

The Pakistan Navy: A Transformation from 'Fledgling Force' to 'Fighting Machine'

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The Pakistan navy (PN) is poised on the brink of a transformation. Neglected for long by Pakistan's political masters and a dominant Pakistan army, the PN was unable to assert its salience and witnessed slow growth. But in the one decade since the September 2001 attacks and the US led 'war on terror', it has undergone a striking metamorphosis. As Pakistan realises the importance of having a robust maritime force and commits greater resources for its development, the tactics of the PN and its broader strategy in the northern Arabian Sea too have undergone a shift. An enhanced international profile and greater credibility for its role in regional maritime order is gradually resulting in the PN becoming a more confident and assertive player, and a major stakeholder in the regional maritime security regime.

In December 2010, the Pakistan chief of naval staff, Admiral Noman Bashir, speaking on the sidelines of the Defence Services Asia (DSA) exhibition, commented that the Pakistan navy was on the cusp of a dramatic transformation¹. The remark did not attract much attention at the time, but in the months that have followed, it has proven to be a realistic and accurate forecast of the PN's future development.

As part of a new comprehensive strategy, the PN, in recent months, has been on a veritable acquisition spree. In May 2011, it took possession of the *PNS Alamgir*, ex-*USS McInerney* - an Oliver Hazard Perry (OHP) class frigate acquired from the US, as part of a deal for transfer of eight such ships². Four months earlier, China had delivered the third F-22-P Frigate (*PNS Saif*) to Pakistan³. Construction of the fourth ship has already begun at the Karachi Shipyard⁴. Pakistan also announced that it would acquire six *Qing* class submarines from China, reportedly equipped with air-independent propulsion (AIP) systems. Seen in perspective, a new strategic heft in the Pakistan navy's acquisition plans is becoming more than evident.

A History of Slow Upgrades

In the more than six decades since its establishment in 1947, the PN has essentially grown in phases. The impetus to its development has been driven by aid and assistance from the US and has broadly corresponded with periods

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of grave international crises – in the 1950s, at the start of the Cold war when an anti-communist alliance was formed; in the 1970s to fight the Soviet invasion of Afghanistan; and post-9/11 as part of the US-led “war on terror”.

At the time of its independence, Pakistan was hard-pressed for funds and could do little for its navy. After signing the Mutual Defence Agreement with the United States in the 1950s, and its subsequent inclusion in the Central Treaty Organisation (CENTO) and the South-East Asia Treaty Organisation (SEATO), the PN managed to procure equipment and ships⁵. But naval acquisitions in Pakistan largely remained limited by the small share allocated to the navy received from the defence budget and also on account of the sanctions that were imposed by the US as a result of its two wars with India.

The army leadership that led the country displayed a serious lack of empathy for the navy's requirements. Even before the 1971 war with India, the Pakistan army leadership appeared blissfully oblivious of the urgent need to ramp-up the PN's inventory and force-levels, even though it was the only means of protecting Pakistan's eastern flank vulnerable to attacks from the sea by the Indian navy.

Following the setback of the 1971 operations, the PN's stock fell further. Until the time that Pakistan lost its eastern part, the PN's role was seen as one of protecting the communication links between the two wings. After losing the eastern wing, Pakistan's military rulers did not see an expanded role for the PN, and plans for its modernisation were put on hold.

This is not to suggest there was never any blueprint for development. Since the late 1980s, the 'impending' up-gradation of the PN had been periodically discussed, debated and speculated over. In fact, following its wars with India in 1965 and 1971 (especially Operation TRIDENT⁶ in December 1971) Pakistan had become acutely conscious of its vulnerability to seaborne attacks and had planned for a major naval expansion. But its plans suffered a blow when the US suspended its military assistance after the India-Pakistan war of 1971.

Following the American embargo, France and China became major sources of weaponry and equipment for Pakistan. The PN, at the time, had a low level of funding and its maritime strategy was geared towards building its underwater capability which would enable its navy to achieve sea denial with limited resources. Thus the Daphne class submarines were procured from France and a Special Services Group (SSG) was raised. By 1975, there was some relaxation in the US embargo and some military hardware was supplied to the PN. Between 1977 and 1983, Pakistan received “Gearing” class destroyers on lease from the US.

