



Iran's Asymmetric Naval Warfare

Fariborz Haghshenass

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Front cover: A swarm of Iranian Islamic Revolutionary Guard Corps Navy (IRGCN) Ashura-class small boats mobilizes during a recent naval exercise in the Persian Gulf. Source: Iranian News Agency

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Executive Summary

THIS STUDY SHEDS LIGHT on Iran’s naval intentions and capabilities by exploring the military geography of the Persian Gulf and Caspian regions, reviewing the historical evolution of Iran’s approach to asymmetric warfare, assessing its naval forces, and evaluating its plans for a possible war with the United States. The study ends with a quick overview of several possible scenarios.

Since the end of the Iran-Iraq War, Iran has invested substantially in developing its navy (particularly the Islamic Revolutionary Guard Corps Navy) along unconventional lines. The most important developments in this regard include the deployment of

mobile coastal missile batteries, modern anti-ship missiles mounted on fast-attack craft, semi-submersibles, midget submarines, modern naval mines, unmanned aerial vehicles (possibly including “kamikaze” attack versions), and improved command, control, communications, and intelligence.

This study concludes that despite Iran’s overall defensive posture in the Persian Gulf and the Strait of Hormuz, it could take preemptive action in response to a perceived threat of imminent attack. And in the event of a U.S. attack, the scale of Iran’s response would likely be proportional to the scale of the damage inflicted on Iranian assets.

Introduction

“We are everywhere and at the same time nowhere.”
—Commodore Morteza Safaari, commander,
Islamic Revolutionary Guard Corps Navy,
July 8, 2008¹

FROM THE IRANIAN MILITARY perspective, asymmetric naval warfare employs available equipment, flexible tactics, superior morale, and the physical and geographical characteristics of the area of operation to defend vital economic resources, inflict losses unacceptable to the enemy, and ultimately destroy technologically superior enemy forces. More specifically, the asymmetric naval warfighter exploits enemy vulnerabilities through the use of “swarming” tactics by well-armed small boats and fast-attack craft, to mount surprise attacks at unexpected times and places.²

The ongoing dispute over Iran’s nuclear program and the war of words between Iran and the United States have heightened the level of tension in the strategic Persian Gulf region. As a major oil exporter with a 1,500-mile (2,400 km) coastline on the Gulf, Iran is a regional power. The last conflict in Persian Gulf waters involving Iran dates back to the Iran-Iraq War (1980–1988), when the country’s naval forces clashed repeatedly with the U.S. Navy. Because of the Gulf’s strategic importance and the potential for future conflict there, Iran’s naval capabilities and intentions—and its approach to asymmetric naval warfare—have assumed great importance for U.S. military planners and policymakers responsible for the region.

1. “The IRGCN Is Prepared for Direct and Far-Ranging Missions in the Persian Gulf” [in Persian], Fars News Agency, July 8, 2008. Available online (www.farsnews.com/newstext.php?nn=8704190054).
2. Eshkboos Danekar, “Janghaye Gheyre Classic dar Khalij-e Fars” [Unconventional wars in the Persian Gulf], in the proceedings of an event held at the Political and International Studies Bureau’s Persian Gulf Studies Center, April 1988, Tehran (Tehran: Iranian Foreign Ministry, 1989), p. 272. Danekar was an Islamic Republic of Iran Navy captain and naval district commander during the Iran-Iraq War.

Military Geography of Iran's Maritime Zones

Persian Gulf

The Persian Gulf is 615 miles (990 km) long and between 40 and 210 miles (65–338 km) wide, covering an area of approximately 92,600 square miles (240,000 km²). Its average depth is 164 feet (50 m), with a maximum depth of 197–328 feet (60–100 m) at the entrance to the Strait of Hormuz (see fig. 1). Numerous coves and inlets on the Gulf's shoreline serve as small boat harbors and anchorages, as do Iran's seventeen islands.¹

At the Gulf's northern end, the Tigris and Euphrates rivers join to create the Shatt al-Arab waterway, which is 2,950 feet (900 m) wide and up to 98 feet (30 m) deep as it enters the Gulf. According to the 1975 Algiers Accord between Iran and Iraq, the "thalweg"—the line tracing the deepest parts of a given waterway—is the accepted boundary between the two

countries, although a fairly large area is still not clearly demarcated.

The Persian Gulf region is home to 65–75 percent of the world's confirmed oil reserves and 35–50 percent of its confirmed gas reserves. Between January and May of 2008, the Gulf countries (excluding Bahrain and Oman) earned combined oil export revenues of \$276 billion.²

Tehran considers the whole Persian Gulf seabed its offshore territory, and in 1993, the Iranian parliament passed a law extending the country's territorial waters to twelve miles, including the area around its islands. In principle, the United States recognizes only three-mile limits, but in practice it normally does not challenge wider claims.³

Strait of Hormuz

The narrow Strait of Hormuz is one of the most important bodies of water on earth. It is approximately 120 miles (193 km) long, 60 miles (97 km) wide at its eastern end, 24 miles (38.4 km) wide at its western end, and has an average depth of 164 feet (50 m) (see fig. 2). It is near vital components of Iran's mainland infrastructure, including the country's largest seaport and naval base—Bandar Abbas—and a major spur of Iran's national railway system. More than 40 percent of the world's internationally traded oil, around 17 million barrels per day, passes through the strait.⁴ That includes more than fifty tankers daily, all under the watchful eyes of Iranian surveillance assets, including those on the island of Hormuz—once a hub of world trade that might be thought of as the Hong Kong of

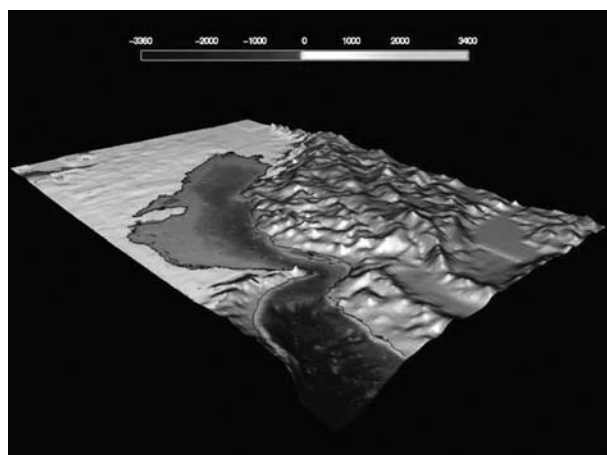


Fig. 1. Persian Gulf and Strait of Hormuz.

1. For detailed biogeophysical and hydrological studies of the Persian Gulf, see Hans-Jorg Barth and Nuzrat Yar Khan, "Biogeophysical Setting of the Gulf" in Abdulaziz H. Abuzinada, Hans-Jorg Barth, et al. (eds.), *Protecting the Gulf's Marine Ecosystems from Pollution* (Basel, Switzerland: Birkhauser Basel, 2008); and W. Abdel-Monim Mubarak and A. I. Kubryakov, "Hydrological Structure of Waters of the Persian Gulf According to the Data of Observations in 1992," *Physical Oceanography* 11, no. 5 (September 2001), pp. 459–471.
2. U.S. Energy Information Administration, "OPEC Revenues Fact Sheet," May 2008. Available online (www.eia.doe.gov/emeu/cabs/OPEC_Revenues/Factsheet.html).
3. Bernard E. Trainor, "Gulf Risks: Mines and Suicide Boats," *New York Times*, August 14, 1987. Available online (query.nytimes.com/gst/fullpage.html?res=9B0DE5DB1F3EF937A2575BC0A961948260&sec=&spon=&pagewanted=all).
4. Simon Henderson, *Energy in Danger: Iran, Oil, and the West* (Policy Focus no. 83) (Washington, D.C.: Washington Institute for Near East Policy, June 2008); available online (www.washingtoninstitute.org/download.php?file=PolicyFocus83.pdf). Richard Halloran, "Pacific Choke Point," *Air Force Magazine* 91, no. 7 (July 2008), p. 49; available online (www.airforce-magazine.com/MagazineArchive/Documents/2008/July%202008/0708choke.pdf).

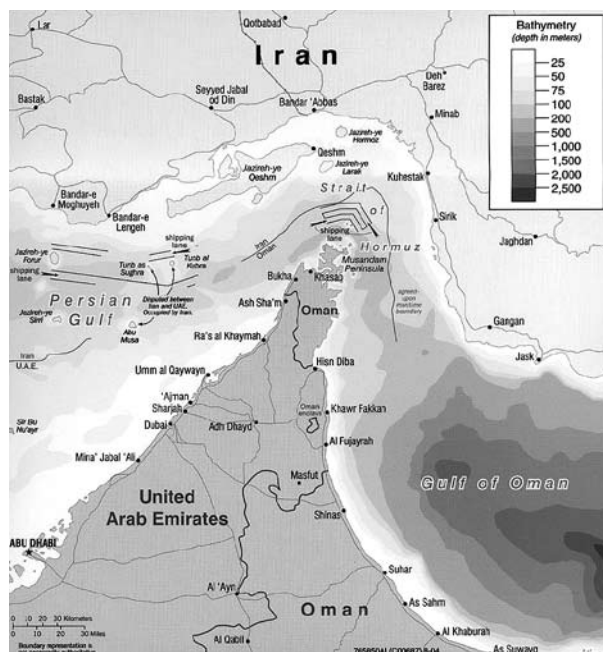


Fig. 2. Strait of Hormuz and approaches.

the sixteenth century. The strait's shipping channels include a twenty-five-mile-long, two-mile-wide corridor that ships use to enter the Persian Gulf. It is separated by a two-mile-wide traffic separation zone from the deeper two-mile-wide outgoing corridor used by laden tankers on the Omani side. There is also another fifty-mile-long separation scheme, which is further inside the Persian Gulf and entirely within Iranian territorial waters. This scheme regulates traffic in a pair of three-mile-wide corridors, which are overseen by the Iranian islands of Greater Tunb and Forur. These

islands, together with four other Iranian islands (Lesser Tunb, Abu Musa, Bani Forur, and Sirri), are particularly important because they lie near the route that all vessels entering or leaving the Gulf use.⁵

Gulf of Oman

The Gulf of Oman has an approximate length and width of 590 and 210 miles (950 and 340 km), respectively. It connects the Persian Gulf to the Arabian Sea/Indian Ocean and is much deeper than the Persian Gulf, with a maximum depth of 11,100 feet (3,400 m).

Caspian Sea

The Caspian Sea is the world's largest lake, measuring 748 by 199 miles (1,204 by 320 km) with 3,976 miles (6,400 km) of coastline, of which more than 560 miles (900 km) are in Iranian territory. The Caspian covers an area of more than 150,000 square miles (400,000 km²). The water depth is about 82 feet (25 m) in the north, 2,582 feet (788 m) in the center, and 3,360 feet (1,025 m) in the south along Iranian shores.

