MARITIME AFFAIRS Copyright © National Maritime Foundation
Vol. 6 No. 2 Winter 2010, pp. 108–132
Print ISSN: 0973-3159, Online ISSN: 1946-6609, DOI: 10.1080/09733159.2010.559788

Routledge
Taylor & Francis Group
ANAMAYA
National Maritime Foundation

"Dark Chill in the Persian Gulf" – Iran's Conventional and Unconventional Naval Forces

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This article reviews the sustained growth of Iran's naval forces in the past two decades. It closely examines the Islamic Republic's navy's war-waging capacity in the Persian Gulf, its new unconventional fighting philosophy, force imperatives, doctrinal underpinnings, combat objectives, and the implications that this might have on shipping and oil trade in the Persian Gulf. Experts have long speculated that Iran is developing its asymmetric capabilities aimed at paralysing the Persian Gulf and the eventual expansion of its sphere of influence. Interfering with the supply of oil would raise oil prices sharply and would certainly stall the still moderate global economic recovery, thereby plunging the world again into a global recession. Analysis shows that the modernisation of its naval forces might be the clearest indication that Iran may well be systematically developing the means to do so. This is brought home starkly by the beefing up of the Revolutionary Guards' Navy and its "swarming" capabilities. With a newfound assertiveness and aggressive tactics, the Iranian naval forces are now challenging the dominant force in the Persian Gulf – the US Navy. And even though the success of such an approach at this stage

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appears unlikely, they may still hold some key cards, to be able to pose a credible and effective threat.

"We are everywhere and yet we are nowhere!"

– Commodore Morteza Safaari,
Commander, IRGC Navy, July 8, 2008[1]

Introduction

The Iranian Navy is on the cusp of a transformation. Traditionally the smallest branch of Iran's armed forces and designed essentially for the security of its own maritime borders, it has in recent times undergone a metamorphosis to emerge as a powerful force in the region, its rise being fashioned by three principle factors: the Islamic revolution, imperatives of the petroleum trade, and an often antagonistic relationship with neighbouring countries and western nations, in particular the USA.[2]

The exact organisation and capability of the force was for a long time shrouded in mystery. But with recent reports of the Iranian Navy having developed asymmetric capabilities to interdict merchant shipping, the secrets have begun to unravel. Curiously, the revelations appear to be deliberate; seemingly on account of a well-planned tactic to intimidate Iran's adversaries by a brazen display of its coercive capabilities at sea and a bold exhibition of intent – an unabashed resolve to choke the passage of oil flowing through the Gulf of Hormuz, in the event of being pressed too hard on the nuclear issue.

Iran's adversaries and competitors now recognise and acknowledge the disturbing truth that confronts them squarely: *the prospect of an Iranian stranglehold over the Persian Gulf*. In the achievement of its stated objective, Iran's prime instrument would be its Navy – a force that has found a new prowess, a fresh vigour, and a contemporary cutting edge. It rise evokes alarm, as it is now perceived to possess the potential of upsetting the global economy by interrupting world oil trade.

Composition of Forces

Iran's military structure is broken up into three branches, with the Ayatollah 'Ali Khamenei as the Commander-in-Chief: Islamic Republic of Iran Army (IRIN) – also known as the Artesh, Islamic Revolutionary Guard Corps (IRGC) and the Basij

Resistance Force.[3] The Iranian Military (Artesh) and the IRGC (Pasdaran) have effectively been placed under the Joint Chiefs of Staff, the General Command of the Armed Forces Joint Staffs.[4] The broad command structure of the Iranian defence forces is complex but can broadly be represented as is shown in Figure 1.

With its classical force structure of frigates, corvettesn and submarines, and strength of about 20,000 personnel, the IRIN represents Iran's conventional naval force.[5] Its headquarters is in Bandar Abbas and naval operations are organised into six major zones: four in the Persian Gulf (Bandar Abbas, Bushehr, Jask and Kharg); one in the Caspian Sea (Bandar Anzali); and one in the Indian Ocean (Chah Bahar). Apart from the six prime zones, its other bases are at Bandar-e-Mahshehr, Bandar-e-Khomeini and Bandar-e-Naushahar. The main forces of the IRIN are concentrated in the Gulf of Hormuz and the Caspian Sea. IRIN bases along the Iranian coast are depicted in Figure 2.

The Islamic Republic of Iran Navy

The IRIN is Iran's conventional navy. Its major strike platforms are the *Alvand* (Vosper Mark 5) class frigates that have been modified to carry the C-802 missile. There are presently three ships of this variety with the IRIN. The *Mowj*' class is the indigenous version of the Alvand class. The first corvette in the series, *Jamaran*, was commissioned on 10 February 2010.[6] Its advent is being heralded as a seminal event, and it is seen to define the capacity quotient of the IRIN. The ship can be deployed across a range of missions, including surveillance, early warning, anti-submarine warfare, surface-to-surface and surface-to-air warfare, and amphibious operations; it has cutting edge armament that boasts of the ''Noor'' long-range anti-ship missiles, four SM-1 surface-to-air missiles, a 76mm Fajr-27 multi-purpose gun, and two triple torpedo launchers capable of launching 324mm light torpedoes.

Jamaran is also the first helicopter-capable surface combatant of Iran. Its flight deck accommodates an AB 212 anti-submarine warfare (ASW) helicopter with low-frequency variable depth sonar and radars, and a capability for helicopter in-flight refuelling (HIFR) operations. In fact, construction of the second frigate in the same class, *Velayat*, has commenced and it is expected to be commissioned by 2012.

