

**Testimony before the Committee on Oversight and Government Reform, Subcommittee on
National Security, United States House of Representatives
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Steven P. Bucci, PhD Director, The Heritage Foundation

My name is Steven Bucci. I am Director of the Douglas and Sarah Allison Center for Foreign and National Security Policy in The Heritage Foundation's Davis Institute for National Security and Foreign Policy. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

I have spent the majority of my life as a military officer. I retired as an Army colonel, having served as a Defense Attaché, a Human Intelligence collector working in embassies for the Defense Intelligence Agency (DIA), and as a Special Forces operator and commander of the 3d Battalion, 5th Special Forces Group, operating in the U.S. Central Command Area of Responsibility. I also served as the Deputy Assistant Secretary of Defense for Homeland Defense, DOD's representative to the Interagency for Counter Terrorism domestically.

My focus here will be the threat we face from the Islamic Republic of Iran's efforts to project power and impose its extreme and abhorrent vision of the of the world on its neighbors in the Middle East region and, frankly, around the world. I will touch on both Iran's direct capabilities to project power, and its use of indirect means through proxies. The vast majority of my written testimony is taken from the Heritage Foundation's recently released *2016 Index of U.S. Military Strength*, Middle East Threats Section (all references can be found there)¹.

Given my Special Forces and Homeland Security / CT background, I will focus there. My colleagues will cover the other higher tech threats, but for me, the most immediate threat, the 25 meter target, is the IRGC Quds Force terrorism threat. The IRGC is a very capable organization that matches its operational expertise in guerrilla warfare and terror with an ideological purity that makes their only comparable force the old Soviet Spetznaz. They are active and very dedicated. They have done operations around the Middle East region and the world, including the attempted murder of the Saudi Ambassador here in Washington, D.C.

Down the road, Iran will gain considerable capability in Ballistic Missile technology. They will gain nuclear weapons, even if they adhere to the JCPOA, which I don't think they will. The release of \$150 Billion will allow them to re-equip their conventional forces with the help of the Russians who are desperate to sell them anything they want. All that is true, but the key will be the orders of magnitude bigger and more dangerous terror events the Quds force can fund and /or execute given their "share" of the new money. There is no sequestration pending for the IRGC, the windows of Hell are about to open.

¹ Dakota L. Wood, ed., *2016 Index of U.S. Military Strength: Assessing America's Ability to Provide for the Common Defense* (Washington, DC: The Heritage Foundation, 2015), pp. 159-176.

Iranian Threats in the Middle East. Iran is an anti-Western revolutionary state that seeks to tilt the regional balance of power in its favor by driving out the Western presence, undermining and overthrowing opposing governments, and establishing its hegemony over the oil-rich Persian Gulf region. It also seeks to radicalize Shiite communities and advance their interests against Sunni rivals. Iran has a long record of sponsoring terrorist attacks against American allies and other interests in the region. With regard to conventional threats, Iran's ground forces dwarf the relatively small armies of the other Gulf States, and its formidable ballistic missile forces pose significant threats to its neighbors.

Terrorist Attacks. Iran has adopted a political warfare strategy that emphasizes irregular warfare, asymmetric tactics, and the extensive use of proxy forces. The Islamic Revolutionary Guard Corps (IRGC) has trained, armed, supported, and collaborated with a wide variety of radical Shia and Sunni militant groups, as well as Arab, Palestinian, Kurdish, and Afghan groups that do not share its radical Islamist ideology. The IRGC's elite Quds (Jerusalem) Force has cultivated, trained, armed, and supported numerous proxies, particularly the Lebanon-based Hezbollah; Iraqi Shia militant groups; Palestinian groups such as Hamas and Palestine Islamic Jihad; and groups that have fought against the governments of Afghanistan, Bahrain, Egypt, Israel, Iraq, Jordan, Kuwait, Saudi Arabia, Turkey, and Yemen.

Iran is the world's foremost sponsor of terrorism and has made extensive efforts to export its radical Shia brand of Islamist revolution. It has found success in establishing a network of powerful Shia revolutionary groups in Lebanon and Iraq; has cultivated links with Afghan Shia and Taliban militants; and has stirred Shia unrest in Bahrain, Iraq, Libya, Saudi Arabia, and Yemen. In 2013, Iranian arms shipments were intercepted by naval forces off the coasts of Bahrain and Yemen, and Israel intercepted a shipment of arms, including long-range rockets, bound for Palestinian militants in Gaza.

Iran's Mounting Ballistic Missile Threat. Iran possesses the largest number of deployed missiles in the Middle East. The backbone of the Iranian ballistic missile force is formed by the Shahab series of road-mobile surface-to-surface missiles, which are based on Soviet-designed Scud missiles. The Shahab missiles are potentially capable of carrying nuclear, chemical, or biological warheads in addition to conventional high-explosive warheads. Their relative inaccuracy (compared to NATO ballistic missiles) limits their effectiveness unless they are employed against large and soft targets such as cities.