Having vast oil and gas reserves as well as caviar stocks, the sea enjoys a growing strategic status, but waterborne access is only possible through Russia's Volga-Don and Volga-Baltic waterways. Moreover, the depth of the Iranian side makes oil and gas exploration difficult, and any economic activity in this area requires more technology and investment.⁶ In the meantime, Iran intends to increase its share of Caspian shipping from less than 15 percent to 40 percent by doubling its Caspian merchant fleet to twenty-five ships.

5. Rouhollah K. Ramazani, *The Persian Gulf and the Strait of Hormuz* (Alphen aan den Rijn, the Netherlands: Sijthoff & Noordhoff International, 1979), p. 2; and Hugh F. Lunn, "Freedom of Navigation in the Persian Gulf and the Strait of Hormuz," in Myron H. Nordquist and John Norton Moore (eds.), *Security Flagships: Oil, Islands, Sea Access and Military Confrontation* (The Hague: Martinus Nijhoff, 1998), p. 317.

6. Bahman Aghai Diba, "Iran's National Interests in the Caspian Sea," *Persian Journal* (online), March 19, 2006. Available online (www.iranian.ws/cgi-bin/iran_news/exec/view.cgi/7/14204/printer).

Historical Background

IRAN HAS A RICH maritime heritage. In ancient times, large Persian fleets sailed as far west as Greece and as far east as China to conquer land or to trade. In the Mediterranean Sea, Achaemenid Persians used spy ships, disguised as foreign merchantmen, and small warships for clandestine operations.¹ And it was the ancient Persians, during the reign of Xerxes, who invented the concept of naval infantry.² Later dynasties built large cities and ports on the southern coasts of Persia, making it the hub of trade between west and east.

Following a long period of decline, Persia's aspirations in the Persian Gulf picked up again during the era of Nader Shah, when he gradually built up a small fleet that he used to retake Bahrain in 1736. This success led him to create a coastal navy in the Gulf. Persia then made expeditions to Oman in a bid to take control of the strategic Strait of Hormuz. The Western powers refused to sell ships to Persia, so Nader created an indigenous shipbuilding industry whose products were instrumental to bringing Oman back into submission, and to the task of fighting pirates. But the nascent Persian navy was short-lived, and by 1743, almost nothing was left of it.

Throughout history, the Portuguese, Dutch, and British fought many battles for control of the Persian Gulf ports, islands, and trade routes. This led to numerous wars of liberation by the southern Persians against foreign occupiers.

More recently, during the Pahlavi era, Iran embarked on a major naval expansion by purchasing large numbers of warships, helicopters, hovercraft, and submarines during the 1960s and 1970s (though some of these were not delivered by the time of the Islamic Revolution). It also sent thousands of naval cadets to the United States and Europe for training. The massive

and hasty buildup engendered various problems, however, including resentment of Iran's dependence on foreign support, organizational inefficiencies, problems with equipment operability, lack of preparedness for major combat operations, and heavy dependence on inappropriate conventional foreign military concepts and doctrines.

Revolution and the Iran-Iraq War

The Islamic Revolution of 1979 brought about a major change in the Iranian political landscape, with which came a new security enforcer, the Islamic Revolutionary Guards Corps (IRGC), also known as "Sepah" or "Pas-daran." The IRGC emphasized nontraditional tactics and revolutionary Shiite values—in particular, the mass mobilization of the ideologically committed, a doctrine of continuous jihad, and a culture of martyrdom. It was soon to become the foremost advocate for and practitioner of Iran's concept of asymmetric naval warfare.

The Iran-Iraq War involved a maritime dimension almost from the start, with Iraq using torpedo and missile boats to attack Iranian merchant ships and mine Iran's northern Gulf harbors. But Iraq's naval capability received a blow in November 1980 when Iran's navy and air force launched a combined air and sea operation to sink and damage several Iraqi naval vessels. Yet, Iraqi shore-based missile attacks continued against Iranian convoy operations at Iran's only commercial port at that time, Bandar Shahpour, and against its oil industry. By late 1983, Iraq began to receive new weaponry, and by early 1984, it increased the pace of its maritime attacks.

The IRGC's quasi-naval role began during its 1984 amphibious offensives in southern Iraq, when it made extensive use of marshland boats to transport troops and supplies.³ Later, in September 1985, the IRGC

1. Ismail Raean, *Daryanavardiye Iranian* [The seafaring Iranians], vol. 1 (Tehran: Sekeh Publishing, 1971), p. 149.

2. *Ibid.*, p. 176.

3. Mehdi Khodaverdikhan (ed.), *Nabard al-Ommaya: Avalin Amaliyat Daryaie Sepah Pasdaran dar Khalij Fars* [Battle of al-Ommaya: the first naval operation of the IRGC in the Persian Gulf] (Tehran: IRGC War Studies Center, 1997), p. 12.

Navy (IRGCN) was established as an independent arm alongside the Islamic Republic of Iran Navy (IRIN). It soon assumed a key operational role during the seizure of the Iraqi Faw Peninsula in February 1986, when young Basij frogmen crossed the Shatt al-Arab waterway and secured a bridgehead for Iran's first assault wave against unsuspecting Iraqi defenders.⁴ Only after September 1986, however, did the IRGCN take part in combat operations in the Persian Gulf. That month, the IRGCN briefly seized a derelict Iraqi offshore oil terminal that was used as an intelligence gathering outpost at the mouth of the Khowr Abdullah/Shatt-al-Arab, and attempted to establish a permanent IRGC presence there. This operation gave the IRGC confidence to initiate ambitious naval swarming operations against the U.S. Navy; Tehran subsequently invested significant additional resources in the IRGC's naval capabilities.⁵

Following a series of inconclusive major Iranian offensives into Iraq in 1986 and early 1987, Baghdad intensified its economic campaign against Iran's oil industry, especially against tankers carrying Iranian oil. Soon thereafter, Iran began employing naval guerrilla tactics in what became known as the Tanker War.

At first, Iran lacked proper means to retaliate against intensifying Iraqi attacks. The regular military's initial attempts against Iraqi proxy oil exports (i.e., Kuwaiti and Saudi tankers exporting oil on Iraq's behalf) were cautious. Its weapons—air-launched Maverick and AS-12 missiles, ship-launched Sea Killer missiles, and naval surface gunfire—proved largely ineffective, and their respective platforms proved vulnerable to counterattacks.

As a result of these largely unsuccessful responses, as well as the increasing foreign naval involvement in the region, the IRGCN was tasked with developing and implementing unconventional naval guerrilla warfare tactics using speedboats—the very first of which Iran had either confiscated from Kuwaiti smugglers or purchased

internationally. In early 1987, the IRGCN employed more aggressive tactics using small FIACs, followed shortly thereafter by HY-2 missile attacks launched from the Iranian-occupied Faw Peninsula of Iraq.

Yet, the IRGCN's initial capabilities were limited due to a lack of proper equipment and inadequate training for adverse weather conditions.⁶ When it launched one of its most substantial swarming attacks against Saudi Arabia's Khafji oilfields—the world's largest offshore oilfield—on October 3, 1987, the flotilla of IRGC boats became stranded in rough seas after their command boat lost its way. This attack was in retaliation for the death of Iranian Hajj pilgrims at the hands of Saudi security forces the previous July, and the sinking of IRIN mine-laying vessel *Iran Ajr* by the U.S. Navy in September 1987. A major show of force by the Saudi air and naval forces also contributed to the termination of the planned operation. At the same time, a small team of Iranian Special Boat Service commandos penetrated Saudi territory undetected and were about to set off explosives on several major Saudi pipelines when they were ordered to abort their mission and return to base.

Despite these initial setbacks, the IRGCN quickly built up its tally of attacks on carefully identified oil tankers carrying Kuwaiti and Saudi oil, from thirty-seven during the first year of the Tanker War to more than ninety-six in 1987. Maritime operations were gradually overshadowing the stalled land war.⁷

The reflagging of the Kuwaiti tankers, and the subsequent Bridgeton incident of July 24, 1987 (when a tanker in the first reflagged convoy was hit and damaged by an Iranian mine), was the turning point for the IRGC in its confrontation with the United States in the Persian Gulf, and a major escalatory event in the ongoing low-intensity struggle against “the Great Satan.” In fact, the Guards were seeking even further escalation in the Gulf, according to instructions given to them by Ayatollah Ruhollah Khomeini, but for reasons still

4. Ibid. The Basij Resistance Force is the popular reserve militia of the IRGC, which can be mobilized in times of war or internal emergencies to fill the ranks of the IRGC and to fulfill various supporting roles. It has assumed an even more important role than in the past as a result of the IRGC's recent reorganization.

5. Ibid., p. 13.

6. “A Brief Look at the Unconventional Warfare at Sea” [in Persian], *Faslnameye Tarikhe Jang* [History of war quarterly] 2, no. 6 (Winter 1992) (IRGC War Studies Center), p. 94.

7. Ibid., p. 93.

unknown, they did not act. In any case, they had nearly exhausted their capabilities and resources by that point,⁸ and toward the later stages of the war, the U.S. military and even the Iraqi air force became increasingly successful in detecting and destroying IRGCN boats.

Iranian retaliatory strikes during the Tanker War were proportional and carefully controlled by Tehran. Iranian forces generally focused their attacks on large crude oil tankers rather than well-defended warships, and were generally more successful at striking static targets than moving ones, such as Seersucker missile attacks on Kuwaiti oil facilities and moored tankers.⁹

IRGCN retaliatory operations hardly affected Iraq's proxy oil exports through the Gulf, and their effect on the Tanker War was relatively insignificant. They did help escalate the confrontation with Western powers, however, culminating in a major naval battle on April 18, 1988, which the U.S. Navy called Operation Praying Mantis. During the battle, three Iranian warships were sunk or damaged, and a U.S. helicopter gunship was shot down. With the exception of this engagement, the IRIN was reluctant to cooperate with the IRGCN or to undertake joint operations. Instead it was engaged mainly in surveillance and inspection operations.

In early 1987, a joint IRIN/IRGCN headquarters was established in Bandar Abbas in an attempt to bring the IRGC's naval activities under the control of the regular military, and to limit its role to coastal areas. But the ambitious IRGC did not cooperate and decided to continue in its independent operations.¹⁰ Even the Iranian Defense Ministry initially refused to deliver the first batch of Iranian-built naval mines to the IRGC.¹¹ Yet, the IRIN's conventional assets proved unsuitable for the kind of combat operations desired by the Iranian leadership and the nature of the emerging conflict in the Gulf. By the end of the war, the political leadership was convinced of the IRGC's ability to defend Iranian shipping, control sea lines of communication, and

even to cross the Persian Gulf and take the fight to the enemy, if necessary.¹² As a result of the war, Iran identified the following requirements for its naval forces:

- Large numbers of anti-ship missiles on various types of launch platforms
- Small fast-attack craft, heavily armed with rockets or anti-ship missiles
- More fast mine-laying platforms
- An enhanced subsurface warfare capability with various types of submarines and sensors
- More small, mobile, hard-to-detect platforms, such as semi-submersibles and unmanned aerial vehicles
- More specialized training
- More customized or purpose-built high-tech equipment
- Better communications and coordination between fighting units
- More timely intelligence and effective counterintelligence/deception
- Enhanced ability to disrupt the enemy's command, control, communications, and intelligence capability
- The importance of initiative, and the avoidance of frontal engagements with large U.S. naval surface warfare elements
- Means to mitigate the vulnerability of even small naval units to air and missile attack

8. Ibid.

9. Hossein Alaei, "How the IRGC Navy Was Formed" [Persian interview], in Madjid Mokhtari (ed.), *Iran-Iraq War Strategic Issues* (Tehran: IRGC War Studies Center, 2002), p. 135. Alaei was the founding commander of the IRGCN and one of its key strategists.