The other platforms with the IRIN are the old Bayador Class corvettes, an old, low-tech, patrol craft; three *Kilo* class submarines; 11 *Ghadir* (Yono) class and 1 *Nahang*

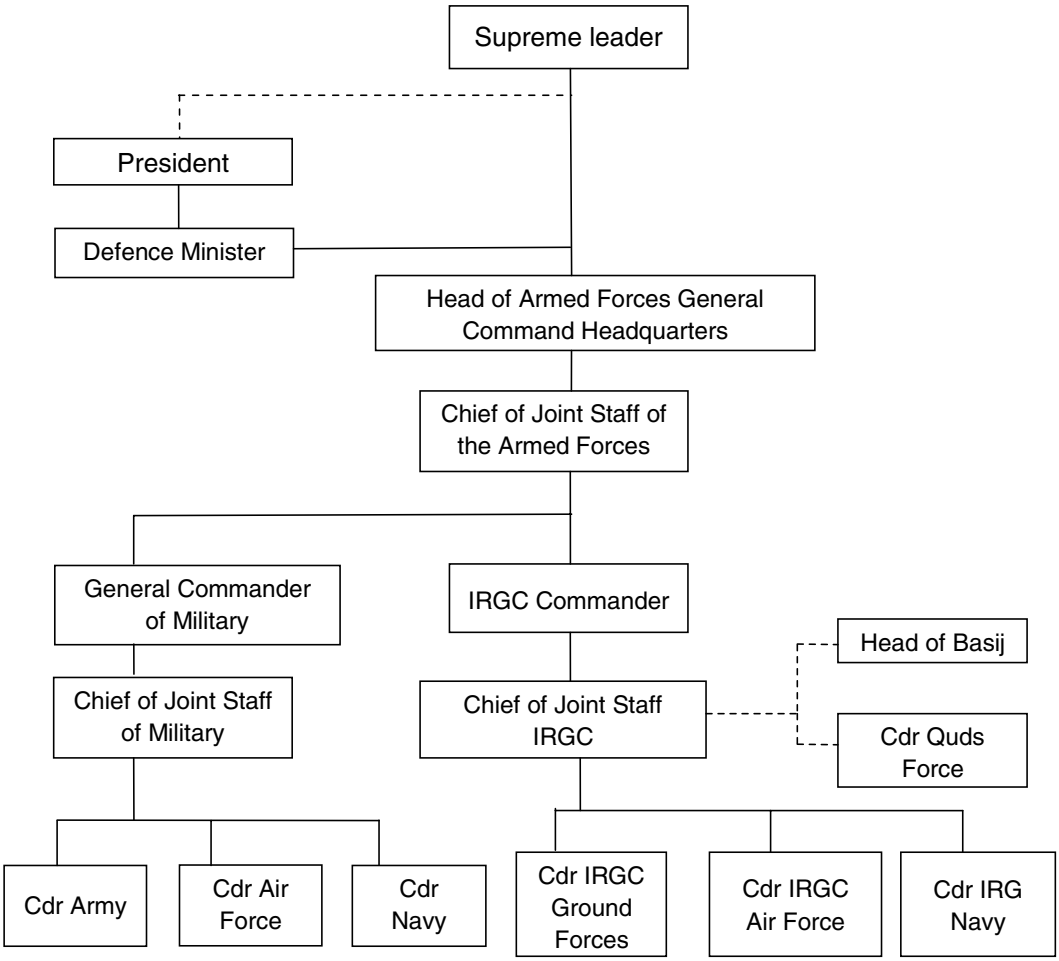

Fig. 1. Broad command structure of the Iranian defence forces.

class midgets. There are also missile patrol boats including 12 French made *Combattante II (Kaman)* class fast attack crafts (275 tons), armed with 2-4 C-802 anti-ship missiles and one 76 mm gun In addition, there are over 140 patrol and coastal combatants, mine warfare ships, and 60 inshore coastal craft and amphibious ships.[7]

Submarines

Iran's three KILO-class diesel-electric submarines (Tareq, Nuh and Yunes) – bought from Russia in the mid-1990s – are all based at Bandar Abbas and are modern and

quiet submarines. The *Tareq* is reportedly undergoing a refit with Russian assistance at Bandar Abbas with the technical assistance of the Russian shipyard Sevrnash – an upgrade that might involve the fitting of the submarines with a cruise missile capable of hitting an adversary's surface ship or land target at a range of up to108 nautical miles.

The other two KILOs are likely to undergo similar refits following the *Tareq*. Iran additionally has eleven YONO-class midget submarines[8] (also known as the IS-120, QADIR, or GHADIR) – said to be equipped with modern, commercially available navigation and ship control systems – and the NAHANG-class midget submarine, a 25-meter indigenously developed vessel that Iran claims can operate in shallow waters of the Persian Gulf and act as a mother-ship for swimmer delivery vehicles.

The other platform that can be used effectively for unconventional attacks is the *Sabehat-15*, a GPS-equipped two-seat submersible swimmer delivery vehicle (SDV) used by the Islamic Revolutionary Guard Corps Navy (IRGCN).[9] Designed by the Esfahan Underwater Research Centre, it is restricted to operating in coastal waters.

The latest submarine project to be undertaken by the Iranians – the *Qa'em* class – is reported to have the ability of firing torpedoes and laying mines.[10] There are

Fig. 2. IRIN bases along Iran's coast.

rumours that it has developed a super-cavitating high-speed torpedo called "Hoot" with speeds of 100m/s (223m/h or 360km/h), which is allegedly based on the Russian *VA-111 Shkval*. Known to operate in shallow waters, the Shkval is rocket-propelled, with ranges between 7 to 11 kilometers.[11] Besides that, Iran has, since 2005, also been locally producing 533mm and 324mm wake-homing torpedoes.

The IRGC Navy

Iranian unconventional forces are represented by the IRGC Navy. It has a strength of approximately 20,000 personnel (including one brigade of 5,000 marines) and bases in Bandar-e Abbas, Khorramshahr, Larak, Abu Musa, Al Farsiyah, and Sirri.[12] The IRGC is officially meant for coastal security, but it is Iran's premier fighting force in the Persian Gulf. Its bases stretching along the Iranian coast and on islands in the Persian Gulf are shown in Figure 3.