The 1970s was also a time when the Pakistan Navy upgraded its small boat attack capability by procuring the Slaughter class fast patrol boats (FPB), Hunain class fast attack craft (FAC) and Huchwan class hydrofoil craft from China⁷. It also strengthened its aviation arm, acquiring six Westland Sea King helicopters, the French Atlantiques, meant to build surveillance and targeting capabilities, and four SA 319B Alouette helicopters for maritime missions⁸. Concomitantly, an expansion of the submarine arm was undertaken with the induction of the fourth Daphne class submarines (in 1975) and two Agosta *class* submarines⁹.

It was, however, in the 1980s that the Pakistan navy began its trajectory towards building a professional force with a substantive combat capability¹⁰. The Soviet invasion of Afghanistan and Pakistan's status as a frontline state for Washington led to a revival of Islamabad's defence modernisation plans. In the latter half of the decade, Pakistan received four Brooke class and four Garcia class frigates from the US¹¹. The US also provided Pakistan with a depot for repairs, also leasing out the ex-US *Hector* (rechristened *PNS Moawin*) from 1989-94 that was used as a tender for Brooke/Garcia class ships.

The US was not the only major military power to come to the aid of Pakistan. Some naval platforms and aircraft were received from the United Kingdom - Fokker F-27s, two Leander class frigates and County class frigates¹². This is not to suggest that Pakistan got all that it needed. Much of the equipment supplied was rudimentary and the PN had to make do with many second hand items¹³ But, despite being consistently fund starved, it strove hard to improvise and modernise, thus, retaining its cutting edge. A key example was the initiative to undertake modernisation of the Atlantiques to enable them to fire Exocet missiles, thereby acquiring an anti-submarine warfare (ASW) capability¹⁴.

By 1989, the PN had received nearly \$3.2 billion from the US as military aid and nearly doubled its surface fleet¹⁵, also going on to acquire the sophisticated long range anti-ship missile, the Harpoon, thereby enhancing its maritime strike capabilities. This was a significant milestone for the PN as it provided the force with a high-grade offensive capability against the Indian navy. It was also a time when the PN first developed the concept of a "defensive zone" for Karachi¹⁶. In the years that followed, securing Karachi became an obsession, and maritime surveillance and strike capability from the shore was deployed to strengthen the naval shield.

The 1990s Decade – A Changed Dynamic

The early 1990s marked a watershed for Pakistan. The supply of the first batch of the P3C Orions transformed Pakistan's maritime outlook and broader

naval combat strategy. The aircraft was meant to boost Pakistan's surveillance capability and, provide a capable replacement for the Atlantique-I aircraft, but the PN seized the moment and used it to bring about a profound transformation in its combat philosophy.

The PN's plans for modernisation, however, received a jolt in 1993, when the Pressler Amendment stopped the supply of American equipment to Pakistan. Upon the Soviet withdrawal from Afghanistan, the US saw no further utility in supporting Pakistan and again imposed sanctions. Not only was supply of major platforms suspended, supply of essential spares was halted too. It seriously compromised the efficacy of the Pakistan navy, which mainly comprised US ships. When the US refused to renew the lease of the Brooke class frigates in 1994, Pakistan realised it was time to look elsewhere for military aid. It soon set itself to acquiring the Type 21 (Amazon) class frigates from the UK, getting six ships in 1993-95. Between 1992 and 1994, agreements were signed with France for the acquisition of three mine hunters, and three Agosta 90-B submarines – a deal which was financed with a loan provided by the French themselves.

The Force Multipliers

In the years that have followed, the Pakistan navy has transformed into a capable and potent force. The six Type 21 (Amazon) class frigates, acquired from the UK in 1993-95 – christened the Tariq class - along with the recently acquired Zulfiqar class (F22Ps) built with China's assistance, form the backbone of its surface fleet¹⁷. Three Type 21s, originally equipped with Chinese LY60N Surface-to-Air Missiles (SAM), have been modified to be fitted with Harpoon launchers (ex US Gearings). Pakistan is said to be considering equipping the ships to launch UAVs¹⁸.