10. Ibid., p. 134.

11. Ibid., p. 132.

12. Ibid., p. 136.

Factors Influencing Iran's Approach to Asymmetric Naval Warfare

A NUMBER OF FACTORS would likely influence the planning of future Iranian unconventional naval operations in the Persian Gulf.

Coastal Geography

Iran's unconventional naval warfighters enjoy a number of geographic advantages, including:

- the proximity of available staging areas to anticipated areas of operation (reducing transit times for Iranian forces and available reaction times for enemy forces),
- the depth and density of coastal road networks (which enhance Iran's tactical options and flexibility), and
- the relatively confined waters of the Gulf, which limit the freedom of maneuver of enemy naval units and could enable Iran to hit targets on the far side with long-range coastal missiles.

Bases, Staging Areas, and Routes

To operate effectively, unconventional naval warfighters and logistical support units need secure bases, staging areas, and routes to and from their areas of operation. There are more than ten large and sixty small ports and harbors along Iran's southern coastline, in addition to the many scattered fishing and sailing villages and towns, all of which offer excellent hiding places for small surface combatants.¹ The IRGC has numerous staging areas in such places and has organized its Basij militia among the local inhabitants to undertake support operations.

Some of Iran's smaller speedboats can be launched discreetly—for example, off the back of a flatbed truck

under cover of darkness, during high tide without any special accommodations. This would reduce the likelihood of being interdicted en route to their destination and increase the likelihood of surprise.²

Camouflage and Concealment

Unconventional warfighters will seek to avoid detection by the enemy and will attack at a time and place of their choosing, employing a variety of camouflage, concealment, and deception measures. Historically, the success of swarming tactics has depended on superior situational awareness to facilitate surprise, and the ability to land painful blows against the enemy and then elude pursuers after breaking contact. Iran's long shoreline is overlooked by a mountain ridge that rises as high as 6,500 feet (2,000 m) and continues uninterrupted along the northern shores of the Gulf. Moreover, the Gulf's network of islands, inlets, and coves, and its coastal support infrastructure (buoys, onshore hide sites and bunkers, coastal observation posts), are ideal for staging and supporting extended patrol and reconnaissance operations, precision mining operations, missile barrages, and swarming attacks.

The element of surprise is particularly important in unconventional naval warfare, and is particularly likely in littoral waters³ because of the relatively small distances involved, and because close-range engagements reduce some of the technological advantages enjoyed by larger forces such as the U.S. Navy.⁴ Therefore, Iran is likely to use terrain, camouflage, concealment, and deception measures (including platforms or weapons incorporating low-observable technology and features) to achieve surprise.

The daily transit of more than 3,000 local vessels and hundreds of crude carriers and cargo ships

1. Hossein Alaei, "How the IRGC Navy Was Formed" (Persian interview), in Madjid Mokhtari (ed.), *Iran-Iraq War Strategic Issues* (Tehran: IRGC War Studies Center, 2002), p. 136.
2. Ibid., p. 277.
3. Wayne P. Hughes Jr., *Fleet Tactics and Coastal Combat*, 2nd ed. (Annapolis, Md.: Naval Institute Press, 2000), p. 165.
4. David B. Crist, "Iran's Small Boats Are a Big Problem," *New York Times*, January 20, 2008. Available online (www.nytimes.com/2008/01/20/opinion/20crist.html?_r=2&ref=world&coref=slogin&coref=slogin).

through the Persian Gulf and the Strait of Hormuz can make the task of differentiating friend from foe very difficult for conventional forces operating there, especially when the unconventional forces use local civilian boats and vessels to approach and attack targets.⁵ Any error involving collateral damage and civilian casualties would almost certainly benefit Iran.

Chokepoints

Most of the deep areas of the Persian Gulf are inside Iranian territorial waters. The shallower waters in the southern reaches of the Gulf are strewn with numerous small coral islands, oil-well heads, pumping platforms, and underwater mounds, all of which inhibit navigation and force traffic into designated deepwater channels near Iran's islands or coastline.

Iran could exploit this advantage during sea-denial operations by engaging in large-scale offensive mining of chokepoints and deepwater channels.⁶ Despite the noisiness of mine laying, countering this tactic is difficult once the mines are in place—countermine operations are time consuming and costly and can be undone by further hostile action. During the hostilities of 1987–1988, small Iranian Ashura-class mine-laying boats managed to escape undetected most of the time. During the operation to plant twelve mines on the *Bridgeton's* route, the Farsi island-based IRGC boats were within visual range of the escorting U.S. Navy warships.⁷

Mine-laying operations can be conducted using any type of vessel, including civilian craft such as *lenjes* (Persian for “dhow”), barges, or landing craft, as demonstrated by the *Iran Ajr* incident in 1987.⁸ They can be repeated as often as necessary to frustrate the enemy's countermine efforts.

Another preferred asymmetric tactic is ambushing merchant convoys and warships transiting known shipping corridors. These ambushes might consist of groups of speedboats setting out from small coastal coves, inlets, harbors, islands, or artificial objects such as buoys. Various factors can, however, affect small-boat operations: water currents and wind speeds (which affect navigation), weather and visibility (which hinder navigation and can also obscure small boats from their hunters or their prey), temperature and humidity (which affect crew endurance and the performance of electronic systems), water salinity (which affects seakeeping), and tidal range variations (which affect shallow water and channel operations). With years of operational experience in the region, Iranians would no doubt attempt to use such elements to their advantage.

Iran's naval forces would also likely rely on ambushes and surprise attacks originating from coastal or offshore staging areas, or busy sea-lanes, as well as swarming tactics, to limit the enemy's freedom of maneuver in geographically confined waters. The swarming tactic used by Iran's unconventional naval forces would also aim to hinder the enemy's ability to concentrate fire, using a combination of frontal, flanking, and diversionary attacks. These include coordinated spiraling maneuvers in so-called horseshoe formations while approaching and surrounding their targets.⁹ (Such tactics were used by Persian Gulf pirates for centuries.¹⁰)

Meteorological and Hydrographical Factors

The Persian Gulf summer, from May to October, is very hot and humid (up to 125°F/52°C and 90 per-

5. Eshkboos Danekar, “Janghaye Gheyre Classic dar Khalij-e Fars” [Unconventional wars in the Persian Gulf], from the proceedings of an event held at the Political and International Studies Bureau's Persian Gulf Studies Center, April 1988, Tehran (Tehran: Iranian Foreign Ministry, 1989), p. 272.

6. *Ibid.*, p. 131.

7. “A Brief Look at the Unconventional Warfare at Sea” [in Persian], *Faslnameye Tarikhe Jang* [History of war quarterly] 2, no. 6, (Winter 1992) (IRGC War Studies Center), p. 94.

8. See Danekar, “Janghaye Gheyre Classic dar Khalij-e Fars,” p. 276. The *Iran Ajr* incident involved an Iranian navy landing craft used as a mine-layer. It was caught red-handed off the coast of Bahrain on the night of September 21, 1987, by U.S. special operations helicopters, and was subsequently attacked and captured. The vessel was later scuttled by the U.S. Navy.

9. Mehdi Khodaverdikhan (ed.), *Nabard al-Ommaya: Avalin Amaliyat Daryaie Sepah Pasdaran dar Khalij Fars* [Battle of al-Omayya: the first naval operation of the IRGC in the Persian Gulf] (Tehran: IRGC War Studies Center, 1997), p. 165.

10. For more details on the swarming tactics, see Fariborz Haghshenas, “Iran's Doctrine of Asymmetric Naval Warfare,” *PolicyWatch* no. 1179 (Washington Institute for Near East Policy, December 21, 2006). Available online (www.washingtoninstitute.org/templateC05.php?CID=2548).

cent humidity in certain areas), making small-boat operations during the daytime difficult. As a result, Iran has equipped many smaller (and all larger) speedboats with air conditioning systems. High humidity also seriously disrupts the performance of radars—particularly the type of small marine radars used on Iranian speedboats. The winter weather is generally pleasant, though the early part of the season is often accompanied by heavy rains that can cause usually dry coastal riverbeds to flood, with devastating effects on coastal areas.

Weather and sea conditions also play a key role in naval operations, and the local inhabitants of southern Iran who constitute a significant part of the IRGCN's and Basij's naval forces can be expected to function better than foreign forces in the region's harsh conditions. Bad weather also adversely affects the electronics of modern warships operating in the area. Finally, hot, humid weather and the occasional sandstorm can significantly reduce visibility.

During parts of spring, the summer months, and parts of autumn, small-boat operations become dangerous due to seasonal storms.¹¹ Such annual weather cycles would likely influence the planning for, and timing of, Iranian small-boat operations.

Timing considerations are also necessarily affected by the hydrographic characteristics of the theater of operations. For example, in one area of the northern Persian Gulf, a predominant counterclockwise sea current converges with four other smaller currents. Past Iranian naval operations in the northern Gulf have originated in this area, and future Iranian operations would likely be launched from there as well.¹²

There are various types of winds in the Persian Gulf that affect the pattern and shape of the surface waves: the harmless seasonal winds from northeast to southwest; occasional strong winter storms (the so-called

Bora wind of the Hormuz); the regional winds usually parallel to the coastline that include the dusty northerly wind from the west or southwest (strongest from early June to mid-July); and the wind from the southeast, which significantly increases humidity, haze, and wave heights in late summer.¹³ The winds also continually change direction and make weather forecasting difficult. Together, the winds could adversely affect small-craft and diver operations in the northern Persian Gulf.¹⁴ Moreover, early morning fog, salt, haze, or dust, especially from May to August, reduces visibility to between two and six miles, and sometimes to as little as half a mile.¹⁵

Economic Factors

With oil prices reaching record levels, the main onshore and offshore production facilities scattered around the region offer easy high-value targets to the unconventional naval warfighter. The defense of these facilities would require a major effort, thereby providing additional tempting targets for Iranian forces. In the case of a confrontation with the United States, Iran would also have the option of using terrorist sleeper cells in the southern Gulf Arab states to destroy oil and gas facilities there.¹⁶ Moreover, because Iran relies heavily on locally produced equipment, arms, fuel, and other supplies, it would be able to wage and sustain an unconventional naval campaign for a considerable period of time.