Iran's heavy investment in such weapons has fueled speculation that the Iranians intend eventually to replace the conventional warheads in their longer-range missiles with nuclear warheads. The Nuclear Threat Initiative has concluded that "[r]egardless of the veracity of these assertions, Tehran indisputably possesses a formidable weapons delivery capability, and its ongoing missile program poses serious challenges to regional stability." Iran is not a member of the Missile Technology Control Regime, and it has sought aggressively to acquire, develop, and deploy a wide spectrum of ballistic missile, cruise missile, and space launch capabilities. During the 1980–1988 Iran–Iraq war, Iran acquired Soviet-made Scud-B missiles from Libya and later acquired North Korean–designed Scud-C and No-dong missiles, which it renamed the Shahab-2 (with an estimated range of 500 kilometers or 310 miles) and Shahab-3 (with an estimated range of 900 kilometers or 560 miles). It now can produce its own variants of these missiles as well as longer-range Ghadr-1 and Qiam missiles.

Iran's Shahab-3 and Ghadr-1, which is a modified version of the Shahab-3 with a smaller

warhead but greater range (about 1,600 kilometers or 1,000 miles), are considered more reliable and advanced than the North Korean No-dong missile from which they are derived. The then-Director of the Defense Intelligence Agency, Lieutenant General Michael T. Flynn, warned in 2014 that:

Iran can strike targets throughout the region and into Eastern Europe. In addition to its growing missile and rocket inventories, Iran is seeking to enhance lethality and effectiveness of existing systems with improvements in accuracy and warhead designs. Iran is developing the Khalij Fars, an anti-ship ballistic missile which could threaten maritime activity throughout the Persian Gulf and Strait of Hormuz.

Iran's ballistic missiles pose a major threat to U.S. bases and allies from Turkey, Israel, and Egypt in the west, to Saudi Arabia and the other Gulf States to the south, to Afghanistan and Pakistan to the east. (See map titled "Iran's Missile Ranges" in the *2016 Index of U.S. Military Strength*.) However, it is Israel, which has fought a shadow war with Iran and its terrorist proxies, that is most at risk from an Iranian attack. The development of nuclear warheads for Iran's ballistic missiles would seriously degrade Israel's ability to deter attacks, an ability that the existing (but not officially acknowledged) Israeli monopoly on nuclear weapons in the Middle East currently provides.

For Iran's radical regime, hostility to Israel, to which Iran sometimes refers as the "little Satan," is second only to hostility to the United States, which the leader of Iran's 1979 revolution, Ayatollah Khomeini, dubbed the "great Satan." But Iran poses a greater immediate threat to Israel than to the United States, since Israel is a smaller country with fewer military capabilities and located much closer to Iran. It already is within range of Iran's Shahab-3 missiles. Moreover, all of Israel can be hit with the thousands of shorter-range rockets that Iran has provided to Hezbollah in Lebanon and to Hamas and Palestine Islamic Jihad in Gaza.

Iran has an extensive missile development program that has received key assistance from North Korea and more limited support from Russia and China before sanctions were imposed by the U.N. Security Council. The Pentagon forecasts that:

Iran could develop and test an ICBM capable of reaching the United States by 2015. Since 2008, Iran has conducted multiple successful launches of the two-stage Safir space launch vehicle and has also revealed the larger two-stage Simorgh space launch vehicle, which could serve as a test bed for developing ICBM technologies.

Although Tehran's missile arsenal primarily threatens U.S. bases and allies in the region, Iran eventually could expand the range of its missiles to include the continental United States. In its January 2014 report on Iran's military power, the Pentagon assessed that "Iran continues to develop technological capabilities that could be applicable to nuclear weapons and long-range missiles, which could be adapted to deliver nuclear weapons, should Iran's leadership decide to do so."

The Worldwide Threat Assessment (WTA) "judge[s] that Tehran would choose ballistic missiles as its preferred method of delivering nuclear weapons, if it builds them. Iran's ballistic missiles are inherently capable of delivering WMD, and Tehran already has the largest inventory

of ballistic missiles in the Middle East.” In addition, “Iran’s progress on space launch vehicles—along with its desire to deter the United States and its allies—provides Tehran with the means and motivation to develop longer-range missiles, including intercontinental ballistic missiles (ICBMs).”

Summary: Iran’s ballistic missile force poses a regional threat to the U.S. and its allies, but Tehran eventually could expand the range of its missiles to threaten the continental United States.

Weapons of Mass Destruction. Tehran has invested tens of billions of dollars since the 1980s in a nuclear weapons program that is masked within its civilian nuclear power program. It has built clandestine underground facilities to enrich uranium, which were subsequently discovered near Natanz and Fordow, and plans to build a heavy-water reactor near Arak, which essentially will be a plutonium bomb factory that will give it a second route to nuclear weapons.