In pursuance of its larger strategy of unconventional warfare, the IRGCN has acquired a number of small-to-medium size fast-attack craft (FACs) during the past decade for operations within the Persian Gulf. The "work-horse" in the IRGCN arsenal is the fibreglass *Ashura* motorboat which carries a heavy machine gun, a multiple rocket launcher (MRL) and a single contact mine. Other smaller boats include the *Tareq* (the Swedish Boghammer speedboat); the *Zolghadr, Zoljaneh*, or *Bahman* catamaran patrol boats, capable of carrying both torpedoes and rocket launchers and used for covert mining missions in Persian Gulf shipping lanes.[13]

The force's frontline capability is, however, represented by the anti-ship missile capable Fast Attack Crafts (FACs), patrol boats and crafts. The 10 *Thondur* Class and *Peykaap II* Class FACs are of North Korean design (IPS-16) and equipped with C-802 missiles. The *Azarakhsh* FACS (*China Cat*) are credited with carrying the deadly C-701/Kowsar anti-ship missile.[14] The *Sina* Class FACs, based on the original Combattante II class, are a proud testimony of Iran's abilities at reverse engineering. Besides this, there is the newly commissioned *Gahjae* (DPRK, Taedong B class) and *Kajami* (Taedong C) class low observable torpedo boats with two 324-millimeter homing torpedoes, and (in the case of the *Ghajae*) two Kosar missiles. Finally there are Zolfaqhar class speed boats[15] which along with other coastal and inshore patrol crafts, mine layers, minesweepers, amphibious ships and other support vessels that give the IRGCN a quality of complete defensive preparedness.[16]

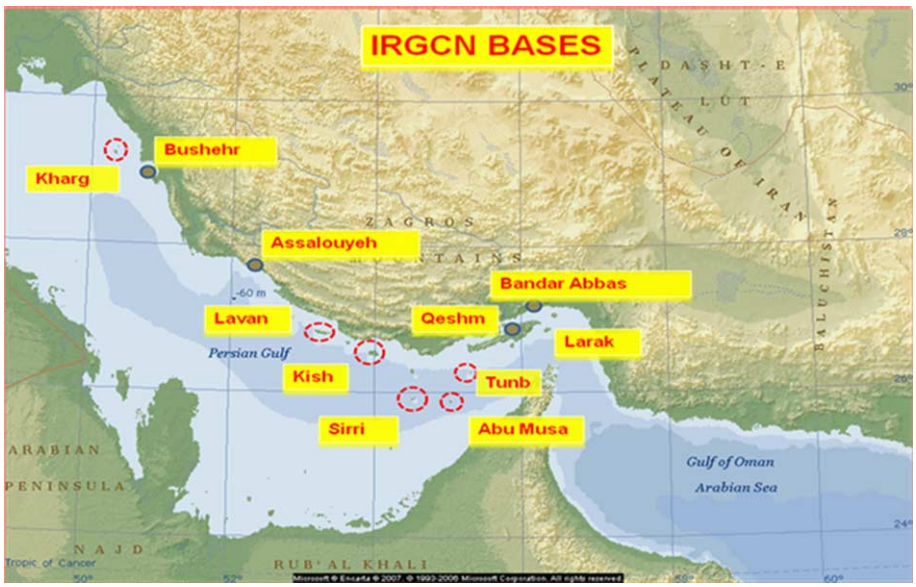

Fig. 3. Islamic Revolutionary Guard Corps Navy (IRGCN) bases.

The IRGCN set itself apart from the IRIN, as its naval vessels consist primarily of smaller, faster platforms that can perform surreptitious operations whilst carrying significant fire-power in the form of anti-ship cruise missiles. Since it has a fleet consisting of smaller and faster boats, the force is ideal for operations off the Iranian coast and in the Strait of Hormuz. The combined order of battle of the IRIN and IRGCN is shown in Table 1.[17]

The War Fighting Doctrine

The IRGC Navy's unconventional war-fighting doctrine is in sync with Iran's revolutionary ethos, and is an innovative tactic of exploiting its favourable geographic situation. It focuses on innate strengths, while targeting the enemy's weaknesses. The experience of April 1988 (when the Iranian naval forces were hopelessly outclassed by the US Navy and incurred heavy losses) was a defining moment for the Iranian Navy in that it learnt a crucial lesson on the decisive vulnerability of large naval vessels to air and missile attacks. That single experience definitively established the imperative of small boat operations, and spurred an interest in missile-armed fast-attack craft. The

Table 1. The order of battle of the Islamic Republic of Iran Army (IRIN) and Islamic Revolutionary Guard Corps Navy (IRGCN).

Class	Source	Strength (2010)
Submarine		3
SSK Kilo	Type 877EKM [Rus]	3
Small Submarine		12
SSM Ghadir / SSC Yono		07 + 04
SSM Nahang		1
SDV Al Sabehat 15		1
SSM Yugo	SSM Yugo [DPRK]	3
Frigate		4
FFG Mowj		1
FFG Alvand		3
Corvette		2
FS Bayandor		2
Missile Craft		40
PFM Sina		3
PFM Kaman	Combattante II [FRA]	12
PFM Thondar	Houdong [PRC]	10
PCI IPS-16 Mod Peykaap II*		5
PCI China Cat	C-14 [PRC]	11
Patrol Coastal		5
PCC Kavian	CG Cape [USA]	2
PCC Parvin	PGM-71 [USA]	3
Patrol Inshore		176
Patrol Boats		37
Patrol Boats (Boghammar) / Tareq	[SWE]	40
PBI	[USA]	40
PFI		36
Gahjae (Low Observable Torpedo Craft)	Taedong-C [DPRK]	2
IPS-16 Peykaap	[DPRK]	10
IPS-18 Tir	[DPRK]	10
Kajami (Low Observable Torpedo Craft)	Taedong-B [DPRK]	1
FAC Zolfaqhar**		12
Zafar	Chaho [DPRK]	3

Table 1 (*Continued*)