In 2006, the Pakistan navy ordered four F-22P frigates from China. Three of these ships have so far been delivered – *PNS Zulfiqar* (2006), *PNS Shamsheer* (2009) and *PNS Saif* (2010) – all constructed by the Hudong Zhonghua Shipyard in Shanghai. Work on a fourth ship is on at the Karachi shipyard. Based on the Chinese Jiangwei class frigates, the F-22Ps are armed with eight Chinese C-802 surface-to-surface missiles (SSMs) and an upgraded version of the LY-60N short-range theatre defence missile. They are also equipped to operate an ASW capable Z-9EC helicopter¹⁹.

The induction of the indigenous unmanned aerial vehicles (UAV) *Uqab-II* in July 2011, too has served as a shot in the arm for the PN. The first squadron of the UAVs, a mid-range tactical UAV designed for reconnaissance missions, was induced in operational service and will be used for maritime interdiction operations in coastal areas. Needless to say, this is a capability that can also be used for surveillance on naval ships operating in areas close to the Pakistan coast²⁰.

Pakistan has also been focussing on building a small ship missile capability. After the indigenously manufactured missile craft, the Jalalat class, inducted in the late 90s²¹, two Kaan 33 FACs have been procured from Turkey²². With a displacement of 120 tonnes, the craft are designed to carry Harpoon block 2 surface-to-surface Missiles (SSM). Islamabad's anxieties about the Indian Navy mining the waters around Karachi and other major Pakistani ports have been addressed by the procurement of the French 'Eridian' class mine hunter – now christened the 'Munfiz' class²³ - in a deal for three mine hunters in 1992, that included the transfer of technology for one mine hunter.

The recent focus on surface warfare notwithstanding, it is 'submarines' that form the core of Pakistan's 'anti-access' strategy in the Indian Ocean²⁴. The PN's current submarine inventory includes two Agosta-70s, three Agosta-90Bs and three MG110 mini subs. The most potent of these platforms is the Agosta 90B, the first of which, *PNS Khalid* was constructed in France and inducted into the PN in 1999. The second and third boats were built at the Karachi Shipyard and commissioned in 2003 (*PNS Hamza*) and 2007 (*PNS Saad*) respectively²⁵. The Agosta 90B's lethal hardware consists of the torpedo tube launched Exocet SM39 missile and the modern Atlas Elektronik Black Shark 533 mm heavyweight torpedoes.²⁶ Its new-age combat systems and markedly superior sensors give the Agosta 90B a definitive edge.

Pakistan's other critical naval acquisition that has significantly contributed to the development of surveillance and offensive capability has been the P-3C Orion. As per an agreement signed in October 2009, between the Pakistan government and Lockheed Martin, the latter was contracted to deliver 07 upgraded P3C Orion aircraft - both the Maritime Patrol Version (MPA) and the Air Early Warning Variant (AEW) with the 'Hawkeye' System²⁷. The first of the upgraded Orions (MPA) was delivered in October 2009 and two more MPA version aircraft transferred in April 2010. The modified P-3Cs are vastly superior aircraft that provide Pakistan with a maritime patrol capability in both the high seas and littoral regions. Their obsolete avionics systems have been replaced with modern equipment that offers increased endurance, accuracy, reliability and sustainability in future operations.

Unfortunately, these were the very same aircraft destroyed during the attack on the *PNS Mehran*²⁸ on May 22, 2011. Notwithstanding the loss, P-3C Orions remain central to Islamabad's naval war plans and constitute a prime and potent asset. The new batch of aircraft is being widely seen as a shot in the arm for the PN. The aircraft is likely to spearhead future operations in the Arabian Sea as it provides the PN with the ability to deal with Indian Naval assets at longer ranges in all three forms of maritime warfare - anti-submarine, anti-surface and anti-air – thus providing the former with a marked offensive capability. The PN believes the Orion provides it with a definitive edge over the IN – one that would most likely prove decisive in a conflict.

