment degree required is at least 90%). Iranian officials claim these violations are meant to pressure the EU into neutralizing the sanctions imposed on Iran by the US.

However, the main concern about Iran’s future ability to manufacture nuclear weapons is the advanced uranium enrichment centrifuges the regime is continuing to develop. Behrouz Kamalvandi, the spokesman for the Iranian Atomic Energy Organization, said at a conference at Fordow on November 9, 2019 that the enrichment rate is being increased “based on our own needs and instructions...[W]e have the possibility to produce 5%, 20%, and 60%, or any other uranium enrichment required.”

Furthermore, on March 27, Kamalvandi announced that on Iran’s National Nuclear Technology Day on April 8 his organization was going to unveil a

new advanced centrifuge. (The event was postponed due to the coronavirus crisis.) He added that “some of Iran’s advanced centrifuges have reached a phase where we can industrialize them...[they] can be manufactured at 60 centrifuges per day.” He even bragged, “Production [enrichment] above 250,000 SWU (separative work units) is definitely achievable, but our goal is to reach one million SWU.” As the required enrichment quantity of natural uranium (containing about 0.7% uranium-235, the fissile uranium isotope) to the amount of about 20 kg of enriched uranium to at least 90% is about 5,000 SWU, Iran is quite close to obtaining enough enriched uranium to use as fissile material for its first nuclear bomb.

As for Iran’s missile and space program, on April 22 the Islamic Revolutionary Guards (IRGC) announced the successful launch of the Noor-1, Iran’s first military satellite. According to the Guards, the Noor-1, which is an imaging satellite, began within 90 minutes to orbit the Earth in a 425-km orbit. This is after several recent failures by Iran to launch satellites into space.

The satellite was launched using a three-stage missile launcher nicknamed Qased (“messenger”). Its first stage was based on a rocket fueled with liquid fuel, with the two additional stages fueled by solid propellant. Solid fuel propulsion indicates an impressive advance of Iran’s missile technology.

While Tehran claims the satellite launch was part of a civilian space research and exploration program, US military experts have expressed concern that the program is intended to develop intercontinental ballistic missiles that can threaten the US with nuclear warheads. Iranian ballistic missiles are also being developed for a 2,000 km range, which could threaten Israel.

On April 29, Iran marked National Persian Gulf Day. There have been recent incidents in the Gulf—to which Tehran has claimed paramouncy since the days of the Shah—between IRGC ships and US Navy ships. Also, following Qassem Soleimani’s killing on January 3, Iran launched more than 15 missile and rocket attacks against US bases and targets in Iraq.

Tehran has also continued its military entrenchment in Syria. Despite recent claims by Israeli security officials that due to the IDF’s intense activity Tehran has become a liability rather than an asset to Damascus, Iranian-backed Shiite militias, Hezbollah in particular, seem to be continuing their operations on the Golan Heights.

Iran’s overall situation is quite distressing. The Iranian people have lost faith in the regime—especially now, in view of the ravages of the coronavirus pandemic. The people (along with the rest of the world) doubt the official casualty figures. At this writing, the regime is claiming about 110,000 cases and about 6,800 deaths, but the true numbers are estimated to be much higher. This distrust became stronger against the backdrop of the authorities’

false reporting of the downing of a Ukrainian passenger jet on January 8 after takeoff from Tehran (most of its passengers were either Iranian or of Iranian origin).

The coronavirus outbreak has dealt a new blow to the Iranian economy, which had already collapsed in 2018 as a result of US sanctions. The real (the Iranian currency) plummeted to unprecedented lows, and the Iranian street expressed its anger that the regime had wasted so much money on its operations in Syria. According to the London Arab newspaper *al-Sharq al-Awsat* on January 1, 2020, Iranian president Rouhani said damage to the Iranian economy resulting from sanctions by the end of 2019 was \$200 billion.

In 1965, Pakistan's foreign minister Zulfikar Ali Bhutto responded to the development of Indian nuclear weapons by saying: "If we have to feed on grass and leaves, or even if we have to starve, we shall also produce an atomic bomb." Indeed, in 1972, at the beginning of his tenure as Pakistan's president, he set his country's nuclear weapons project in motion.

It is highly doubtful that the Iranian people are ready to eat grass in order to bring the regime's dreams of an Iranian nuclear bomb to fruition. Though the mullahs' goal of becoming a regional power that controls Shiite Islam across the Middle East remains unfulfilled, the regime continues to do what it can to demonstrate its power. The object is to show the world that Iran is not capitulating to the US in any way—not regarding its nuclear and space programs, and not militarily. It also seeks to project an image of strength to the increasingly resentful Iranian people, as it fears that signs of weakness could bring an end to its rule. However, the regime's investments in security at the expense of the nation's welfare may turn out to boomerang against it.

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