As of June 2015, Iran had accumulated enough low-enriched uranium to build eight nuclear bombs if enriched to weapons-grade levels, and it could enrich enough uranium to arm one bomb in less than two months. Clearly, the development of an Iranian nuclear bomb would greatly amplify the threat posed by Iran. Even if Iran did not use a nuclear weapon or pass it on to one of its terrorist surrogates to use, the regime in Tehran could become emboldened to expand its support for terrorism, subversion, and intimidation, assuming that its nuclear arsenal would protect it from retaliation as has been the case with North Korea.

On July 14, 2015, President Obama announced that the United States and Iran, with China, France, Germany, Russia, the United Kingdom, and the European Union High Representative for Foreign Affairs and Security Policy, had reached a “comprehensive, long-term deal with Iran... .” That same day, the Speaker of the U.S. House of Representatives said:

His “deal” will hand Iran billions in sanctions relief while giving it time and space to reach a break-out threshold to produce a nuclear bomb—all without cheating. Instead of making the world less dangerous, this “deal” will only embolden Iran—the world’s largest sponsor of terror—by helping stabilize and legitimize its regime as it spreads even more violence and instability in the region. Instead of stopping the spread of nuclear weapons in the Middle East, this deal is likely to fuel a nuclear arms race around the world.

On July 19, 2015, the Chairman of the National Security Council of the State of Israel briefed the Prime Minister and Cabinet on the Iran deal, noting: (1) “the preservation of Iran’s nuclear capabilities that have been made possible as a result of the agreement including the enrichment of uranium and the maintaining of underground nuclear installations such as that at Fordo,” (2) “the go-ahead that was given to Iran to continue the research and development of advanced centrifuges will significantly reduce the break-out time that Iran will need to arm itself with nuclear weapons,” (3) “if Iran honors the agreement it will have a 10-15 year break-out time for dozens of nuclear bombs, as the restrictions on its nuclear program are lifted,” (4) “were Iran to violate the agreement it would be able to break out toward individual bombs before then,” and (5) “with the hundreds of billions of dollars that will flow into its coffers Iran will step up the terrorism that it spreads in the region and around the world.”

Iran is a declared chemical weapons power that claims to have destroyed all of its chemical

weapons stockpiles. U.S. intelligence agencies assess that Iran maintains the capability to produce chemical warfare (CW) agents and “probably” has the capability to produce some biological warfare agents for offensive purposes if it should decide to do so.

Iran also has threatened to disrupt the flow of Persian Gulf oil exports by closing the Strait of Hormuz in the event of a conflict with the U.S. or its allies.

WWTA characterizes Iran as “an ongoing threat to US national interests because of its support to the Assad regime in Syria, promulgation of anti-Israeli policies, development of advanced military capabilities, and pursuit of its nuclear program.” Its President, Hassan Rouhani, “will not depart from Iran’s national security objectives of protecting the regime and enhancing Iranian influence abroad, even while attempting different approaches to achieve these goals.” In addition:

Iran possesses a substantial inventory of theater ballistic missiles capable of reaching as far as some areas of southeastern Europe. Tehran is developing increasingly sophisticated missiles and improving the range and accuracy of its other missile systems. Iran is also acquiring advanced naval and aerospace capabilities, including naval mines, small but capable submarines, coastal defense cruise missile batteries, attack craft, anti-ship missiles, and armed unmanned aerial vehicles.

Summary: Iran poses a major potential threat to U.S. bases, interests, and allies in the Middle East by virtue of its ballistic missile capabilities, nuclear ambitions, long-standing support for terrorism, and extensive support for Islamist revolutionary groups.

Terrorist Threats from Hezbollah. One cannot discuss Iran’s ability to project power without looking at its main proxy. Hezbollah is a close ally of, frequent surrogate for, and terrorist subcontractor for Iran’s revolutionary Islamist regime. Iran played a crucial role in creating Hezbollah in 1982 as a vehicle for exporting its revolution, mobilizing Lebanese Shia, and developing a terrorist surrogate for attacks on its enemies.

Tehran provides the bulk of Hezbollah’s foreign support: arms, training, logistical support, and money. Iran provides at least \$100 million in annual financial support for Hezbollah, and some experts estimate that this could run as high as \$200 million annually. Tehran has lavishly stocked Hezbollah’s expensive and extensive arsenal of rockets, sophisticated land mines, small arms, ammunition, explosives, anti-ship missiles, anti-aircraft missiles, and even unmanned aerial vehicles (UAVs) that Hezbollah can use for aerial surveillance or remotely piloted terrorist attacks. Iranian Revolutionary Guards have trained Hezbollah terrorists in Lebanon’s Bekaa Valley and in Iran.

Iran has used Hezbollah as a club to hit not only Israel and Tehran’s Western enemies, but also many Arab countries. Iran’s revolutionary ideology has fueled its hostility to other Middle Eastern states, many of which it seeks to overthrow and replace with radical allies. During the Iran–Iraq war, Iran used Hezbollah to launch terrorist attacks against Iraqi targets and against Arab states that sided with Iraq. Hezbollah launched numerous terrorist attacks against Saudi Arabia and Kuwait, which extended strong financial support to Iraq’s war effort, and participated in several other terrorist operations in Bahrain and the United Arab Emirates.