Class	Source	Strength (2010)
Misc. Small Craft		200
Mine Layer		3
Iran Ajr		–
LST Hejaz	[NLD]	3
Mine Countermeasure		5
MSI Harischi	Cape [USA]	2
MSC Shahraz	MSC Type-268 [USA]	1
MSC Karkas	MSC Type-292 [USA]	2
Amphibious		20
ACV Iran		1
ACV Wellington	BH.7 Mark 4/5 [UK]	6
LCT		3
LSL Fouque		3
LST Hengam		4
LSM Iran Hormuz-24	[ROK]	3
Polnochny	ex-Iraq	–
Support		28
Accommodation Vessels		–
AORH Bandar Abbas		2
AORH Kharg		1
AR Chah Bahar	Amphion [USA]	–
AWT Kangan		4
SPT Delvar		6
SPT Hamzah		1
SPT Hendijan		12

Note: *Peykaap and Peykaap II are two seperate classes of missile boats. The Peykaap II is a modified version of the Peykaap class and is reported to have been indigenously manufactured. It also carries an Iranian version of the C-802 missile; **in August 2010 Iran introduced 12 Zolfaquar class speedboats to its naval fleet. The Islamic Revolutionary Guard Corps Navy (IRGCN) claims that the boats are capable of launching torpedoes (see http://presstv.ir/detail).

Source: *Jane's Fighting Ships* (2010), pp. 370–380, with corrections for latest updates; *The Military Balance* (2009), pp. 246–248, and recent updates.

new doctrine's principles and parameters, as interpreted by the Iranian defence operations, are as follows:[18]

- Use all available means (hard power, soft power, deception) to deter a military attack and contain hostile behaviour using all available means.
- Maintain a high combat readiness; prepare for a continued, high-intensity stand against an enemy's much more sizeable, hi-tech, military force (applies specifically to the Persian Gulf and the Straits of Hormuz).
- Develop and rely upon indigenous, self-sufficient defence industrial capacity.
- Train to survive; prepare to react to a surprise attack, fast changing situational developments, operational degradation, high pressure and partial loss of its own command and control (C2) capacities.
- Decentralise military forces to mitigate enemy's airpower, fire-power, intelligence capabilities, battlefield informational dominance and control [of the] electro-magnetic spectrum.
- Incorporate unconventional tactics, assets and tools (e.g., terrorism) into all response scenarios. Act aggressively, be agile and innovative and use all the elements of the war across all levels of engagement – strategic, operational and tactical.
- Concentrate decisive capabilities on the enemy's centre of gravity (COG), which are not necessarily of a military nature, or directly linked to an attacking side (i.e., attack a third country, if the need arises).
- Conduct offensive retaliatory attacks against areas regarded by the enemy as safe and remote from the war zone.
- Target the enemy's moral and political will by waging intensive political, information and psychological warfare, indivisible from the military efforts.
- Emphasise and exploit the human factor, primarily the religious zeal and martyrdom efforts.

Naval Swarming Tactics

The most daunting prospect of an Iranian Naval assault is that of "swarming attacks" in the Persian Gulf. Singularly the most worrisome facet of Iran's naval tactics, the ability to carry out a swarm attack, gives the IRGCN a remarkable ability to overwhelm an adversary's conventionally stronger naval force.

An Iranian swarm attack can be expected to assault the enemy from multiple directions and then rapidly disperse. It would consist of light, mobile forces with substantial striking power hitting hard and then beating a fast retreat. They would focus on surprising and isolating the enemy's forces and preventing their reinforcement or resupply, thereby shattering morale and the will to fight.[19] Over time, Iranian naval forces have attained expertise in dispersed swarming tactics and can successfully elude detection through concealment and mobility, employ stand-off firepower, and use superior situational awareness (intelligence), which enables them to find and engage the enemy first.

There are, however, some inherent shortcomings with the small attack craft. Performance of the boats is sometimes direly constrained by their tactical limitations – limited sea keeping capability, operating ranges, and endurance being some of them. The relatively smaller weapons load-out, little armour or protection for the crew, and the difficulty in accurately firing weapons due to platform instability are some of the other constraints that may hinder smooth conduct of operations.

It may thus be plausibly inferred that even as the IRGC uses its small boats to conduct hit-and-run style attacks using surprise and deception to capitalise on the surrounding environment, they would be mindful of the need to close their target to a range from which weapons can be accurately employed.

Passive Defence

Iran realises well that in the event of a real confrontation with the allied forces, its forces would need to have the robustness to survive a debilitating initial attack. Measures of passive defence such as camouflage, concealment, and deception would thus be critical. This would involve hiding platforms along Iran's indented coastline (full of islands, inlets, and coves) and on oil-related infrastructure; building of tunnels and under-ground bunkers on the Persian Gulf islands which could provide protection from initial strikes.[20]

Decentralisation of Command Structure

The ''mosaic defence'' is at the heart of the revitalisation and reorganization of the IRGC.[21] It essentially disaggregates responsibility from one unified command authority to smaller, more agile fighting units that operate autonomously toward overall objectives. It also rationalises the transition to the idea of fighting a

"conventional" war – "unconventionally", thus codifying "unrestricted warfare" as a primary doctrine, rather than adopting "asymmetric warfare" as an accident, as with many of the insurgencies across the world.

Developing Area Specific Tactics

In pursuance of its larger doctrine Iran has developed area specific tactics for each of its four strategic maritime areas – the Gulf of Oman, the Strait of Hormuz, the Persian Gulf, and the Caspian Sea – each with their own unique geography and challenges. Thus tactics developed for the Persian Gulf (with its shallow depths, confined nature of space, and the presence of the many coves and marshes along the 1000 nautical miles coastline) varies considerably from those developed for the more open and deeper Gulf of Hormuz.[22]

The Force Multipliers

Threat of Submarines

Iran's deployment of Kilo-class and midget submarines seeks to create a balance between littoral defensive operations and offensive operations, further out from the Persian Gulf. In a potential conflict, Iran would most likely use its submarines against seaborne enemy forces and commercial shipping traffic through the laying of mines and firing of torpedoes. In addition, they could also be used for reconnaissance missions and covert Special Forces insertion.

