

Iran's Recent Missile Test: Assessment and Implications

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Brief Analysis

Iran gave a new twist to President Khatami's call for a "civilizational dialogue" on July 22 when it test-launched a medium-range missile with the potential to reach India in the east, Russia in the north, Egypt and Turkey in the west and Israel, Jordan and all Gulf Cooperation Council states in between.

Lingering Uncertainties: The test raised more questions than it answered. What is known is that Iran test launched a missile that it identified as a Shehab-3, which flew for less than two minutes before it exploded, apparently due to a system failure. The Shehab-3 is believed to be an Iranian-produced version of the North Korean Nodong-1 missile with a maximum range of 1,300-1,500 km -- sufficient to reach all of Israel, nearly all of Turkey, and most of Egypt. During the recent test, the motor and the aerodynamics were probably the only elements whose performance under flight conditions could be evaluated, though possibly the guidance and control systems were also tested. The outcome of the test would seem to indicate that problems related to the design or construction of the missile have not been resolved. More work and testing of the motor, the guidance system, and the warhead will therefore be required before the missile can be considered operational -- even if the Iranians are willing to accept less than optimal standards of reliability and effectiveness. This might still take 1-2 years. Accordingly, the Shehab-3, and its successor, the Shehab-4 (a missile with a 2,000 km range based on Soviet SS-4 and/or North Korean Taepo-Dong-2 technology, which is not expected to be tested for another 2-5 years), are probably still vulnerable to efforts to staunch the flow of missile technology from abroad.

Iran is currently believed to be capable of producing Scud-B and -C missiles, with ranges of 300 km and 500 km respectively. However, producing a missile, such as the Shehab-3, with a 1,300-1,500 km range, or a Shehab-4 with a 2,000 km range, is a much more difficult proposition. These greater ranges result in greater initial and terminal velocities, a higher flight trajectory, more prolonged stress on the missile airframe, and greater problems with heat buildup. This requires a more sturdy airframe, a more accurate guidance system, and the widespread use of exotic materials that can withstand high temperatures and stress, materials that are available from only a limited number of sources. It is not clear that North Korea has overcome all these technical and technological challenges -- hence the importance of Russian assistance to Iran's medium and intermediate-range missile programs.

Implications for the Region: The eventual deployment of the Shehab-3 missile will raise regional tensions, though it will not transform the regional balance of power. Syria's deployment of SS-21 missiles in 1983 and the deployment of al-Husayn missiles in western Iraq in 1989 led to heightened tensions with Israel and speculation about the possibility of Israeli preventive strikes against missile launch sites in Syria and Iraq. Iran's deployment of missiles capable of reaching Israel is likely to usher in a similar period of heightened regional tension, though it is also worth remembering that the earlier episodes passed without a confrontation.

From Iran's perspective, the Shehab-3 (and subsequently the Shehab-4) will provide a variety of new capabilities. American missile defenses could have problems intercepting a Shehab-3 flying a depressed (low-level) or lofted (high-altitude) trajectory against targets in the Gulf region. Moreover, the Shehab-3 will enable Iran to directly target Israel, Turkey, and Egypt. Thus, in the now unlikely event of an Iranian-American confrontation, the knowledge that they are within range of Iranian missiles could influence decisions by Cairo and Ankara during a crisis. Likewise, the Shehab-4, if and when operational, will be capable of flying depressed or lofted trajectories against Israel, Turkey, and Egypt, complicating the defense of these countries, and will be able to reach southern Europe by following a maximum-range medium-level trajectory.

For now, the main value of these missiles is political. Tehran may believe that at a time that Iranians are increasingly frustrated with their deteriorating economic situation, the country's clerical leadership could score points at home by a missile test that appeared to flout U.S. efforts to curtail Iran's military capabilities (a point made by Khatami himself last weekend) and that implicitly challenged Israel. Moreover, Tehran may have believed that demonstrating the ability to threaten Israel at this time could enhance its standing in the Arab world. Finally, the favorable response in the Muslim world to the recent testing of the Pakistani "Islamic (Atomic) Bomb" may have also encouraged Iran's clerical leadership to demonstrate its emerging missile capabilities. Thus, the Iranian missile test, like the recent nuclear weapons tests by India and Pakistan, may have been motivated, in part, by political considerations.

For this reason, it is important not to overstate the threat posed by the Shehab-3. This only aids Iran's efforts to magnify its importance, and bolsters efforts by hardline conservatives to demonstrate their ability to raise anxiety levels in Washington and elsewhere.

Impact of U.S. Sanctions. Paradoxically, the Shehab-3 missile test demonstrates the success of U.S. efforts to impede Iran's missile program. In 1993-94, U.S.-orchestrated multilateral pressure on Pyongyang discouraged North Korea from transferring the Nodong-1 to Iran, forcing Iran instead to take the more roundabout route of building a missile using North Korean-supplied technology. That five-year delay provided the time for the U.S.-funded Arrow antimissile system to be developed. The first battery will be deployed in 1999, before the Shehab-3 will become operational.

The recent flawed test showed that the Shehab-3 needs many improvements. Disrupting the flow of foreign missile technology to Iran will add years to the time required to make an operational missile, much less one sufficiently reliable and accurate to be a significant military threat. Few countries have the requisite technology -- North Korea not being among them -- and Russia is by far the most likely source. Halting the flow of Russian missile technology could therefore have a significant impact on Iran's missile program -- if nothing else, delaying it long enough for the United States to improve its own theater antimissile capabilities through several programs now under way. The United States has relied on a combination of approaches to persuade Russia to stop missile technology transfers to Iran, consistent with Russia's obligations under the Missile Technology Control Regime (MTCR) to which it belongs. Demarches, political pressure, and economic sanctions against firms aiding Iran's program should continue. In this context, a vigorous debate may well continue about the role of sanctions legislation -- specifically, the Iran Missile Proliferation Sanctions Act (IMPSA), which passed Congress overwhelmingly but was vetoed by President Clinton. The main point is to stop the missile technology transfers from Russia by whatever means is most effective because

it is still not too late to significantly slow it down.

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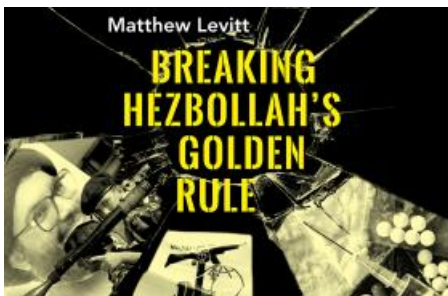
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