Iranian Revolutionary Guards conspired with the branch of Hezbollah in Saudi Arabia to

conduct the 1996 Khobar Towers bombing in Saudi Arabia. Hezbollah collaborated with the IRGC's Quds Force to destabilize Iraq after the 2003 U.S. occupation. It also helped to train and advise the Mahdi Army, the radical anti-Western Shiite militia led by militant cleric Moqtada al-Sadr.

Hezbollah threatens the security and stability of the Middle East and Western interests in the Middle East on a number of fronts. In addition to its murderous campaign against Israel, Hezbollah seeks to use violence to impose its radical Islamist agenda and subvert democracy in Lebanon. Although some experts believed that Hezbollah's participation in the 1992 Lebanese elections and subsequent inclusion in Lebanon's parliament and coalition governments would moderate its behavior, its political inclusion did not lead it to renounce terrorism.

Hezbollah also poses a potential threat in Europe to NATO allies. Hezbollah established a presence inside European countries in the 1980s amid the influx of Lebanese citizens seeking to escape Lebanon's civil war. It took root among Lebanese Shiite immigrant communities throughout Europe. German intelligence officials estimate that roughly 900 Hezbollah members live in Germany alone. Hezbollah also has developed an extensive web of fundraising and logistical support cells throughout Europe.¹⁴¹

France and Britain have been the principal European targets of Hezbollah terrorism, in part because both countries opposed Hezbollah's agenda in Lebanon and were perceived as enemies of Iran, Hezbollah's chief patron. Hezbollah has been involved in many terrorist attacks against Europeans, including:

- The October 1983 bombing of the French contingent of the multinational peacekeeping force in Lebanon (on the same day as the U.S. Marine barracks bombing), which killed 58 French soldiers;
- The December 1983 bombing of the French embassy in Kuwait;
- The April 1985 bombing of a restaurant near a U.S. base in Madrid, Spain, which killed 18 Spanish citizens;
- A campaign of 13 bombings in France in 1986 that targeted shopping centers and railroad facilities, killing 13 people and wounding more than 250; and
- A March 1989 attempt to assassinate British novelist Salman Rushdie that failed when a bomb exploded prematurely, killing a terrorist in London.

Hezbollah attacks in Europe trailed off in the 1990s after Hezbollah's Iranian sponsors accepted a truce in their bloody 1980–1988 war with Iraq and no longer needed a surrogate to punish states that Tehran perceived as supporting Iraq. Significantly, the participation of European troops in Lebanese peacekeeping operations, which became a lightning rod for Hezbollah terrorist attacks in the 1980s, could become an issue again if Hezbollah attempts to revive its aggressive operations in southern Lebanon. Troops from European Union member states may someday find themselves attacked by Hezbollah with weapons financed by Hezbollah supporters in their home countries.

As of 2015, Hezbollah operatives are deployed in countries throughout Europe, including Belgium, Bulgaria, Cyprus, France, Germany, and Greece.

Summary: Hezbollah poses a major potential terrorist threat to the U.S. and its allies in the

Middle East and Europe.

Threats to the Commons

The United States has critical interests at stake in the Middle Eastern commons: sea, air, space, and cyber which Iran has the ability to threaten. The U.S. has long provided the security backbone in these areas, which in turn has supported the region's economic development and political stability.

Maritime. Maintaining the security of the sea lines of communication in the Persian Gulf, Arabian Sea, Red Sea, and Mediterranean Sea is a high priority for strategic, economic, and energy security purposes. The Persian Gulf region contains approximately 50 percent of the world's oil reserves and is a crucial source of oil and gas for energy-importing states, particularly China, India, Japan, South Korea, and many European countries. The flow of that oil could be interrupted by interstate conflict or terrorist attacks.

Bottlenecks such as the Strait of Hormuz, the Suez Canal, and the Bab el-Mandeb Strait are potential choke points for restricting the flow of oil, international trade, and the deployment of U.S. Navy warships. The chief potential threat to the free passage of ships through the Strait of Hormuz, one of the world's most important maritime choke points, is Iran. Approximately 17 million barrels of oil a day flowed through the strait in 2013, roughly 30 percent of the seaborne oil traded worldwide.

Iran has trumpeted the threat it could pose to the free flow of oil exports from the Gulf if it is attacked or threatened with a cutoff of its own oil exports. Iran's leaders have threatened to close the Strait of Hormuz, the jugular vein through which most Gulf oil exports flow to Asia and Europe. (See map titled "Middle East Oil Transit Chokepoints" in the *2016 Index of U.S. Military Strength*.) Although the United States has greatly reduced its dependence on oil exports from the Gulf, it still would sustain economic damage in the event of a spike in world oil prices, and many of its European and Asian allies and trading partners import a substantial portion of their oil needs from the region. Iran's Supreme Leader, Ayatollah Ali Khamenei, has repeatedly played up Iran's threat to international energy security, proclaiming in 2006 that "[i]f the Americans make a wrong move toward Iran, the shipment of energy will definitely face danger, and the Americans would not be able to protect energy supply in the region."