Iran has several contingency plans to decrease, and eventually eliminate, its reliance on imported gasoline by 2009. Even if successful, however, it would still depend on the Strait of Hormuz as the channel for exporting almost all of its crude oil. Therefore, it seems highly unlikely that Iran would attempt to halt all shipping through the strait in a limited conflict scenario.

11. Ismail Raean, *Daryanavardiye Iranian* [The seafaring Iranians], vol. 1 (Tehran: Sekeh Publishing, 1971), p. 437.

12. Khodaverdikhan, *Nabard al-Ommaya*, pp. 35–36.

13. Ibid., p. 26, and Raean, *Daryanavardiye Iranian*, pp. 441–442.

14. Khodaverdikhan, *Nabard al-Ommaya*, p. 26.

15. Rouhollah K. Ramazani, *The Persian Gulf and the Strait of Hormuz* (Alphen aan den Rijn, the Netherlands: Sijthoff & Noordhoff, 1979), p. 4.

16. Danekar, "Janghaye Gheyre Classic dar Khalij-e Fars," p. 281; and Div. General Muhammad Ali Jafari, interview with *Jamejam* newspaper, June 28, 2008 (available online at www.jamejamonline.ir/newstext.aspx?newsnum=100942312993).

Human and Ideological Factors

Arguably, the human factor plays an important, if not vital, role in asymmetric warfare, especially when combatants are energized by nationalist or religious zeal. The Islamic Republic has exploited the historical resentment of the residents living along the country's southern coastline, who have endured numerous foreign occupations. The long and bitter Iran-Iraq War helped strengthen these feelings.

The IRGC places religious belief at the core of the Iranian concept of asymmetric warfare.¹⁷ This concept rests on three components: political and religious prudence and faith in the *velayat-e faqih* (the doctrine of clerical rule that underpins Iran's theocracy); motivation and resilience in the face of adversity; and the culture of jihad and martyrdom. The Quran promises that the Islamic warrior who embodies the qualities of faith, prudence, and patience will achieve superiority over his adversary by a factor of ten.¹⁸

Indeed, Iran's leadership seeks to imbue its fighters with a belief in their spiritual superiority over their perceived enemies—a view strengthened by recent encounters with British forces in the northern Persian Gulf. Therefore, the IRGC's leadership has chosen to emphasize the spiritual dimension in preparing for asymmetric warfare.¹⁹ To this end, they have launched a program aimed at deepening revolutionary zeal and religious fervor in the ranks as the IRGC's "center of gravity."²⁰ This is part of a broader effort to institutionalize its concept of "Alavi" warfare (derived from the

real-life example of the warrior-statesman Imam Ali—the Prophet Muhammad's cousin and son-in-law). Proponents of this concept believe it will ensure success on the battlefield because of its focus on duty (*taklif*) rather than the military objective or end-state.²¹

The concept could potentially be problematic, however, by making martyrdom fighters prone to overly emotional responses. On several occasions during the Iran-Iraq War, for example, IRGC small-boat units responded to successful U.S. attacks by swarming whatever undefended or insignificant target they could find, resulting in little if any harm to the enemy's forces.²²

In recent years, a gradual decline in Islamic commitment within the IRGC raised concerns among the Iranian leadership, prompting the IRGC command to assign 4,000 religious "commissars" to its units.²³ In May 2008, IRGCN commanders gathered in Mashad to discuss, among other issues, ways of rectifying this problem and "improving religious faith and political prudence," as well as asymmetric military readiness.²⁴

In Iran's concept of asymmetric warfare, the ideological or "spiritual" superiority of the community of believers is considered as important as any other factor—hence the importance attached to the doctrines of Alavi and "Ashurai" warfare (the latter referring to the martyrdom of Hussein ibn Ali—the Imam Ali's son and the Prophet Muhammad's grandson—during the battle of Karbala, on the tenth of Muharram, 680 CE).²⁵ A key aspect that connects these doctrines to asymmetric warfare is the special attention devoted to offensive psychological war-

17. Ali Saeedi, "Spirituality as the Mainstay of Asymmetric Warfare" [in Persian], *Payam*, no. 83 (Summer 2007) (Islamic Research Center). Saeedi is the Supreme Leader's representative in the IRGC.

18. Ibid. See the Quran, "Al-Anfal" (The spoils of war), verse 65.

19. Ibid.

20. "Innovation as the Main Aspect of IRGCN's 'Taali Plan,'" Islamic Republic News Agency (IRNA), April 9, 2008. Available online (www2.irna.ir/fa/news/view/line-2/8701210789125800.htm).

21. "Alavi warfare" is part of the new lexicon the IRGC has developed to describe its doctrine of asymmetric warfare, which emphasizes the deterrent and warfighting value of religious belief. The IRGC's current commanding officer (Muhammad Ali Jafari) is one of the principle's main proponents. See "New IRGC Commander: We Are at the Peak of Readiness" [in Persian], Mehr News Agency, September 3, 2007 (available online at www.mehrnews.ir/NewsPrint.aspx?NewsID=545730); Maj. Gen. Yahya Rahim-Safavi (former IRGC commander), interview with Mehr News Agency, September 23, 2007 (available online at www.mehrnews.com/fa/NewsDetail.aspx?NewsID=556030); and Haghshenass, "Iran's Doctrine of Asymmetric Naval Warfare."

22. "A Brief Look at the Unconventional Warfare at Sea," p. 95.

23. "The IRGC Commander Announces a Religious Uplifting Plan" [in Persian], Fars News Agency, May 9, 2008. Available online (www.farsnews.com/newstext.php?nn=8702090887).

24. "The 16th Gathering of IRGCN Commanders" [in Persian], Fars News Agency, May 20, 2008. Available online (www.farsnews.com/newstext.php?nn=8702310072). Ironically, this conference was held at the same time that the IRGC sponsored Tehran's first rap and R&B concert.

25. See Alireza Movahed Alavi, "Asymmetric Warfare and the Effects of Cultural and Psychological Factors" [in Persian], *Psychological Operations Quarterly* 2, no. 5 (July 2004) (this journal is an IRGC publication); available online (www.arnet.ir/?lang=fa&state=showbody_new*s&key=&row_id=2156&style=no). See also Haghshenass, "Iran's Doctrine of Asymmetric Naval Warfare."

fare and “nonmaterial” factors in warfare. Accordingly, even the creation of a “rapid cultural reaction unit” to counter threats to Iran’s revolutionary Islamic values has been proposed.²⁶ This demonstrates the importance Tehran attaches to achieving both moral and military superiority over its enemies.

Iranian military thinkers define Alavi warfare as “a defensive war based on religious and national values using fighters who are psychologically prepared to fight to the death if necessary, and who have enough moral capacity to persevere militarily.” As described earlier, this Shiite-inspired concept, which is often used in conjunction with Ashurai warfare, is different from asymmetric warfare to the degree that it gives priority to the “cause” over the “objective.” In other words, for a military force following the concept, the mere act of

fighting and fulfilling its duty to the fullest—including martyrdom—is an end in itself; the military outcome is of secondary importance. The IRGCN has incorporated this concept into its operational plans in the Persian Gulf and the Gulf of Oman by giving the ideologically committed Basij a more prominent role in waging bold swarming attacks.²⁷

The IRGC leadership believes that Iran’s most fearsome weapon is its martyrdom culture. Thus, acting IRGCN commander Ali Fadavi recently threatened to launch suicide missions in the Strait of Hormuz using young Basijis. He also revealed plans to better “incorporate” the Basij into IRGC naval operations, including an apprenticeship program that apparently assigns Basijis to every active IRGCN unit—including surface and commando units—to perform “expendable” duties.²⁸

26. Alireza Movahed Alavi, “Asymmetric Warfare.”

27. See *ibid.* for a comparison of Alavi and asymmetric warfare.

28. “Successor at IRGC Navy: One Small Action in the Strait of Hormuz Would Also Have a Big Effect” [in Persian], *Keyhan*, October 30, 2007, p. 2. Available online (www.kayhannews.ir/860808/2.htm#other207).

Iranian Capabilities and Intentions

“Unconventional means lead to unconventional ends.”

—Anonymous IRGC officer

IRAN’S UNCONVENTIONAL naval warfare forces consist of six elements: surface vessels, midget and conventional submarines, missiles and rockets, naval mines, aviation, and military industries.

Surface Vessels

Although Iran’s long-range coastal artillery and shore-based anti-ship missiles can provide some level of area denial over substantial portions of the Gulf, surface vessels are required in order to actually control the Gulf. Toward this end, Iran has built or acquired a number of small- to medium-size fast-attack craft (FACs) during the past decade for operations within the Persian Gulf and the Gulf of Oman. Both the IRGCN and IRIN make use of these craft.

Although the most numerous vessel in the IRGCN arsenal is the fiberglass Ashura motorboat (see fig. 3)—which may carry a heavy machine gun, a multiple rocket launcher (MRL), or a single contact mine—it also uses several of the other small boats procured or produced by Iran. These include the Tareq (the Swedish Boghammer speedboat);¹ the Zolghadr, Zoljaneh, or Bahman catamaran patrol boats, which are capable of carrying both torpedoes and rocket launchers and may also be used for covert mining missions in Persian Gulf shipping lanes; and the Zolfaghar and Azarakhsh FACs (versions of the China Cat built in Iran), which are capable of carrying a sixteen-tube HM 23 122-millimeter naval MRL (with a range of



Fig. 3. An Ashura-class small boat fitted with a ZU-23-2 cannon.

around 20 kilometers) or two Kosar anti-ship missiles.² The IRGCN also operates remote-controlled radar decoy and/or explosives-filled boats, to divert enemy defenses or attack enemy vessels.

The newest boats in the IRGCN’s fleet are the North Korean IPS-16 (see fig. 4) and the slightly larger IPS-18 torpedo boats, which incorporate low-observable features. Both can carry two 324-millimeter homing torpedoes, while the former can also carry two Kosar missiles (though this would presumably increase the vessel’s radar signature). Both were very active during the latest Iranian naval exercises, and reports suggest Iran is building a large number of these vessels. Iran is also reported to operate a small number of North Korean–designed Taedong-B and Taedong-C semi-submersible special operations attack craft delivered in 2002.³ At least one such boat, a Taedong-B, was used during recent war games. Both types are believed to be

1. Iran also benefits from fine Italian design when it comes to naval warfare. Iran’s Joulaee Marine Industries has apparently obtained a license from the Italian company Fabio Buzzi (FB) Design to produce the RIB-33SC and FB-55SC high-speed patrol boats, which would probably be used by the IRGCN. Emanuele Ottolenghi, “Iran’s Deceptive Commercial Practices,” *Perspectives Papers on Current Affairs*, April 15, 2008. Available online (www.biu.ac.il/Besa/perspectives41.html).
2. The idea of putting MRLs on boats was originated by the Soviets during the World War II era, with their armored riverboats. Interestingly, Rouhollah Ramazani foresaw as early as 1979 the use of MRLs by guerrillas to attack vulnerable oil tankers transiting the Strait of Hormuz; see his book *The Persian Gulf and the Strait of Hormuz* (Alphen aan den Rijn, the Netherlands: Sijthoff & Noordhoff International, 1979), p. 5. The Iranian-made rocket launchers used during the Tanker War had a range of about 8.5 kilometers, compared to the 20-kilometer range of the 122-millimeter MRL round.
3. Bill Gertz, “Korea Delivers Semi-Submersible Gunships to Iran,” *Washington Times*, December 16, 2002.