However, notwithstanding their capabilities, using submarines for laying mines in the straits would be quite challenging. Several factors contribute to this: first, the underwater geography of the strait neutralises many of the characteristic advantages of submarines. Kilos require a minimum operating depth of 45 metres, and only in a few places is the water in the strait more than 80 metres deep, limiting the use of tactics such as diving for concealment or protection. Second, a limited flow of fresh water and high evaporation makes the Gulf extremely salty. This creates complex underwater currents in the main channels of the straits and complicates both submarine operations and submarine detection. The noise in these waters would however not mask submarine acoustic emissions from highly sophisticated passive sonars of the kind operated by ships of the coalition navies.

The Iranian Navy, not impervious to the limitations of operating Kilo-class submarines in the Straits, is increasingly deploying them in the eastern mouth of the Straits, the Gulf of Oman, and the Arabian Sea. Reportedly, Tehran in 2008 relocated its Kilo-class submarines from the shallow waters of Bandar Abbas to naval facilities in deeper waters at Chah Bahar in the Gulf of Oman.

Use of Naval Mines

The IRIN's facility and capability with mine warfare operations is also significant. Its inventory consists of the domestically produced Sadaf-01/02 bottom-moored contact mine, the Chinese MC52 sea-rising mine (rocket propelled anti-ship), and the North Korean-manufactured M-8 moored contact mine (of 1908 vintage). There is admittedly, an inadequacy of intelligence about acquisition of a mine transferred in huge numbers (about a thousand) along with the three Kilo-class submarines in the mid-1990s. It is speculated that the M-8 – a weapon that Iran has used most generously in the past – might have been the likely choice. But it is a moored mine with a notorious reputation of breaking free of its moorings and drifting, and cannot be laid from torpedo tubes. It thus seems likely that Iran may instead have acquired the MDM-6 – an influence mine that can be laid from both 533-millimeter torpedo tubes of submarines and ships with rail and stern ramp facility.

Analysis of Mine Laying Capability

It is hard to determine accurately Iran's specific stocks of different kinds of mines and which type(s) it would use. What can however be said with certainty is that deploying these mines in the Straits of Hormuz will not be an easy task. One reason for this is the peculiar hydrology and currents in the area. The Strait is relatively shallow, and the currents are strong, so drifting mines could be pushed easily from the shipping lanes and might come to pose a danger to Iran's own forces. To avoid fratricide, Iran will need to develop a clear-cut operational plan for force deployment to undertake mine-laying.

Despite its limitations, it is not inconceivable for Iran to lay several hundred mines in a sustained deployment of two (of the three) Kilo-class submarines and using only 100 small boats, attack craft, Hovercrafts and Boghammars. In all probability these mines would be laid at the mouth of the straits (east of Tunub Istand, directly south of Larak).

Since moored mines have an inherent disadvantage of drifting out to sea, influence mines will most likely be the preferred variety. The flip side of such a deployment is that once laid, the Iranian Navy would be helpless (in terms of capability) to remove the mines. Even so, it appears preferable to having rogue mines broken of their moorings floating all over the Persian Gulf.

The Iranian Navy would likely be to lay a minimum number of influence mines (100–200) that would keep US minesweeping forces busy for weeks, if not months. As a corollary to the essential plan of mining the straits, US assets would be attacked by the Iranian small boats and shore based missiles, making it difficult for them to clear the straits. In the event, oil traffic would be held up for days. The Iranians would have achieved their objective. Therefore the notional threat of mining would turn out to be far more costly than the material dangers that it poses.

Anti-ship Missile Capabilities

The second potent weapon in Iranian Navy's arsenal is the anti-ship missile. By the most conservative estimates, Iran probably possesses several hundred anti-ship cruise missiles. Most of these missiles are reportedly based on Chinese designs. These include the C-801 and the C-802 with ranges up to 120kms and can be launched from surface vessels, aircraft, and trucks. The primary platforms for delivery are the three "Alvand" class missile frigates,[23] French-made *Kaman* fast missile boats and its ten Chinese-made *Houdong* fast missile boats. Besides, at least six F-4E aircraft in Iran's inventory of air assets have been provided with the C-801K – an air-launched version of the C-801. Iran's three indigenous ASMs – the Kowsar, the Noor and the Ra'ad – are also essentially reverse engineered versions of Chinese missiles (C-801/2 and HY-1/2s) and are mostly carried by Iranian frigates and missile boats.

The real threat, however, is thought to be posed by Iran's highly mobile inland truck mounted batteries. Reportedly, at least 60 such missiles have been positioned on the island of Qeshm. They are ably supported by the Chinese anti-ship missiles: the *CSS-N-2 Silkworm* and the *CSS-N-3 Seersucker* – sea-skimming subsonic cruise missiles with ranges up to 95 miles that pose a serious hazard to undefended surface ships. Reportedly, at least 12 batteries and 300 missiles of this type have been deployed in and around Bandar Abbas, directly across from the Strait.

There is however, a limiting attribute that curtails the performance of the missiles: *the lack of a modern targeting system*. Iranian naval missiles were designed to rely on

line-of-sight (LOS) targeting using an old (type 254) radar and do not have the benefit of ''over-the-horizon'' systems[24] (C-802s have ''inertial guidance'' but that requires the establishment of a comprehensive targeting infrastructure, unlikely to be in place for Iranian missiles). LOS targeting, though effective at close distances against undefended ships, is a grossly ineffectual system for targets far out as sea as it gives away the launch location, or at least the location of the targeting radar, thus making one's own platform a ''sitting duck'' for the adversary to strike.

There are some reports that the C-802 can be targeted using the OTH radar. If this is true, it enlarges the area from which Iran could target traffic in the Strait. Even so, these cruise missiles face the problem of dealing with terrain elevations that would obstruct the flight path of the low flying missiles. The US Tomahawks, for instance, use extensive geo-spatial information and the ability to map flight paths. There does not seem to be any evidence to suggest that Iran has such programming ability.

The threat of Iran's land based cruise missiles therefore, appears a bit hyped. They might doubtless be able to carry out a first strike but would immediate expose themselves and face the fury of US attacks. They are thus, not likely to be as effective or lethal as expected.