Iran has established a precedent for attacking oil shipments in the Gulf. During the Iran-Iraq war, each side targeted the other's oil facilities, ports, and oil exports. Iran escalated attacks to include neutral Kuwaiti oil tankers and terminals and clandestinely laid mines in Persian Gulf shipping lanes while its ally Libya clandestinely laid mines in the Red Sea. The United States defeated Iran's tactics by reflagging Kuwaiti oil tankers, clearing the mines, and escorting ships through the Persian Gulf, but a large number of commercial vessels were damaged during the "Tanker War" from 1984 to 1987.

Iran's demonstrated willingness to disrupt oil traffic through the Persian Gulf in the past to place economic pressure on Iraq is a red flag to U.S. military planners. During the 1980s Tanker War, Iran's ability to strike at Gulf shipping was limited by its aging and outdated weapons systems and the U.S. arms embargo imposed after the 1979 revolution. However, since the 1990s, Iran has been upgrading its military with new weapons from North Korea, China, and Russia, as well as with weapons manufactured domestically.

Today, Iran boasts an arsenal of Iranian-built missiles based on Russian and Chinese designs that pose significant threats to oil tankers as well as warships. Iran is well stocked with Chinese-designed anti-ship cruise missiles, including the older HY-2 Seersucker and the more modern CSS-N-4 Sardine and CSS-N-8 Saccade models. Iran also has reverse engineered Chinese missiles to produce its own anti-ship cruise missiles, the Ra'ad and Noor. Shore-based missiles deployed along Iran's coast would be augmented by aircraft-delivered laser-guided bombs and missiles, as well as by television-guided bombs.

Iran has a large supply of anti-ship mines, including modern mines that are far superior to the simple World War I-style contact mines that Iran used in the 1980s. They include the Chinese-designed EM-52 "rocket" mine, which remains stationary on the sea floor and fires a homing rocket when a ship passes overhead. In addition, Iran can deploy mines or torpedoes from its three *Kilo*-class submarines, which would be effectively immune to detection for brief periods when running silent and remaining stationary on a shallow bottom just outside the Strait of Hormuz, and also could deploy mines by mini-submarines, helicopters, or small boats disguised as fishing vessels.

Iran's Revolutionary Guard naval forces have developed swarming tactics using fast attack boats and also could deploy naval commandos trained to attack using small boats, mini-submarines, and even jet skis. The Revolutionary Guards also have underwater demolition teams that could attack offshore oil platforms and other facilities.

On April 28, 2015, the Revolutionary Guard naval force seized the *Maersk Tigris*, a container ship registered in the Marshall Islands, near the Strait of Hormuz. Tehran claimed that it seized the ship because of a previous court ruling ordering Maersk Line, which charters the ship, to make a payment to settle a dispute with a private Iranian company. The ship was later released after being held for more than a week. An oil tanker flagged in Singapore, the *Alpine Eternity*, was surrounded and attacked by Revolutionary Guard gunboats in the strait on May 14, 2015, when it refused to be boarded. Iranian authorities alleged that it had damaged an Iranian oil platform in March, although the ship's owners maintained that it had hit an uncharted submerged structure. The Revolutionary Guard's aggressive tactics in using commercial disputes as pretexts for the illegal seizures of transiting vessels prompted the U.S. Navy to escort American and British-flagged ships through the Strait of Hormuz for several weeks in May, before tensions eased.

Finally, Tehran could use its extensive terrorist network in the region to sabotage oil pipelines and other infrastructure or to strike oil tankers in port or at sea.

Summary: Iran poses the chief potential threat to shipping in the Strait of Hormuz.

Air. Iran has an air force, but it is old and its maintenance is dubious. It cannot be discounted completely and with help from the Russians, it could improve more quickly than expected. They also have a robust air defense system that would hinder air operations against them.

Terrorists have seized substantial numbers of anti-aircraft missiles from military bases in Iraq, Libya, and Syria that pose potential threats to safe transit of airspace in the Middle East, North Africa, and elsewhere.

Space. Iran has launched satellites into orbit, but there is no evidence that it has an offensive

space capability. Tehran successfully launched three satellites in February 2009, June 2011, and February 2012 using the Safir space launch vehicle, which uses a modified Ghadr-1 missile for its first stage and has a second stage that is based on an obsolete Soviet submarine-launched ballistic missile, the R-27. The technology probably was transferred by North Korea, which built its BM-25 missiles using the R-27 as a model. Safir technology could be used as a basis to develop long-range ballistic missiles.

Iran claimed to have launched a monkey into space and returned it safely to Earth twice in 2013. Tehran also announced in June 2013 that it had established its first space tracking center to monitor objects in “very remote space” and to help manage the “activities of satellites.”

The WWTA assesses that “Iran’s progress on space launch vehicles—along with its desire to deter the United States and its allies—provides Tehran with the means and motivation to develop longer-range missiles, including intercontinental ballistic missiles (ICBMs).”

