### Iran's Missile Program: Past and Present

**Key Systems**

#### Short-Range Ballistic Missiles
- Ranges up to 1,000 km; can reach Iraq, Syria, and Persian Gulf countries
- **Fateh family**: single-stage, solid-fueled; variants include Zolfaghar, Dezful, and Raad-500
- **Shahab 1 and 2**: modified versions of Soviet Scuds; single-stage, liquid-fueled; variants include Qiam

#### Medium-Range Ballistic Missiles
- Ranges up to about 2,000 km; can reach Israel, Lebanon, parts of Eastern Europe
- **Shahab-3**: derived from Scuds/DPRK No-Dong; single-stage, liquid-fueled; nuclear-capable; variants include Ghadr, Emad
- **Sejil**: two-stage, solid-fueled; nuclear capable; no tests reported since 2012
- **Khorramshahr**: derived from DPRK Musudan; single-stage, liquid-fueled; tested in 2018

#### Space Launch Vehicles (SLVs)
- Use many of the same technologies as long-range missiles; "shortens the timeline to an ICBM" according to U.S. intelligence
- **Safir and Simorgh rockets**: two-stage, liquid-fueled rockets, use Shahab-3 components; recent launch failures
- **Qased**: three-stage rocket; uses solid and liquid fuel; successful launch by IRGC Aerospace Force in 2020

### Key Entities, Sanctions, and Foreign Supply

- **IRGC Aerospace Force (IRGC-AF)**: controls Iran’s deployed missiles; oversees development and production of missiles, launchers, silos, led by Amir Ali Hajizadeh
- **Aerospace Industries Organization (AIO)**: designs and produces missiles; subsidiary of Iran’s defense ministry
- **Shahid Hemat Industrial Group (SHIG)**: produces liquid-fueled missiles; subordinate to AIO; U.N.-sanctioned
- **Shahid Bagheri Industrial Group (SBIG)**: produces solid-fueled missiles; subordinate to AIO; U.N.-sanctioned

- **U.N. Security Council resolution 2231** calls upon Iran “not to undertake any activity related to ballistic missiles designed to be capable of delivering nuclear weapons”
- Resolution also restricts procurement of missile technology; sanctions key missile entities
- All U.N. missile restrictions set to expire in 2023
- U.S., EU, and other countries continue to apply more expansive sanctions on Iran’s missile program
- Iran continues to depend on foreign suppliers for missile components and technology, according to U.S. intelligence
- Receives support from North Korea and entities in China and Russia
- Runs an expansive illicit procurement network to obtain export-controlled missile technology and relevant items below control thresholds
- Seeking advanced materials and components to improve missile guidance, fuel, re-entry vehicles

### Missile Missions: Nuclear Weapon Delivery and Conventional Combat

- Iran has developed a number of solid and liquid fueled ballistic missiles capable of delivering nuclear weapons.
- An IAEA investigation found that Iran had a "coordinated" nuclear weapon development program until 2003, with efforts to integrate a nuclear warhead into its Shahab-3 ballistic missiles.
- Iran increasingly using cruise and ballistic missiles in conventional combat, demonstrating improved accuracy.
- Iran has transferred missiles and production equipment to regional proxies, including Hezbollah, Shi'ite militias in Iraq, and Yemen's Houthis.

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