Strategic Underpinnings

Much of the Iranian strategy is based on holding out a credible threat in the Straits of Hormuz and the Persian Gulf. The means to do that is ''asymmetric warfare''. But the ''warfare'' aspect of the threat is only one dimension of the broader concept of ''unconventional operations'' that gives equal importance to other elements, called upon simultaneously to bear hard upon the adversary.

Cashing In on Religious Fervour

Glorified ''martyrdom'' plays a unique role in the orchestration of the overall concept of ''asymmetric warfare''. The Islamic regime's dependence on the military's allegiance to their rule leads to a need to inspire ''resilience'' and ''fierce courage'' in the face of adversity, especially when confronted with a technologically superior foe. The ingenious means adopted to achieve this is through the propagation and glorification of a culture of Jihad. The new war-fighting doctrine has been imbued with a revolutionary fervour that draws its strength from Shiite religious concepts

reflecting Iran's Shiite (Alavi and Ashurai) heritage and glorified the idea of "suicidal attacks for the sake of Islam as a religious duty".[25] It is often presented in part-religious, part-nationalistic sermons, serving an emotional appeal to the rank and file of the fighting forces, and imparting motivation to fight a stronger adversary.

Psychological Warfare

> *"The mass graves that were used for burying Saddam's soldiers in the Iran-Iraq war of the 1980s have now been prepared for US soldiers."*
>
> Maj. Gen. Hossein Kan'ani Moghadam
> Deputy Chief IRGC, August 2010[26]

Another tactic adopted by Iran's naval forces to subdue the adversary, is psychological operations. The military leadership relentlessly rains rhetoric on the adversary, by making grand statements ostensibly to serve a warning to desist from any misadventure. But the frequent reliance on grandiose language and hyperbole suggests a keenness for political victory, as opposed to a military one.

Since the end of 2005, Iran has unleashed an intensive "Psy-ops" campaign whereby its propaganda machinery has sought to overstate real and virtual military capabilities via exaggerations, hoaxes, and tricks. In early 2006, a lot of publicity was given to the successful testing of Iran's coastal and ship-borne missiles. It was later confirmed by the expert community that the reports were either exaggerations or even full-scale bluffs.[27]

In August 2006, the Iranian proxy Hezbollah posted on the Internet what was claimed to be a picture of an "Israeli ship" being hit by an Iranian-made C-802 missile. It turned out to be a decommissioned Royal Australian Navy frigate, the HMAS Torrens, sunk during a torpedo fire training exercise by an Australian submarine in early 1999. Whilst the Hezbollah did indeed hit an Israeli corvette, it was only damaged (and definitely didn't sink). The same year, fake footage of a USN aircraft carrier by an undetected Iranian drone was again put out.[28]

Use of Naval Forces for Political Ends

The adroit use of naval forces for political ends such as "naval diplomacy" and "strategic messaging", is also striking. Public statements by Iranian leaders often

illustrate an attempt to convey a tacit message that if provoked, Iran would consider closing the Strait of Hormuz. However, they are always canny enough to keep a window of opportunity open for collaboration. For instance, in April 2010, on the occasion of the its annual exercises *Velayat 89*, the IRGC commander, Rear Admiral Habibollah Sayyari, said that the exercises were intended to demonstrate Iran's "might" and the country's ability to protect its interests in the gulf and beyond into the Indian Ocean. But he hastened to add that the maintenance of security in the Persian Gulf region did not require the presence of foreign forces and that the war games were meant to convey "a message of peace and friendship" to the countries of the region, and Iran's willingness to conduct joint exercises with them.

Likely Wartime Strategy

The Islamic Republic's wartime strategy is premised on the tactic of trapping the opposition in the narrow confines of the Gulf of Hormuz. This is the region in which it will be able to put its asymmetric warfare strategies to good effect and play geography to its utmost advantage. Because of the proximity of major shipping routes to the country's largely mountainous 2,000-kilometer coastline, Iranian naval elements can sortie from their bases and attack enemy ships with little advance warning. Meanwhile, shore-based anti-ship missiles can engage targets almost anywhere in the Persian Gulf and the Gulf of Oman.

And while controlling the Strait of Hormuz is the key tool by which Iran could internationalise any conflict, it has other options as well. Iran could strike regional countries that actively support or participate in a conflict against the Islamic Republic in an attempt to dissuade them from following such a course. The Iranian military top brass reportedly has elaborate plans for targeting ports, oil terminals, industrial installations, and rich resources of other nations in the Persian Gulf using special operations. Iran shares an adversarial relationship with the GCC countries that is perceives as being antipathetic to its cause. It spares no opportunity to point out in the event of a conflict with the coalition forces, GCC facilities in the Persian Gulf are fair game.

Closing the Straits of Hormuz

The prospect if Iran closing the straits of Hormuz is at the heart of Western insecurity. The Hormuz is the oil jugular of the world. Approximately 17 million

barrels of oil pass through the Straits of Hormuz every day, a significant portion of which is bound for Western shores. Therefore, in a situation of conflict Iran would likely consider closing the Straits as a legitimate objective. For this it would doubtless look at putting its asymmetric warfare strategies to good effect and play geography to its utmost advantage. As mentioned earlier, there are a host of methods through which Iran can employ to close the Straits: deployment of mines, sinking tankers using anti-ship cruise missiles, and using small boats to launch asymmetric/suicide attacks on ships.

The IRGC has, supposedly, factored in the characteristics and limitations of the Strait of Hormuz in its larger plan of operations. The fact that the strait is just under 90 nautical miles long, only about 22 to 35 nautical miles wide and has but two deep-water 2 nautical mile wide channels (one each for inbound and outbound traffic and a 2nm buffer zone) makes it easier to plan for an effective sabotage of the area. Being the single transit passage for oil trade, it is a lifeline for all nations and one that can be effectually exploited.[29]

To ensure that it can achieve surprise in the event of a crisis or war, Iran's naval forces keep foreign warships in the region under close surveillance. Iranian submarines continually monitor movements of US Naval ships in the region, frequently at close range. Iran claims its UAVs shadow US carrier battle groups in the area.