Summary: Though Iran has launched satellites into orbit successfully, there is no evidence that it has developed an offensive space capability that could deny others the use of space or exploit space as a base for offensive weaponry.

Cyber Threats. Iranian cyber capabilities present a significant threat to the U.S. and its allies. Iran has developed offensive cyber capabilities as a tool of espionage and sabotage. Tehran claims to have the world’s fourth largest cyber force, “a broad network of quasi-official elements, as well as regime-aligned ‘hacktivists,’ who engage in cyber activities broadly consistent with the Islamic Republic’s interests and views.”

The creation of the “Iranian Cyber Army” in 2009 marked the beginning of a cyber offensive against those whom the Iranian government regards as enemies. A hacking group dubbed the Ajax Security Team, believed to be operating out of Iran, has used malware-based attacks to target U.S. defense organizations and has successfully breached the Navy Marine Corps Intranet. In addition, they have targeted dissidents within Iran, seeding versions of anti-censorship tools with malware and gathering information about users of those programs. Iran has invested heavily in cyber capabilities, with an annual budget reported to be almost \$1 billion in 2012.

Hostile Iranian cyber activity has increased significantly since the beginning of 2014 and could threaten U.S. critical infrastructure, according to an April 2015 report released by the American Enterprise Institute. The Islamic Revolutionary Guard Corps and Sharif University of Technology are two Iranian institutions that investigators have linked to efforts to infiltrate U.S. computer networks, according to the report.

Iran allegedly has used cyber weapons to engage in economic warfare, most notably the sophisticated and debilitating denial-of-service attacks against a number of U.S. financial institutions, including the Bank of America, JPMorgan Chase, and Citigroup. In February 2014, Iran launched a crippling cyber attack against the Sands Casino in Las Vegas, owned by Sheldon Adelson, a leading supporter of Israel who is known to be critical of the Iranian regime. In 2012, Tehran was suspected of launching the “Shamoon” virus attack on Saudi Aramco, the national oil company that produces approximately 10 percent of the world’s oil, which destroyed around 30,000 computers, as well as an attack on Qatari natural gas company Rasgas’s computer networks.

The sophistication of these and other Iranian cyber attacks, together with Iran’s willingness

to use these weapons, has led various experts to name Iran as one of America's most cyber-capable opponents. Iranian cyber forces have even gone so far as to create fake online personas in order to extract information from U.S. officials through accounts such as LinkedIn, YouTube, Facebook, and Twitter.

The WWTA assesses that "Iran very likely values its cyber program as one of many tools for carrying out asymmetric but proportional retaliation against political foes, as well as a sophisticated means of collecting intelligence." In addition, "Iranian actors have been implicated in the 2012–13 DDOS attacks against US financial institutions and in the February 2014 cyber attack on the Las Vegas Sands casino company."

Summary: Iranian cyber capabilities present significant espionage and sabotage threats to the U.S. and its allies, and Tehran has shown willingness and skill in using them.

Assessment of Iran's Threat

Iran represents by far the most significant security challenge to the United States, its allies, and its interests in the greater Middle East. Its open hostility to the United States and Israel, sponsorship of terrorist groups like Hezbollah, and history of threatening the commons underscore the problem it could pose. Today, Iran's provocations are mostly a concern for the region and America's allies, friends, and assets there. Iran relies heavily on irregular (to include political) warfare against others in the region and fields more ballistic missiles than any of its neighbors. The development of its ballistic missiles and potential nuclear capability also mean that it poses a long-term threat to the security of the U.S. homeland.

According to the IISS *Military Balance*, among the key weapons in Iran's inventory are 12-plus MRBMs, 18-plus SRBMs, 1,663 main battle tanks, 21 tactical submarines, six corvettes, 13 amphibious landing ships, and 334 combat-capable aircraft in its air force. There are 523,000 personnel in the armed forces, including 125,000 in the Iranian Revolutionary Guard Corps and 130,000 in the Iranian Army.

With regard to these capabilities, the IISS assesses that "The Iranian regular forces are large, but equipped with outdated equipment. The country's apparent strategic priority is the complementary independent Iranian Revolutionary Guard Corps." The IRGC "is a capable organization well-versed in a variety of different operations," and "Iran is able to present a challenge to most potential adversaries, especially its weaker neighbors."

I assess the overall threat from Iran, considering the range of contingencies, as "aggressive."

Conclusion: Iran presents a significant threat to U.S. national security interests: directly in the Middle East region, to our key allies, and to our position as the balancer / influencer there. It has the ability to project power around the region and even outside it, particularly in asymmetric forms. The recent collusion of Iran with Russia gives Iran additional abilities to move around the world and to do significant mischief. As mentioned, there is no sequestration for the biggest purveyors of State Sponsored terrorism in the world. With respect to the Secretary of State, you cannot logically separate Iran's terrorism from the JCPOA.

It is a mistake to underestimate either the intentions or the capabilities of Iran to do harm. Iran is not our partner, but a clear adversary.