Fig. 4. An IPS-16 torpedo boat fitted with Kosar anti-ship-missile launchers.



Fig. 5. Tondar fast-attack craft.

equipped with lightweight 324-millimeter short-range (6–10 km) torpedoes.

Iran's ten Tondar (North Korean Houdong; see fig. 5) FACs provide the IRGCN with its only “conventional” capability (as compared to the largely conventional IRIN, which has a handful of operational corvettes and some half dozen missile boats in its fleet). With a displacement of around 200 tons and a top speed of 35 knots, each is armed with two C-802 double-launchers. FACs suffer from critical shortcom-

ings, however, when compared to larger ships. For example, they are unable to hit targets at long ranges due to the limitations of their target acquisition sensors. This means that in many cases they are armed with missiles that can shoot farther than the ships can “see,” which dramatically reduces their effectiveness. And in littoral warfare, small missile-armed boats are likely to draw disproportionate fire.⁴ Their prospects for survival, therefore, are not very good.

Submarines and Torpedoes

The IRIN's three 877EKM Kilos are based at Bandar Abbas, together with most of Iran's fleet of four midget submarines. Two of the Kilos are operational at any given time and are occasionally deployed in the eastern mouth of the Strait of Hormuz, the Gulf of Oman, and the Arabian Sea. The smaller, locally built 200-ton Ghadir (which can carry two 533-millimeter torpedoes; see fig. 6, next page) and 500-ton Nahang-1 littoral submarines, which both the IRGCN and IRIN now have, will likely operate mainly in the Persian Gulf.⁵ These submarines are probably intended for mine-laying, special operations, and anti-shipping operations, and are indicative of Iran's growing interest in developing an undersea warfare capability.⁶ In addition, the IRGCN maintains an elaborate network of long-range day/night video cameras in numerous locations along Iran's southern shoreline to detect possible clandestine infiltrations, and perhaps even to pass targeting intelligence to submarines using underwater communications gear developed by the Iranian Electronic Industries (IEI).

Unlike air, water is a hostile medium that distorts noise very easily, but it also allows sound to travel over very great distances. The U.S. Navy has a variety of means at its disposal to detect submerged submarines, but in shallow coastal waters, high ambient noise levels degrade the performance of sonar, making the job of detecting, locating, and identifying submarines very

4. Wayne P. Hughes Jr., *Fleet Tactics and Coastal Combat*, 2nd ed. (Annapolis, Md.: Naval Institute Press, 2000), p. 164.

5. *Bluffer's Guide to North Korean Naval Power 2007*. Available online (www.abovetopsecret.com/forum/thread285661/pg1).

6. “Iran Tested a Missile with a Range of 150 km” [in Persian], Fars News Agency, April 20, 2007. Available online (www.farsnews.com/newstext.php?nn=8601300091).

difficult.⁷ At the same time, temperature and salinity may facilitate the detection of submarines in certain areas. Extremely high salinity affects sound wave transmission; the higher the salinity of water, the faster the sound waves travel through it. Therefore the combination of high temperature and salinity in the approaches to the Gulf could make it easier for a surface ship with passive sonar to detect a submarine.⁸ At any rate, because Iran's submarines would eventually have to return to base to rearm, refuel, and undergo maintenance and repairs, it would be only a matter of time before they were located—a fact that does not bode well for their survival in the event of a confrontation with the United States.

Elsewhere, at the southern end of the Caspian Sea, the Iranians would face problems operating their small littoral submarines. The water depth reaches more than 3,000 feet there, so the Iranians would have to design hulls that could withstand such conditions.

Iran is also experimenting with wet submersibles, which require highly trained and motivated crews. The experimental Sabehat-15 two-seat submersible swimmer delivery vehicle, designed by the Esfahan Underwater Research Center, is one example. Although it is being tested by the IRIN, and most probably by the IRGCN as well, it is not known whether this GPS-equipped submersible is in active service yet. Not only can such small submersibles be operated from large mother ships, they could also conceivably be fixed to the hull pylons of Nahang-class boats for longer-range insertion operations. Iran also has “manned torpedoes” of North Korean origin in service.

Even innocent-looking merchant ships or trawlers can have hatches below the waterline and facilities for delivering and recovering small submersibles.⁹ Such an arrangement would be ideal for long-range “strategic” operations in the Gulf of Oman and the Arabian Sea, similar to those carried out by the Italian Navy in the Mediterranean during World War II.



Fig. 6. A Ghadir-class midget submarine.

In recent years, Iran has greatly expanded its torpedo capability and has reportedly launched a production line for at least two types of 533- and 324-millimeter homing torpedoes. The Iranian TT-4, 53-65KE, and possibly TEST-71 wake-homing torpedoes have ranges of up to 20 kilometers. Iran also claims to have designed a torpedo especially for targeting submarines and surface vessels in the Strait of Hormuz; it is reportedly in service with both the IRGCN and IRIN.¹⁰ Also purportedly in service is the Hoot superavitation high-speed missile torpedo (reportedly based on the Russian Shkval), with a speed of 223 miles per hour (360 km/h, 100 m/s). Iranian possession and mastery

7. Antony Preston, *Submarine Warfare* (London: Brown Books, 1998), p. 137.

8. Ramazani, *The Persian Gulf and the Strait of Hormuz*, p. 5.

9. John E. Moore and Richard Compton-Hall, *Submarine Warfare: Today and Tomorrow* (London: Michael Joseph, 1986), p. 209.

10. “Modern Torpedo Fired against Live Target at Strait of Hormuz” [in Persian], Fars News Agency, April 3, 2006. Available online (www.farsnews.net/newstext.php?nn=8501140362).

of such a system could be a potential game-changer in the Gulf, although Iran's claim remains unverified, and the safety, reliability, and capabilities of the original Russian system on which it is based remain a matter of contention.

Missiles and Rockets

IRGCN swarms during the Iran-Iraq War were vulnerable to early detection and aerial interdiction en route to their targets, although their losses did not deter Iran from undertaking additional missile and speedboat attacks. Furthermore, the 2006 Lebanon war showed the Iranians that military victory was possible against an enemy that enjoyed air supremacy.

Nevertheless, the IRGCN hopes to reduce this vulnerability to enemy air attack with the deployment of large numbers of man-portable air defense systems, such as the widely used Misagh-1 and -2 surface-to-air missiles (licensed copies of the Chinese QW-1 and QW-1M) with a maximum range of 5 kilometers, as well as anti-helicopter rockets and mines and shore-based Pantzir, Tor M-1, and YZ-3 Shahab Thaqeb (FM-80) surface-to-air missiles.

The IRGCN prides itself on its impressive arsenal of anti-ship missiles. Iran has made numerous guidance/control modifications to the venerable Chinese HY-2 Silkworm mobile shore-based missile, which for a long time was the backbone of its anti-ship-missile force, with a maximum range of 53–62 miles (85–100 km).¹¹ Iran has also produced an extended-range version of the HY-2, the “strategic” SS-N-4 Rad (Thunder). The Rad, which was first tested in military maneuvers in early 2007, is designed to fly lower than its predecessor, the HY-2G (C-201) Seersucker, and perform evasive maneuvers during its terminal phase of flight. Equipped with active and passive guidance, electronic counter-countermeasures (ECCMs), and a massive 1,000-pound (500 kg) warhead, this missile could prove deadly even to large vessels.

Next in line is the Noor anti-ship cruise missile—a license-produced, upgraded version of the



Fig. 7. A C-802 coastal anti-ship-missile battery.

Chinese C-802 (see fig. 7), with a 155-kilogram warhead, an improved ECCM capability, and increased range—which may simply be a version of the Chinese C-803. This missile is deployed in mobile batteries in Iran's coastal areas and islands, including Qeshm. The Noor includes a datalink for receiving midcourse targeting data from an airborne radar system carried by helicopter or fixed-wing aircraft. The Iranians have integrated Noor with the IRGCN fleet of Mi-171 helicopters.

The Sedjil, FL-10, and Nassr-1 seem to be locally produced versions of the Chinese JJ/TL-6B anti-ship missile, which has active radar guidance and a maximum range of 35 kilometers.

The most diverse range of anti-ship missiles in Iran's arsenal is the small Kosar series. It includes the optically guided fire-and-forget Kosar (JJ/TL-10A) and Kosar-1 (C-701T) missiles with 20-kilogram warheads and a maximum range of 15 kilometers. Iran also operates an active radar-guided version, the KJ/TL-10B (which might be called Kosar-2 in Iran), with a range of 18 kilometers. Another EO-guided version is the Kosar-3, closely resembling the C-701T, but with a much larger 120-kilogram warhead and an extended range of 25 kilometers. Truck-mounted versions of one or more Kosar variants have reportedly been deployed to a number of Iran's Gulf Islands.

11. “C-201/HY-2/SY-1/CSS-N-2/CSS-C-3/Seersucker,” Federation of American Scientists (FAS). Available online (www.fas.org/man/dod-101/sys/missile/row/c-201.htm).

With regard to rocket systems, the most popular type in the IRGCN inventory is the 107-millimeter mini-MRL, which comes in 10-, 11-, 12-, and 19-tube varieties and has an effective range of about 8.5 kilometers. Some of these MRLs have reportedly been equipped with gyro-stabilizers to improve accuracy in rough seas. In addition, the larger, 8-tube 333-millimeter Falaq-2 naval rocket system has a range of 10 kilometers.

In recent years, Iran has used shore-based Fajr artillery rockets in a naval support role. The Fajr-3 has an 85-kilogram warhead and a range of 43 kilometers, while the larger Fajr-5 delivers a 170-kilogram warhead with a maximum range of 70–75 kilometers. Iran is also reportedly producing a version of the Fajr-3 that can deliver a submunition warhead to a range of 120 kilometers, as well as a mine-dispensing version that could saturate shipping lanes in the Gulf with small unmoored mines (see fig. 8).

Naval Mines

Having appreciated the true potential of naval mine warfare during the Tanker War, the IRGCN considers mine-laying one of its most important missions. It possesses or produces a variety of naval mines, including the Sadaf-01 bottom-moored contact mine (used extensively during the Tanker War), copied from the Iraqi al-Mara mine (which in turn was based on the antiquated Russian M-08 design; see fig. 9); moored and bottom-influence mines incorporating magnetic, acoustic, and pressure fuses; limpet mines for use by special operations forces; drifting mines; and remotely controlled mines.