Closing the Strait of Hormuz would have severe repercussions, not only for the immediate region, but for the world at large. As transportation of oil is suspended, overland routes would have to be used to transport oil out of the Persian Gulf. The only known facility for such a contingency is the Saudi Arabia East-West Pipeline with a capacity to move five million barrels per day to the port of Yanbu on the Red Sea (Jubail-Yanbu pipeline), but even that is well short of the average 17 million barrels per day that currently transit the Strait of Hormuz. It would doubtless lead to great despair in the West, exactly the result that Iran would relish.

It is, however, instructive to point out that the Iranian economy's dependence on the Persian Gulf for its precious crude oil exports and refined oil imports would complicate the decision of disabling the Persian Gulf. What might realistically happen is that Iran may enforce a partial closure of the straits, disrupt traffic flow, or use the threat of doing so, to its advantage. At the same time, it will not let tensions

escalate to a level where it might not be possible for it to maintain its own traffic and trade, therefore avoiding any economic damage.

Maritime Surveillance and Reconnaissance

The Iranian Navy does not appear to have a very well developed MR capability. The IRIN's large ships lack modern surface search radars and the older radars are usually used to conduct surface searches for short durations. IRGCN's smaller boats are sometimes employed but need to be deployed in much greater numbers to achieve good results. It is therefore through a combination of traditional and supplemental ISR that Iran probably maintains an accurate, timely picture of the maritime traffic in its waters. Iran's numerous oil platforms in the northern Persian Gulf probably provide some supplemental surveillance capability, either through radars or simple visual observation of nearby maritime traffic.

Its key air surveillance systems include 2 or 3 operational P-3F Orions (MPA) (hobbled, though, by non-operational radars that cannot be replaced under the restrictive sanctions imposed over Iran) and 03 Da-20 Falcons (EW and Electronic intelligence missions). The other naval air element comprises of ASW and mine-laying helicopters (SH-3D/RH 53D Sea Stallions and AB 212s). Besides this, some air force aircraft are also used to conduct patrols over water. These include the F-27 and the Y-12. They do not however, have the endurance of the ORION and are usually used for local patrols.[30]

Reorganization of Forces

Since September 2008, Iran has re-organised the IRIN and IRGCN by undertaking a redistribution of duties and areas of operation. Traditionally, the two navies shared operations in the Caspian Sea, Persian Gulf, and Gulf of Oman, even though their areas of responsibility were differentiated. The IRIN has now been assigned the Gulf of Oman and Caspian Sea, while the IRGCN has been given full responsibility for operations in the Persian Gulf. Since Iran's naval doctrine is based upon access denial, the realignment of IRIN assets further into the Gulf of Oman and the concentration of IRGCN fast boats, suicide boats, and coastal defence cruise missiles in the Strait of Hormuz and Persian Gulf, the reorganisation better allows Iranian naval assets to contribute to Iran's layered defence strategy.

Material State and Readiness

The IRIN's ships are of vintage designs and suffer from the usual problems that go with trying to maintain aging Western-built ships without access to Western support. Iran is under the debilitating effects of severe international sanctions that deny it weapons and defence sector technologies. Consequently, approximately half of all the old missile-armed surface combatants with the IRIN are in very poor material condition, limiting their readiness and operational endurance. The IRGCN units are, however, in relatively much better material condition. Since the force operates smaller and relatively newer combatants with lower maintenance requirements than the IRIN's large ships, overall readiness levels are much better.

Maritime Security and Patrol Operations

Despite its constraints, Iran's naval forces are said to conduct peacetime missions, security operations and patrols with a remarkable purposefulness. Iranian naval forces, in 2008, confiscated ten oil tankers that according to Iranian press were smuggling 4,600 tons of Iranian fuel out of the Persian Gulf. Iranian run-ins with Western naval units, notably the capture of 15 British naval personnel in March 2007, suggest that Iran's naval forces do not brook any infringement of Iranian territorial waters. Iran justified the seizure of the British personnel by saying that they had illegally entered Iranian waters. Iran also claims that its naval forces are conducting extended patrols.[31] In December 2008 Iranian press reported that Iranian warships were heading to the Gulf of Aden to fight the burgeoning piracy threat in that area: in February 2009 Iranian press reported that the IRIN had started to deploy ships on missions "to the high seas", including a deployment to the Indian Ocean.

The Iranian Strategy in the Persian Gulf: A Realistic Assessment

Practically speaking, the Iranian tactic in the Persian Gulf is that of "effective deterrence", i.e. not to attack any US target in the Gulf but continue holding out the threat of doing so. The US realises it, but is chary of calling the IRGC's bluff. The fact that Iranian oil exports fell by 25% this year (Mar 09– Feb 10)[32] even without a single attack in the Persian Gulf, only supports this proposition. Iran is aware that the price to pay for a real time attack would be high and economically debilitating.

An issue that has, however, critically restricted Iran's ability for firm and decisive action in the Gulf region is that of identification. The severe nature of sanctions imposed on Iran has resulted in a denial of radar technology and equipment to its naval forces. The area that needs to be surveyed within the Gulf region is confined to the narrow navigable channel-the only region deep enough for tankers, cargo ships or even warships. Yet the IRGCN is only able to keeps an effective watch over this region and monitors foreign warships movement, using its boats.

The strategy of pre-emptive strikes now seems to be based, not so much on positive identification of military targets but on attacking any worthwhile enemy target in the Gulf. Analysts estimate that in the event of a conflict in the Persian Gulf, Iran would look to open other fronts. Not surprisingly, the region is currently witnessing the largest arms races that the region has ever known. Saudi Arabia, Kuwait, Qatar, Bahrain, the United Arab Emirates, and Oman are currently preparing for the adverse consequences of the standoff between the West and Iran on the issue of the Iranian nuclear program.