Future Acquisitions

For some time now, there has been speculation that Pakistan might acquire submarines from China²⁹. Recent reports seem to suggest that China may be providing its "all-weather friend"³⁰ with six Qing class submarines - the latest variant of 041 class Yuan class³¹. The deal for supply of the submarines is said to have been signed between Wuhan-based China State Shipbuilding Industrial Corp (CSIC) and the Pakistani Government in April 2011.

The submarines will be double hulled with a submerged displacement of 3,600 tons and will be equipped with the new Stirling-cycle AIP. The propulsion systems will be all electric (and not the diesel electric propulsion system) making the submarines very quiet. The submarines will be designed to carry up-to 3 nuclear capable CJ-10K surface to surface missiles, with a range of 1500 kms. Unique design features will include hull retractable fore-planes and hydro-dynamically streamlined sail.

Pakistan's navy will bolster its surface force capability through the planned acquisition of at least 5 more OHP class ships from the US, and the type 54 (Jiangkai II class) frigates from China. As per a recent deal, Pakistan is due to receive 2 Type 054A FFGs on a 10 year lease from China. The ships are designed primarily for air defence, and include a medium-range air defence missile system with a 32-cell vertical launch system (VLS), and are also capable of firing YJ-83 anti-ship missiles³². The frigate incorporates a number of stealthy features in its hull design, including the sloped side to minimise radar cross section and the reduced profiles of external features. The helicopter deck can operate the Russian Kamov Ka-28, or the indigenous Harbin Z-9C.

Reportedly, Pakistan is also said to be considering procuring three Turkish Milgem class frigates. Designed as a multipurpose corvette, the Milgem class can be deployed in a range of missions, including reconnaissance, surveillance, target identification, early warning, anti-submarine warfare, surface-to-surface and surface-to-air warfare and amphibious operations. The corvettes are equipped with eight Harpoon Block II anti-ship missiles, Mk-46 torpedoes, and a single Mk-31 RAM anti-air missile weapon system³³. In addition, the Pakistan is also said to be considering procuring three UK Royal Navy Type 42 Batch destroyers after their retirement from the Royal Navy.

The PN's thrust on small-craft capability is also quite apparent. The Larkana class patrol boats and the Jalalat class and Kaan 15 class FACs will be aided in coastal patrol and maritime interdiction by the Azmat class missile boat being constructed at China's Xinggang Shipyard and designed to carry eight C-802A

anti ship missiles. There are also reports of a planned launch of the construction of four 1500 tonne stealth corvettes – known as the littoral combat vessel. This will be armed with the C-802A missile as well as the vertical LY-60N E-SHORADS missile. At the same time to guard the approaches to the integrated port facilities at Gwadar, the PN will procure off-the-shelf from China, two type-022 Hobei class catamaran based FAC-Ms capable of launching surface-to-surface cruise missiles and surface-to-air missiles³⁴.

Robust Chinese Assistance

A constant in Pakistan's plans for naval expansion has been, China. Substantive Chinese assistance to the PN dates back to 1994, when the US suspended supplying military equipment, following the Pressler Amendment. The ban on sale of military equipment was so total that the Americans even refused to sell essential spares to the PN. The crisis was exacerbated by the US's unwillingness to renew the lease of the Brooke class frigates that expired in 1993-94. It marked a turning point in Pakistan-China relations, bringing the two nations close on military issues, also triggering Pakistan's interest in pursuing indigenous production.

China's naval cooperation with Pakistan however goes back to the 70s when the Shanghai class FACs, and the Hunain and Huchan class of attack craft were delivered. In the early 80s, Pakistan received four Hegu and Huangfen class missile boats each – a deal that Islamabad signed to get access to technology for future indigenous development³⁵. But substantive cooperation in shipbuilding with China began with a collaborative venture in the 90s for manufacture of the Jalalat and Jurrat class missile boat. The construction of the boats was carried out at the PN Dockyard and Karachi Shipyard and Engineering Works (KS&EW), but all the technology from China.