The difficult-to-detect bottom mines are suitable for waters no deeper than 180 feet (60 m), while moored mines are used in deeper waters, although currents at the Strait of Hormuz are strong enough to displace all but firmly moored mines.¹² The maximum depth of the strait is 264 feet (80 m), and in the Persian Gulf it is between 260 and 330 feet (80–100 m), although most shipping corridors there are no deeper than 115 feet (35 m).



Fig. 8. Ashura-class small boats configured for mine-laying duties.



Fig. 9. Iranian M-08 contact mines.

The IRGCN could task small speedboats, submarines, and nondescript civilian vessels manned by military crews to covertly mine shipping corridors and harbor entrances, while combat divers inserted by IRGCN or IRIN Zodiac boats and wet submersibles, or dropped by helicopter, could attach limpet mines to enemy ships or offshore oil facilities.

Little is known, however, about the IRGCN's mine countermeasure capabilities. While the IRIN still operates four or five Sikorsky RH-53D helicopters (used by the U.S. Navy in the airborne mine countermeasures role), there are no indications of any mine-clearing sys-

12. Richard Halloran, "Pacific Choke Point," *Air Force Magazine* 91, no. 7 (July 2008), p. 47. Available online (www.airforce-magazine.com/MagazineArchive/Documents/2008/July%202008/0708choke.pdf).

tems in the IRGCN inventory. The IRGCN has likely done considerable research on this topic, but it is not known to have fielded any such capability

Aviation

The IRGCN's naval units can expect to receive close air support from the IRGC's small inventory of 12 Su-25 and 15 EMB-312 Tucano ground attack aircraft, as well as Iranian air force F-4 Phantoms and Su-24 Fencers armed with Noor anti-ship missiles.

The IRGCN could mount day or night commando raids by inserting the IRGC ground force's "Saaberin" special operations units using their Mi-17I helicopters equipped with IEI night-vision equipment. They could also use Noor-armed Mi-17Is to mount long-range attacks on shipping.

Finally, the IRGCN has deployed several types of indigenously produced unmanned aerial vehicles (UAVs). Iran commenced work on UAVs beginning in 1985, including models that could carry rockets or bombs or undertake "kamikaze" missions. These attack UAVs were developed to counter the increasingly powerful U.S. naval presence in the Persian Gulf in the mid- to late 1980s, but were never used in the naval arena (although a rocket-carrying UAV capable of holding up to six RPG-7 rounds was used in combat against Iraqi ground forces—the world's first combat application of an unmanned combat aerial vehicle).¹³

The positive wartime experience with UAVs prompted Iranian leaders to endorse an expanded investment in the UAV industry, which now produces several families of the weapon. In October 1997, Iran reported that it had successfully tested a stealth surveillance UAV (made of composite materials) during naval exercises in the northern Persian Gulf. It claimed that the UAV flew by the aircraft carrier USS *Nimitz* undetected.¹⁴

Self-Reliance

The unconventional IRGCN runs an innovative Self-Sufficiency Research Organization with different bureaus dealing with naval engineering, surface and sub-surface warfare, marine electronics/communications/radar, electronic warfare (e.g., radar, communications, and global positioning system jammers), navigation, sonar and acoustics, missile technology, and cartography. The force's naval communications capabilities have come a long way since 1986, when nonwaterproof radios went dead in the middle of combat. Today, Shiraz Electronics Industries, for example, manufactures a variety of maritime (surface and subsurface) communications, navigation, and acoustics detection equipment, including HF modems, coastal mobile radar, and electronic support measure (ESM) stations.¹⁵ Likewise, the navy's self-sufficiency organization has reportedly also developed electronic warfare equipment—for use by both surface and submarine units—designed to counter U.S. systems present in the Gulf region.

More important, from the perspective of its operational capabilities, the IRGCN has reportedly established an extensive fiber-optics communications network. Built by the local Asia Ertebat company, it is said to stretch along the length of the northern Persian Gulf littoral to ensure secure and continuous communications in wartime.

Organization and Main Bases

The IRGCN was established on September 17, 1985, and first commanded by Hossein Alaei (currently a military advisor to Supreme Leader Ali Khamenei). Its main headquarters is in eastern Tehran, and its zones of operation consist of four districts, as shown in Table 1. The IRGCN has bases in almost every port, harbor, and island in the Persian Gulf and Gulf of Oman, but its southern headquarters is the Shahid Bahonar naval base and the Bandar Abbas air-naval station.

13. For a detailed study of the Iranian UAV industry, see Liam F. Devlin, "Iran Expands UAV Capability," *Unmanned Vehicles* 11, no. 8 (December 2006–January 2007), pp. 16–19. Available online (www.webmags.co.uk/mag.aspx?magcode=UV_DECJAN_2007).

14. *Ibid.*, p. 19.

15. See two items on the Rahnama System website: "Project Title: Supervision on Designing and Manufacturing National Radar" (www.rahnamasystem.com/English/Proj-e/p006.htm) and "Project Title: Conceptual Design for Equipping Armed Forces Ships in Ground of Electronic, Control, Navigation and Telecommunication Systems" (www.rahnamasystem.com/English/Proj-e/p005.htm).

Table 1: IRGCN Operational Districts

DESIGNATION	KEY BASE NAME	LOCATION	COMMANDING OFFICER
1st Naval District	Shahid Bahonar Naval Base	Bandar Abbas, Strait of Hormuz	Sardar Alireza Tangsiri
2nd Naval District	Shahid Mahalati Naval Base	Bushehr, Central Persian Gulf	Sardar Ali Razmjou
3rd Naval District (North)	—	Mahshahr, Northern Persian Gulf	Pasdar Col. Taghipour-Rezaie
4th Naval District	—	Babolsar, Caspian Sea	Pasdar Capt. Seifolah Bakhtiarvand
—	Imam Ali Independent Naval Base	Chabahar, Gulf of Oman	Pasdar Captain Ali Nasiyenkou

Iran's other main bases include the Shahid Mahalati naval base; the Bushehr air-naval station; the Arvand naval surveillance base at the mouth of Shatt al-Arab (Arvand Road), which secures the Iranian side of the waterway; the Imam Ali naval base in Chabahar; as well as bases in Assaluyeh, Borazjan (home of the IRGCN's Engineering Command), Bandar Taheri, Jask (the Emamat naval/missile base), and various islands, including Kharg, Abu Musa, the Tunbs, Farsi, Qeshm, Sirri, Larak, and Lavan. The IRGCN also presides over an extensive officer and noncommissioned officer training activity in its Javad al-Aemeh Maritime Science and Technology College in Chalous, on the Caspian coast. Finally, the IRGC has built an extensive network of tunnels and underground missile bunkers on the Persian Gulf islands, turning them into what they call "static warships."

In Tehran, the events of 1987–1988 effectively undercut the perception that religious fervor alone could defeat superior technology and firepower. This led to the rethinking of future requirements and technological capabilities, although the reliance on unconventional tactics remained unchanged. Therefore, after the war ended in 1988, it was decided that the IRIN and IRGC would both benefit from a greater degree of interaction.¹⁶ To this end, an IRGC ground commander was appointed commander of the IRIN. Such measures were expected to facilitate coordination and cooperation on the battlefield, and resolve problems arising from the existence of parallel naval chains of command in the IRIN and IRGCN.¹⁷

The latest reports out of Iran suggest the IRGCN is in the process of ceding, or greatly reducing, its security role in the Caspian Sea to the IRIN. Instead, the

16. Mehdi Khodaverdikhan (ed.), *Nabard al-Ommaya: Avalin Amaliyat Daryaie Sepah Pasdaran dar Khalij Fars* [Battle of al-Omayya: the first naval operation of the IRGC in the Persian Gulf] (Tehran: IRGC War Studies Center, 1997), p. 13.

17. Ayatollah's Khamenei's speech at the inaugural ceremony of the new IRIN commander, Commodore Shamkhani, October 31, 1989. Available online (farsi.khamenei.ir/FA/Speech/detail.jsp?id=680809A). Some Western sources suggest, erroneously, that the IRGCN is subordinated to the regular naval forces.

HEADQUARTERS (HQ) NAMES	DETAILS
Noah Tactical HQ; Saheb-az-Zaman Tactical HQ (Strait of Hormuz); Nassr Aviation and Air Defense HQ	Home to the Persian Gulf Fleet HQ and a diving school; fleet includes the IRGCN's flagship Velayat, midget submarines, and various missile boats.
Moharam Tactical HQ	Home to the IRGCN's rapid reaction speedboat group, Salmaan (Coastal) Missile Group, Saaber Communications Center, the "Naval Missile Brigade 110," and various missile boats.
Imam Hossein Tactical HQ	One of the largest IRGCN naval, missile, and electronic warfare bases, includes the Arvand naval surveillance base at the mouth of the Shatt al-Arab, commanded by IRGC Col. Abolghasem Amangah; fleet includes small missile and gunboats.
—	Home of the Javad al-Aemeh Maritime Science and Technology College, under command of Pasdar Capt. Naghi Pour-Rezaie; fleet includes FACs.
—	Fleet includes various missile boats, and possibly midget submarines.

IRGCN is concentrating its resources on Iran's more volatile southern shores, where it will play a dominant role,¹⁸ and where the newly established IRIN light squadrons could be brought under the overall theater command of the IRGC—something the Pasdars have sought since the Iran-Iraq War.

At the same time, the IRIN is in the process of moving away from conventional naval tactics and toward methods usually associated with the IRGCN, such as subsurface warfare using midget submarines, FAC operations, and offensive mine warfare.¹⁹ The commander of the IRIN recently called this doctrinal and technological shift a "renaissance."²⁰

The IRGCN anticipates that in wartime, potential enemies will try to disrupt its command and control. In response, it is creating a decentralized command structure that will allow for more autonomous district and sector operations. Small, autonomous, mobile, and agile combat units form the basic building block of this new "mosaic" defense strategy.²¹ In the naval arena, speedboats will be taken out of camouflaged coastal or inland hide sites and bunkers, hauled on trailers to coastal release points, and given mission-type orders that will not require them to remain in contact with their chain of command. Each unit of such teams will be assigned a naval sector of operation where, in

18. "Independent Missile Command Might Be Formed in the IRGC" [in Persian], Fars News Agency, May 25, 2008. Available online (www.farsnews.com/newstext.php?nn=8703051021).

19. "Iran Tested a Missile with a Range of 150 km" [in Persian], Fars News Agency, April 20, 2007 (available online at www.farsnews.com/newstext.php?nn=8601300091). This shift was predicted by the famed war-game designer James F. Dunnigan; see "Iran's Navy Goes Underwater to Win," April 9, 2006 (available online at www.strategypage.com/dls/articles2006/20064904047.asp).

20. "New Generation of Iran's Submarines Soon to Enter Service" [in Persian], Fars News Agency, September 24, 2006. Available online (www.farsnews.com/newstext.php?nn=8507020257).