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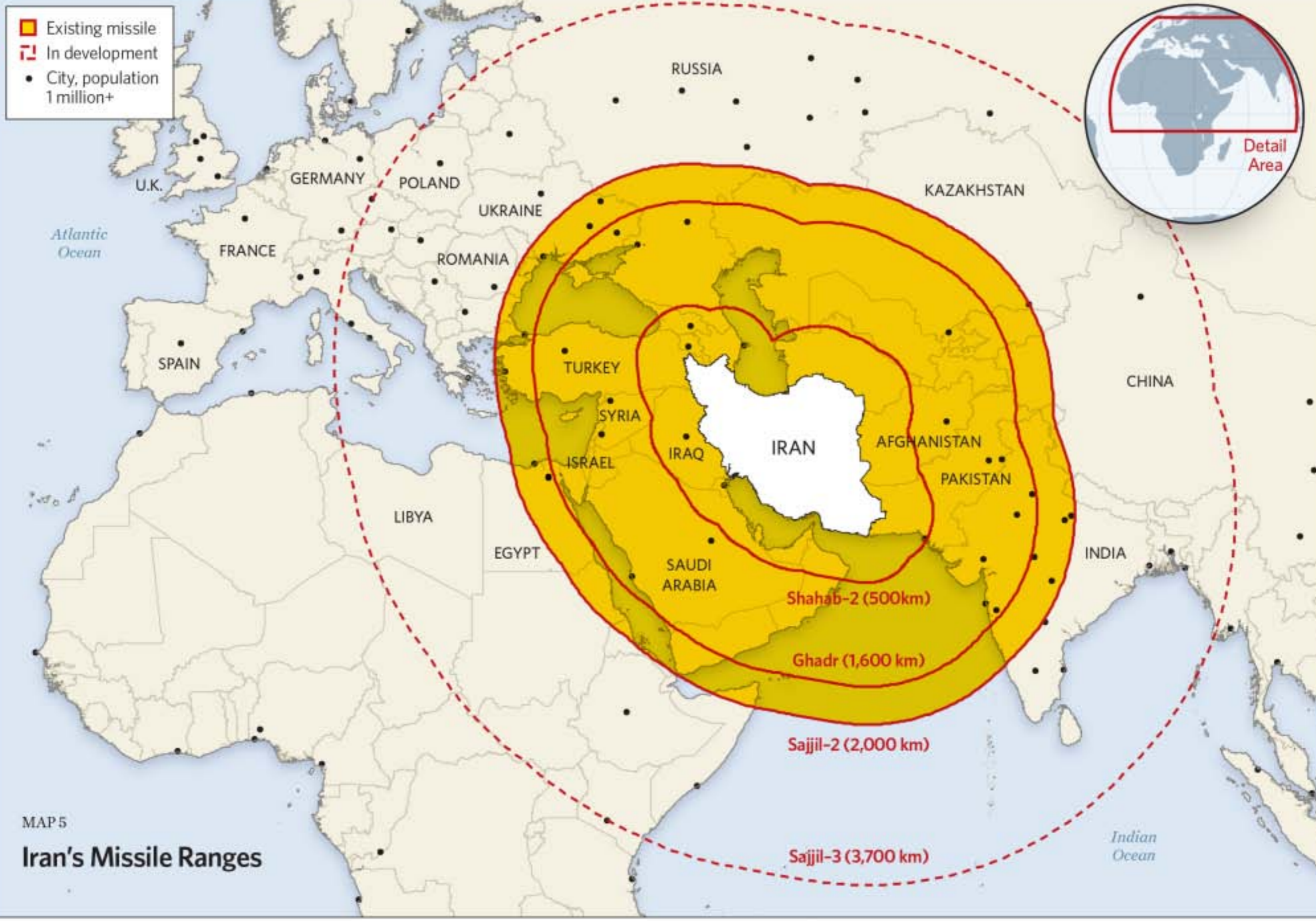
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- Existing missile
- In development
- City, population 1 million+



MAP 5
Iran's Missile Ranges

Sources: International Institute for Strategic Studies, *The Military Balance 2014* (London: Routledge, 2014), and Michael Elleman, "Iran's Ballistic Missile Program," United States Institute of Peace, <http://iranprimer.usip.org/resource/irans-ballistic-missile-program> (accessed August 25, 2015).

Middle East Oil Transit Chokepoints



SUEZ CANAL

In 2013, 915.5 million tons of cargo transited the canal, averaging 45.5 ships transiting each day. The 120-mile canal is an important transit route for European oil imports from the Persian Gulf.



BAB EL-MANDEB STRAIT

This strait, 18 miles wide at its narrowest point, is an important transit route for Persian Gulf oil exports to Europe. The vast majority of southbound traffic through the Suez Canal must also pass through Bab el-Mandeb.



STRAIT OF HORMUZ

Almost 20 percent of the world's traded oil passes through this strait, making it the busiest passageway for oil tankers in the world.