Operations might however be adversely effected by the fact that there is very little coordination between the IRIN and the IRGC, even though both of them fall under the same command headquarters (led by the supreme leader, Ali Khomeini). The IRGCN, with its huge political and economic clout is the premier fighting force, but is deeply distrustful of the IRIN, which is treated more like a ceremonial force. The latter has, since November 2008, been completely sidelined and made responsible only for the defence of the Caspian Sea and Gulf of Hormuz.

Future Prospects and Estimates

The awareness within Iran of the limitations of confining naval operations in the Persian Gulf has led the Islamic regime to seek an extension of its sphere of influence beyond its immediate neighbourhood. Other than statements emanating from the naval leadership of formulating plans that look beyond the mere defence of the Persian Gulf, the IRIN has now been pressed into conducting extended patrols. In furtherance of the new objectives, naval bases are being established along the Gulf of Oman and ''force strength'' outside the Strait of Hormuz is on its way to being bolstered. The leadership hopes this would make the opposition defensive, which should then be a cue for an intensification of the IRIN's efforts in the region. The

IRGCN will however, likely limit its operations inside the Persian Gulf, a place where it will doubtless be dependent on its asymmetric tactics and numbers advantage.

IN-IRIN Relations

Significantly, the Indian Navy until 2003 had an extremely cordial relationship with the Iranian Navy. The visit of the then Chief of Naval Staff, Admiral Madhvendra Singh, in January 2003 to Tehran that saw the signing of an agreement on defence cooperation, was a notable event in bi-lateral ties.[33] India had earlier assisted Iran in adapting it four Kilo-class submarines to the warm water condition in the Persian Gulf. In fact, in March 2003, IRIN ships paid a goodwill visit to Mumbai and participated in their first ever joint exercises with the Indian Navy in the Arabian Sea.[34] Rear Admiral Sajjad Kouchaki, the Iranian Navy chief visited India in Mar 2007and made a pitch for warmer defence ties between the two countries.

With the revelations about Iran's nuclear program and its subsequent international isolation, however, things have changed dramatically. In recent years there has been a sharp reduction in the warmth shared earlier between India and Iran, as the IRIN has gravitated more towards the Pakistan Navy, even conducting joint exercises, as recently as 2009 (Exercise Aman-07). To be sure, the IRIN has tried to reach out to the IN by proposing greater engagement including goodwill visits by IN ships, cooperation on MDA, and intelligence sharing on vessels in the North Arabian Sea (both for the tackling of piracy and dealing with a notorious smuggling problem on Iran's land and maritime border with Pakistan).[35] The IN, though not overly enthusiastic about resumption of normal relations, has evinced a quite optimism and an interest in keeping the track alive.

Conclusion

Iran sees itself as a regional power that does not welcome ''extra-regional'' forces in the waterways of the Middle East. The Iranian armed forces are seen to be key players in the battle for supremacy over the region. The nation reposes complete faith in its armed forces that high officials say with great conviction is ready to defend the honour of the country. In the service of the essential cause, the naval forces, the IRIN and the IRGCN, are prime instruments.

The last time it played a major role in a conflict (1988 Tanker Wars) the IRGCN was still in its infancy and had limited resources and experience. In its current incarnation, it is a highly motivated, well-equipped and well-financed force, capable of executing its unique doctrine of asymmetric naval warfare. Iran's application of this doctrine in the Persian Gulf could produce highly destabilising and surprising results. And yet the force will act at its own peril as its newly acquired strengths and skills remain untested against the most powerful navy in the world.

Watching from the sidelines, India is perhaps aware of the serious strategic implications of an Iran-US standoff in the Gulf. Whist making its stand clear on the issue vis-à-vis the nuclear program, it has often reiterated the need for engage with Iran. It will, supposedly, continue to display the same caution in its outward posture and public announcements because of the great dependence on Iran for hydrocarbons. India is, perhaps rightly, aware that it will alienate Iran at its own peril.

The tactical lessons of surveying the proceedings are, admittedly, more compelling. Watching the situation unfold, it is clear that wars of the future will, in all probability, be fought in the strategically located littorals. Asymmetric warfare will have a major role to play in such conflicts and the capacity to defend against unconventional attacks will prove pivotal. To achieve this, the evolution and perfection of the art of ''small boat warfare'' is an unqualified imperative. Consequently, mine warfare needs more attention and the IN must aggressively seek advanced mine sweeping capabilities. Also, in a war in the littorals, land launched anti-ship cruise missiles will test our defensive systems and we will need to develop the tactics, doctrines and training drills to deal with asymmetric strikes.

Notes

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3. The Basij is a militia force that has been tasked with the responsibility of ensuring internal security, quelling domestic dissent against the regime and maintaining security in large urban

centres. It is also a back-up support force for the IRGC. The Quds Force is a special unit of IRGC tasked with exporting Iran's Islamic revolution, responsible for extraterritorial operations of the Revolutionary Guard.

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13. Fariborz Haghshenass, "Iran's Asymmetric Naval Capability", The Washington Institute of Near East Policy, Policy Focus 87, September 2008, pp. 12–13.
14. IISS, "The Military Balance" and *Jane's Fighting Ships* (2010).
15. In August 2010, the IRGC introducing 12 Zolfaqhar class speedboats to its naval fleet.
16. Cordesman and Klieber, "Iran's Military Forces and War fighting Capabilities", pp. 109–111.
17. Table composed by author using data available in *Jane's Fighting Ships* (2010), pp. 370–380, *Military Balance* (2009), pp. 246–248, and recent updates.
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20. *Iran's Naval Forces: From Guerilla Warfare to Modern Naval Strategy*, www.fas.org/irp/agency/oni/iran-navy.pdf, p. 8.
21. *Ibid.*
22. *Ibid.*
23. The Alvand Class frigates carry *C-801* missiles, and may have been upgraded to carry the *C-802s* with improved control radars.
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29. Antony H. Cordesman, ''Iran, oil and the Straits of Hormuz'', http://csis.org/files/media/csis/pubs/070326_iranoil_hormuz.pdf
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