21. "Iran Changes Its Defense Doctrine to Face Extra-Regional Threats," Mehr News Agency, September 23, 2007. Available online (www.mehrnews.com/fa/NewsDetail.aspx?NewsID=556030). In the so-called mosaic defense concept, small Basij groups (Ashura battalions) are being formed in many towns and counties, to operate autonomously in defense of their local geographical area but under the operational control of the provincial IRGC commands.

the event of a conflict, enemy naval assets or civilian maritime traffic will be attacked. Under such wartime circumstances, the IRGCN is expected to be directed out of a forward operating command post, the Noah General headquarters, as was the case during the Iran-Iraq War.

Intentions

“Our war is a war between our religion and all the inequalities of the capitalist world; therefore, this war has no boundaries. Our war is a war of faith and devotion. And this draws our strategy.”

—Div. Gen. Muhammad Ali Jafari,
IRGC general commander, July 2, 2008²²

During the 1980s, Iran repeatedly tried to avoid drawing U.S. forces into its war with Iraq, which the United States interpreted as a sign of prudence and self-interested restraint, given the balance of forces in the Gulf.²³ And in a future confrontation with the United States, Iran might once again act with restraint—to avoid escalating the conflict in a way that would play to U.S. strengths in waging mid- to high-intensity warfare—by employing discreet tactics such as covert mine-laying, limited submarine operations, and occasional mobile shore-based missile attacks. A dress rehearsal for just such an operation took place on June 18, 2008.²⁴

Alternatively, Iran could launch a coordinated attack involving explosives-laden remote-controlled boats, swarming speedboats, semi-submersible torpedo boats, FACs, kamikaze UAVs, midjet and attack submarines, and shore-based anti-ship missile and artillery fire, all concentrated on a U.S.-escorted convoy or surface action group transiting the Strait of Hormuz.

Barrages of rockets with cluster warheads could be used to suppress enemy defensive fire and carrier air operations.

A war game conducted by the U.S. military in 2002, called Millennium Challenge, revealed a serious fleet vulnerability to well-coordinated attacks by ballistic and cruise missiles and swarming speedboats in littoral waters, causing “the worst [simulated] naval defeat since Pearl Harbor.”²⁵ Since then, Western militaries have studied the concept of “net-centric” warfare in the maritime environment, especially against swarm attacks, and expect this concept—which stems from information advantages on the battlefield—to help reduce, if not eliminate, their vulnerability.²⁶

Based on the doctrine of asymmetric naval warfare, the Iranian military has embarked on a remarkable rearmament and re-equipment program during the past decade, aimed at offsetting the U.S. Navy’s military presence in the Persian Gulf region. The Iranians appear confident that the dense, layered defense they have created, along with their much-vaunted swarming tactics and the fear inspired by their martyrdom culture, will deter an attack against their territory or interests.

Iran’s defense policy is based on deterrence, and despite the fact that Tehran maintains it has no intention of attacking neighboring countries, a preemptive strike against U.S. and Gulf Arab naval and other military assets in the region cannot be ruled out under certain circumstances. In Islam, war is generally believed to have a defensive nature. According to Islamic law as defined in IRGC textbooks, however, a “preemptive jihad” can be justified if defined as a defensive act. Hence, a preemptive jihad can be prescribed when deemed necessary.²⁷ Moreover, the 2006 war in Lebanon underscored

22. “IRGC Prepares with Planning and Identification of Threats to It” [in Persian], Fars News Agency, July 2, 2008. Available online (www.farsnews.net/newstext.php?nn=8704120790).

23. *The Persian Gulf: Implications of a U.S.-Iranian Confrontation*, CIA SNIE 34-87, August 1987 (declassified in 2006), p. 12.

24. “Jafari Emphasized the Need to Improve Readiness and Defensive Capabilities to Counter Threats” [in Persian], Fars News Agency, June 19, 2008. Available online (www.farsnews.com/newstext.php?nn=8703300121).

25. Tom Abate, “War Game Reveals Navy Risk,” *San Francisco Chronicle*, March 20, 2003. Available online (www.sfonline.com/cgi-bin/article.cgi?f=/c/a/2003/03/20/MN265390.DTL).

26. David Galligan, George Galdorisi, and Peter Marland, “Net Centric Maritime Warfare—Countering a ‘Swarm’ of Fast Inshore Attack Craft,” paper presented at “The Future of C²,” the Tenth International Command and Control Research and Technology Symposium, April 2005. Available online (www.dodccrp.org/events/10th_ICCRTS/CD/papers/053.pdf).

27. See “The Characteristic Images of War and Peace in Islam” [in Persian], *Hossoun* (Fall–Winter 2001) (IRGC Center for Islamic Research).

the merits of preemptive action—Tehran maintains that Hezbollah's kidnapping and killing of Israeli soldiers actually preempted a large-scale Israeli and American military attack against the group and, ultimately, Iran itself, claiming that said attack had been planned for September or October 2006.²⁸

Along these lines, the IRGCN has helped Hezbollah build up its nascent naval capabilities through a modern military alliance that bears echoes of the distant past. The ancient Achaemenid Persians commissioned the services of the seafaring Phoenicians to build a navy for them, so that they could expand the Persian Empire into the Mediterranean and beyond. During the Islamic era, it was Persian sailors and shipbuilders living in Phoenicia, today's Lebanon and Syria, who helped the Arab caliphs create a navy with which to fight the Byzantines.

History repeated itself when the IRGCN began helping Hezbollah establish and train its frogmen and naval units in the 1990s. The task was given to the experienced IRGCN chief of naval operations, Abdollah Roudaki, who was instrumental in devising the IRGCN's tactics and operations against the U.S. Navy in the 1980s. According to an Iranian publication, he was wanted by the Israeli and American intelligence services when he was killed by unidentified gunmen in May 2000.²⁹

The IRGC believes its chain of command extends through Supreme Leader Ali Khamenei to God, thereby investing military orders with transcendent moral authority and instilling fear in the hearts of Iran's enemies that God is on the side of the Islamic

Republic.³⁰ Despite this, a high-ranking IRGC commander recently acknowledged that his organization is still vulnerable to the cyber age's "soft war"—the subversive influence of the Western "cultural invasion."³¹

It is no secret that Tehran's ultimate aim is to expel U.S. and Western influence not only from the Persian Gulf region, but also from the entire Middle East. The Iranian president has even called for the removal of all American military bases outside the United States.³² But for now, Iran's main focus is on the Persian Gulf. According to Ayatollah Khamenei's representative to the IRGC, the time has come to defeat the superpowers,³³ and in July 2008, Commodore Safaari for the first time promoted the IRGCN as the protector of the world's energy jugular through the Strait of Hormuz.³⁴

Ever since the late 1980s, the main aim of the IRGC has been to ensure that Iran's naval capability is factored into U.S. threat assessments, whether through heated rhetoric, highly publicized military maneuvers, or actions such as the capture of British military personnel and the harassment of U.S. warships in the Gulf. This trend was highlighted by military maneuvers held in November 2006, when the IRGC rehearsed the closure of the Strait of Hormuz by means of missile boat operations, attacks by shore-based anti-ship missiles, and concentrated long-range artillery and rocket fires.³⁵

Such maneuvers are planned in conjunction with the IRGC's propaganda and psychological operations command, however, and are as much exercises in psychological warfare as they are exercises of Iran's military capabilities. Indeed, the recent merger of the

28. "Ayatollah Khamenei Speaking with Hugo Chavez: Hezbollah's Preemptive Attack Disrupted America's Plan" [in Persian], *Keyhan*, July 10, 2006; available online (www.kayhannews.ir/850508/2.htm). See also other news reports on this issue: *Keyhan*, November 4, 2006 (www.kayhannews.ir/850813/2.htm); Fars News Agency, July 13, 2008 (www.farsnews.com/newstext.php?nn=8704231107) and August 5, 2006 (www.farsnews.com/newstext.php?nn=8505140317).

29. "IRGCN Martyrs" (IRGCN Special Issue), *Bosbra Monthly* (March 2007) (Islamic Propaganda Organization of Iran for the IRGCN Cultural Directorate).

30. "Pasdar Gen. Hossein Salami: The World Has No Clear Assessment of the IRGC's Power" [in Persian], Fars News Agency, July 6, 2008. Available online (www.farsnews.com/newstext.php?nn=8704160325).

31. *Ibid.*

32. "Iran's Ahmadinejad Calls for U.S. bases to be 'eradicated,'" Agence France-Presse, July 8, 2008. Available online (www.france24.com/en/20080708-irans-ahmadinejad-calls-us-bases-be-eradicated).

33. "Leadership's Representative to the IRGC: It Is the Time to Break the Superpowers' Horns" [in Persian], Fars News Agency, July 6, 2008. Available online (www.farsnews.com/newstext.php?nn=8704160562).

34. "Massive Numbers of IRGC Missiles and Vessels Are Ready for Direct Action at the Strait of Hormuz" [in Persian], Fars News Agency, July 8, 2008. Available online (www.farsnews.com/newstext.php?nn=8704181380).

35. "The IRGC Practices Blockage of the Strait of Hormuz," *Raja News*, November 6, 2006. Available online (www.rajanews.com/News/?2723).

IRGC's propaganda and public relations offices signifies the importance given to psychological warfare as an element of Iran's "soft power."³⁶ On January 6, 2008, six small IRGCN speedboats maneuvered aggressively as three U.S. Navy warships transited the Strait of Hormuz, in an apparent attempt to probe the American response and intimidate the United States. This incident was not the first time Iran engaged in such tactics. Its psychological efforts during the Iran-Iraq War also included placing suspicious objects such as inflated tractor tires, large painted wooden boxes, or unmanned boats in the path of U.S.-escorted convoys.³⁷

The latest example of this propaganda/public relations merger was the announcement, in an anonymous report released by a semiofficial Iranian news agency, of the IRGC's novel "presence everywhere and nowhere doctrine," purportedly tested during the latest round of the Great Prophet maneuvers in the Persian Gulf and the Strait of Hormuz in July 2008.³⁸ The report implied

that the IRGCN succeeded in carrying out undetected its biggest force dispersal and live-fire exercise ever, which was said to include the largest number of anti-ship missile and torpedo launchings ever accomplished during an exercise in the region.³⁹

Finally, Iran is in the process of devising a doctrine of "asymmetric cultural defense" through psychological warfare.⁴⁰ Defending the Islamic Republic's revolutionary culture against a Western cultural invasion has been a central tenet of Iranian thought since the 1979 Islamic Revolution. "Cultural defense" is therefore seen as an integral part of asymmetric warfare, one that includes five factors: psychological preparations for war; preparation for psychological operations within the context of asymmetric warfare; influencing domestic and international public opinion; monitoring and countering enemy psychological warfare activities; and executing offensive psychological operations on various levels.⁴¹

36. "The IRGC Merges Its Propaganda and Public Relations Divisions" [in Persian], Fars News Agency, June 21, 2008. Available online (www.farsnews.com/newstext.php?nn=8704010689).

37. Mohamad Saebi, *We Will Hold America under Our Feet: An Analysis of the Events Affecting Iran during the Past 50 Years* (Tehran: Danesh va Andisheye Moasser Cultural Institute, 2005), p. 264.