Millions of barrels of oil moved per day, 2013 ▶



Sources: Heritage Foundation research and analysis provided elsewhere in this *Index*, and U.S. Department of Energy, Energy Information Administration, "World Oil Transit Chokepoints," December 2014, Table 1, <http://www.eia.gov/beta/international/regions-topics.cfm?RegionTopicID=WOTC> (accessed August 17, 2015).

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Name:

Steven P. Bucci

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None

2. Please list any entity you are testifying on behalf of and briefly describe your relationship with these entities.

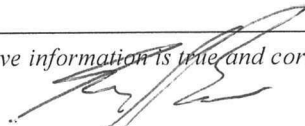
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3. Please list any federal grants or contracts (including subgrants or subcontracts) received since October 1, 2012, by the entity(ies) you listed above. Include the source and amount of each grant or contract.

None

I certify that the above information is true and correct.

Signature:



Steven P. Bucci

Date:

2 November 2015

Dr. Steven P. Bucci,
Director of the Douglas and Sarah Allison Center for Foreign and National Security
Policy Studies
And Senior Fellow, Homeland Security & Defense Issues
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Dr. Steven P. Bucci, the Director of the Allison Center, is the Senior Fellow at the Heritage Foundation for all issues involving Homeland Security and Defense. He leads a team of analysts on all National and Homeland Security issues as well as regional issues for Latin America, Africa, the Middle East and Eurasia. Additionally he is the strategy and thought leader, and serves as a Subject Matter Expert for Cyber Security, Special Operations, and Defense Support to Civil Authorities. Bucci brings over 30 years of leadership at the highest levels of our Government in response to all security threats to America. He is a recognized expert in the interagency process, the defense of U.S. interests, particularly with regard to critical infrastructure and the productive interplay of government and the private sector.

In his career, Bucci held key military leadership positions in the 82nd Airborne, the 5th & 7th Special Forces, and completed graduate study, language training, and regional orientation in the Balkans. At the JFK Special Warfare Center, Bucci taught European Studies, Foreign Policy, and International Relations. He conducted numerous counter drug and development missions across Latin America, was the first-ever resident Defense Attaché (human intel collection) in Tirana, Albania and was the Defense Attaché in Sarajevo. As the Commander, 3d Battalion of the 5th Special Forces, he led deployments to eastern Africa, the Persian Gulf, and South Asia, including Operation Desert Thunder.

Bucci assumed the duties of the Military Assistant to the Secretary of Defense Donald H. Rumsfeld on 1 July 2001, saw the 9/11 attacks, the War on Terrorism, and led a team of 25 US military experts to Baghdad to directly assist the Coalition Provisional Authority. He daily reviewed all intelligence for the Secretary. Retired in 2005, Bucci continued to serve as the Staff Director of the Immediate Office of the Secretary of Defense.

He was next appointed to serve as the Deputy Assistant Secretary of Defense, Homeland Defense and Defense Support to Civil Authorities, overseeing policy issues involving the Defense Domains (Air, Land, Maritime, & Cyber), National Guard domestic operational issues, domestic Counter Terrorism, all Readiness Exercises, and Defense response to natural and manmade disasters (e.g., floods, hurricanes, wildfires, and industrial accidents), acting as the primary civilian oversight of U.S. Northern Command.

After leaving government, Dr. Steven P. Bucci served as one of IBM's lead consultants for Cyber Security Policy, in IBM's Public Sector Team. He was the strategy and thought leadership driver for IBM's Cyber Security Campaign and served as a Subject Matter Expert to several Federal Cabinet Departments, and one of the company's primary briefers on IBM's cyber security policy point of view. He directly supported all of the Industry Accounts for IBM Global Business Services – Public Sector. These included; Defense & Intelligence, Homeland Security & Justice, General Government, State &

Local Government, and Healthcare. He was a member of the Cyber Coordinating Committee and an original Deputy Director of the IBM Institute for Advanced Security.

Bucci has published numerous articles on cyber security issues, as well as being the regular cyber contributor to Security Debrief, a leading national security blog. He speaks widely at cyber security, defense and homeland security related conferences and is sought after for his insights into leading edge policy issues. He is also an adjunct professor at George Mason Univ. in Leadership, and an Associate Professor at Long Island Univ. in Terrorism Studies and Cyber Security Policy. Additionally, he serves on the Advisory Board of MIT's Geospatial Data Center and is an advisor to the Prince of Wales/Prince Edward Fellows at MIT and Harvard.

Raised in Dobbs Ferry, NY, Bucci graduated from the U. S. Military Academy at West Point in 1977 with a B.S. in National Security. In 1986 and 1987, he earned an M.A. and Ph.D. from the University of South Carolina, both in International Relations. Bucci graduated from the U.S. Army War College, the Hellenic Army War College in, Greece, and the Department of State Senior Seminar.

Dr. Bucci and his wife, the former Suzanne Sloane of Bettendorf, IA have two sons: Peter a psychologist and his wife Jennifer live in Harbor Springs, MI, and Philip, a Captain in the US Army and his wife Mary live in Columbia, SC .