38. "The Great Prophet Maneuvers Helps Increase Iran's Defensive Power and Speed" [in Persian], Fars News Agency, July 12, 2008. Available online (www.farsnews.com/newstext.php?nn=8704220319).

39. Ibid.

40. See Alireza Movahed Alavi, "Asymmetric Warfare and the Effects of Cultural and Psychological Factors" [in Persian], *Psychological Operations Quarterly* 2, no. 5 (July 2004) (this journal is an IRGC publication); available online (www.arnet.ir/?lang=fa&state=showbody_news&key=&row_id=2156&style=no). See also Fariborz Haghshenass, "Iran's Doctrine of Asymmetric Naval Warfare," *PolicyWatch* no. 1179 (Washington Institute for Near East Policy, December 21, 2006); available online (www.washingtoninstitute.org/templateC05.php?CID=2548).

41. Alireza Movahed Alavi, "Asymmetric Warfare."

Conflict Scenarios

THE FOLLOWING SECTION provides a general overview of how, in the event of a confrontation between Iran and the United States, events could unfold in various parts of the Gulf region.

Shatt al-Arab and Northern Persian Gulf

Given uncertainties regarding the locations of borders and boundaries in the northern Gulf, a clash between U.S., British, or other coalition forces and IRGCN units attempting another “boatnapping” operation in “disputed” waters is a real possibility. Should such a clash lead to human or material losses on the Iranian side, Iran could respond with anti-ship-missile attacks from land-based sites east of Mahshahr, as well as attacks on coalition helicopters operating in the area. Such actions would significantly increase the chance of hostilities spreading to the southern sections of the Gulf or the Strait of Hormuz. If the coalition response involves any Iranian oil industry targets, the Iranians would most likely retaliate in kind by trying to damage, or even briefly seize, the two strategically important Iraqi offshore oil terminals, which are manned by coalition troops who reportedly operate radar, electro-optical, and other surveillance equipment.

Central and Southern Persian Gulf

A naval blockade of Iran (as suggested by Israeli prime minister Ehud Olmert in his May 2008 discussions with U.S. officials in Washington¹) or a strike against Iran’s nuclear facilities could lead to an Iranian response aimed at ports, harbor facilities, oil tankers, oil terminals, and other strategic installations belonging to those countries either participating in or supporting such actions. Moreover, the narrow shipping channel

passing between Farsi Island and southern shallow waters—the common shipping channel to Kuwait—is a suitable place for mining. And the deeper and wider channel east of Farsi, which is less suitable for moored mines (though suitable for rising mines), is vulnerable to shore-based missile attacks.

In case of a conflict, Iran’s conventional and unconventional forces will threaten not only U.S. military facilities in Bahrain, Qatar, and elsewhere in the region, but also Bahraini and Qatari oil and gas facilities (especially those Qatari offshore facilities that draw from the vast gas field the country shares with Iran). The huge Knock Nevis floating storage and offloading unit moored at the al-Shaheen oilfield in Qatari waters—formerly the Seawise Giant supertanker (and the world’s largest ship), now with a capacity of 564,765 deadweight tons—would be an attractive stationary target for Iranian HY-2 and Rad missiles.

Strait of Hormuz

In 1987, the United States estimated that Iran could close the Strait of Hormuz for a maximum of one to two weeks,² but Iran’s present capabilities to interdict traffic in the strait far exceed those it had in the 1980s. Tehran recently indicated that, in the event of a military confrontation with the United States, its goal would be “control” over (as opposed to “blocking”) the strait.³

Iran would probably attempt to close the Strait of Hormuz only if Iranian vessels were somehow deprived of the ability to use the waterway.⁴ Therefore, even in the event of an attack on, for example, Iranian nuclear facilities, it seems highly unlikely that Tehran would attempt to close the strait to all traffic as long as its own oil shipments continued to pass through the waterway. Iran would rather attempt to impose some level of

1. “Olmert to U.S.: Impose Naval Blockade on Iran,” *Haaretz*, May 21, 2008. Available online (www.haaretz.com/hasen/spages/985421.html).
2. *Iran and the Superpowers in the Gulf*, CIA Special NIE 34/11/39-87, June 1987 (declassified in 2006), p. 6.
3. Div. Gen. Muhammad Ali Jafari, interview with *Jamejam* newspaper, June 28, 2008. Available online (www.jamejamonline.ir/newstext.aspx?newsnum=100942312993).
4. “We Will Not Allow the Use of the Strait of Hormuz if Iran’s Interests Are Undermined” [in Persian], Fars News Agency, July 5, 2008. Available online (www.farsnews.com/newstext.php?nn=8704150536).

control over the strait by denying free passage to tankers from countries supporting such attacks, although this could lead to further escalation.

Gulf of Oman and Beyond

In a Persian Gulf military confrontation, Iran could seek to expand operations into the southern Gulf of Oman and Arabian Sea. The anchorage off the Omani coast, which is used by oil tankers prior to entering the Gulf, might be a tempting place to lay mines, as it was during the Iran-Iraq War. But with most Iranian vessels designed for coastal operations, it could be difficult for Iran to operate in this area. Nevertheless, even occasional forays or strikes against targets in these waters would suffice to stir panic in oil and insurance markets.

Caspian Sea

In the very different geographical environment of the Caspian basin, where other littoral countries, especially Russia, have a robust military presence, Iran is at a clear military disadvantage. It has, however, been trying to redress this shortcoming by constructing and deploying its own missile boats and frigates in the Caspian, following Russia's refusal a few years

ago to allow passage of Iranian warships through its inland waterway (based on Moscow's reading of an old bilateral treaty).

Iran is trying to keep a low profile in this region for now, given that its share of Caspian shipping is less than 15 percent. It also depends on Russia for arms, nuclear know-how, and, most important, political support. Yet, given the economic importance of the region due to its energy endowments, the yet-to-be finalized legal regime governing relations between its littoral states, and the potential for an enlarged U.S. role in the Caucasus, the Caspian area remains a potential flash point that the IRGCN could be expected to reinforce by road, rail, and air if need be.

Given the fact that the threats emanating from the Caspian region do not touch on the core mission of the IRGC (i.e., safeguarding the achievements and principles of the Islamic Revolution and political system), the IRGCN prefers to concentrate its resources in the Persian Gulf region. Supreme Leader Khamenei, however, has stated that Central Asia, with its large Muslim population, is likely to be Iran's next theater of struggle with the United States, and even Russia,⁵ implying that the Caspian region might someday become an arena of operations for the IRGCN.

5. "Iran's Regional Issues from the Point of View of the Supreme Leader" [in Persian], *Hossoun* 7 (Spring 2006) (IRGC Center for Islamic Research).

Conclusion

IRAN HAS DEVELOPED a comprehensive doctrine of asymmetric warfare, based on its experience during the Iran-Iraq War as well as more recent conflicts in Iraq, Afghanistan, and Lebanon. And thanks to its efforts to develop a robust asymmetric warfare capability in the naval arena, the Islamic Republic holds the Persian Gulf and the Strait of Hormuz—the world’s oil lifeline—in its grip.

As part of this effort, Iran has greatly expanded the IRGCN’s role and capabilities, including its ability to escalate the scope and intensity of any conflict and to project Iranian power in this strategic arena. It should be remembered that during the events of 1987–1988, the IRGCN was still in its infancy and had limited resources and experience during its confrontation with the U.S. Navy. The IRGCN in its current incarnation is a highly motivated, well-equipped, well-financed force,

capable of executing its unique doctrine of asymmetric naval warfare.

Iran’s application of this doctrine in such a vital region could produce highly destabilizing and surprising results. At the same time, there are limitations to what may be accomplished by means of asymmetric tactics against a much more powerful adversary like the United States, which enjoys a vast technological advantage, is capable of employing similar tactics and techniques, and may also act in an unpredictable manner. Nevertheless, with the IRGCN assuming a dominant role in the Persian Gulf and the Gulf of Oman, and nuclear negotiations between Iran and the international community entering a more dangerous and uncertain phase, further tensions and confrontations involving the IRGCN, the U.S. Navy, and U.S. coalition partners are likely.

Appendix 1. Iranian Military Rank Insignia

IRGCN^a (ORIGINAL)	TRANSLATED	IRGC^a (ORIGINAL)	TRANSLATED
<i>Naavi</i>	Seaman	<i>Sarbaaz</i>	Private
<i>2nd Naavi</i>	Seaman 2nd Class	<i>2nd Sarbaaz</i>	Private 2nd Class
<i>1st Naavi</i>	Seaman 1st Class	<i>1st Sarbaaz</i>	Private 1st Class
<i>Sar Naavi</i>	Chief Seaman	<i>Razmyaar</i>	Corporal
<i>3rd Naavyar</i>	Petty Officer 3rd Class	<i>3rd Razmavar</i>	Sergeant 3rd Class
<i>2nd Naavyar</i>	Petty Officer 2nd Class	<i>2nd Razmavar</i>	Sergeant 2nd Class
<i>1st Naavyar</i>	Petty Officer 1st Class	<i>1st Razmavar</i>	Sergeant 1st Class
<i>2nd Naavdar</i>	Chief Petty Officer	<i>2nd Razmdaar</i>	Master Sgt. 2nd Class
<i>1st Naavdar</i>	Senior Chief Petty Officer	<i>1st Razmdaar</i>	Master Sgt. 1st Class
<i>3rd Naavban</i>	Probationary Ensign	<i>3rd Sotvaan</i>	3rd Lieutenant
<i>2nd Naavban</i>	Ensign	<i>2nd Sotvaan</i>	2nd Lieutenant
<i>1st Naavban</i>	Lieutenant Junior Grade	<i>1st Sotvaan</i>	1st Lieutenant
<i>Naavsarvan</i>	Lieutenant	<i>Sarvaan</i>	Captain
<i>3rd Naavsalar</i>	Lieutenant Commander	<i>Sargord</i>	Major
<i>2nd Naavsalar^b</i>	Commander ^b	<i>2nd Sarhang^b</i>	Lt. Colonel ^b
<i>1st Naavsalar</i>	Captain	<i>Sarhang</i>	Colonel
<i>2nd Daryaadar</i>	Vice Commodore	<i>2nd Sartip</i>	2nd Brigadier General
<i>Daryaadar</i>	Commodore	<i>Sartip</i>	Brigadier General
<i>Daryaaban</i>	Rear Admiral	<i>Sar Lashgar^c</i>	Divisional General
<i>Daryasaalar</i>	Vice Admiral	<i>Sepahbod</i>	Corps General
<i>Daryabod</i>	Admiral	<i>Arteshbod^d</i>	Force General

a. IRGCN and IRGC ranks are generally suffixed in Persian with the word “Pasdar.”

b. From lieutenant colonel upward, the specific ranks are colloquially replaced by, or prefixed with, the word “Sardar” (“frontline military commander”).

c. The highest existing rank in the IRGC.

d. Apparently nonexistent in the IRGC.

Appendix 2. For Further Reading

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