The indigenous construction of small missile boats was followed by larger projects, including Agosta 90-B submarines and mine-hunters, with technology transferred from China and France. Wary of the disruption of its military modernisation plans by the suspension of American supplies, Pakistan's focused on garnering the capacity to enhance indigenous production. Most of the deals negotiated during this period carried a clause for transfer of technology which Pakistan insisted upon.

In recent times, the PN has displayed a high degree of comfort in its strategic partnership with China. Beijing is now tipped to overtake Washington as Pakistan's principal defence partner. Military cooperation between the two countries has deepened with joint projects to produce armaments ranging from fighter jets (JF-17s) to guided-missile frigates (F-22Ps) China is already a steady source of military hardware to the resource-deficient Pakistani Army. It has played a major

role in the development of Pakistan's nuclear infrastructure and has repeatedly expressed a desire to strengthen military cooperation³⁶.

After a meeting between Chinese defence minister Liang Guanglie and PN chief, Admiral Noman Bashir in December 2009, Pakistani defence blogs and websites were abuzz with speculation that China has promised to supply the PN with four more F-22 P frigates and was considering Pakistan's request for a bigger 4000 ton class of ships³⁷.

US Aid to Pakistan

Despite the tense nature of their relationship, Pakistan's alliance with the United States is still very strong. The September 11 attacks resulted in Pakistan becoming a frontline state in the war, and revived US defence cooperation with Islamabad. In the past decade, Pakistan has received high technology equipment and other military aid which had led to the modernisation of its inventory. Moreover, the PN's involvement in the Combined Task Force (CTF-150) has influenced the navy's operational strategy and professionalism (in much the same way as the Pakistan army thinking was shaped by the American alliance in the 1950s and later in the 1980s).

In recent years, America has contributed towards enhancing Pakistan's conventional military capabilities. While the aid has been provided under the broad support for counter-terror operations, almost all the equipment and platforms supplied seems intended for use against its eastern neighbour. This is true of the Oliver Hazard Perry class ship (delivered in April 2011), the new batch of 7 P-3C Orions and the Harpoon anti-ship missile³⁸. The PN has also received six Phalanx close-in naval guns and six C-130E transport aircraft from the US (ordered in 2004).

In 2009, there were reports that the US has concluded a US \$ 284 million deal to supply Pakistan with 200 Raytheon AIM-9M-8/9 Sidewinder air-to-air missiles (AAMs) and 500 AIM-120C5 Advanced Medium-Range Air-to-Air Missile (AMRAAM) systems. The AMRAAM sale marks the biggest single export order in the history of the AIM-120 programme and gives the Pakistan Air Force (PAF) a beyond-visual range (BVR) active-radar AAM capability for the first time. According to the report, the missiles will be carried by the PAFs newly ordered F-16C/D Block 50/52 aircraft and its existing F-16A/B Block 15s, which will acquire AMRAAM compatibility as part of a mid-life upgrade³⁹.

The induction of the AMRAAM into the PAF gives it a significant combat capability that had previously been denied. Pakistan has explored several clandestine avenues to develop its own active radar BVR AAMs to counter the Indian air

force's considerable stocks of weapons in the same class. Pakistan is also expected to acquire the Chinese-developed SD-10 (PL-12) AAM with its JF-17 Thunder lightweight fighters.

As per a June 2010 press release of the US embassy in Pakistan US civilian and security assistance to Pakistan since 2007 has totalled more than \$4 billion, including civilian aid, as well as 14, F-16 fighter aircraft, 10 Mi-17 helicopters, 2 Bell 412EP helicopters, 5 fast patrol boats, 115 M109 self-propelled Howitzers, more than 450 vehicles for Pakistan's Frontier Corps, hundreds of night vision goggles, day/night scopes, radios, and thousands of protective vests and first-aid items for Pakistan's security forces⁴⁰. US-Pakistan military relations are, evidently, alive and thriving.

Nuclearisation of the PN

Pakistan's plans for a naval nuclear deterrent capability are more than decade old but appear to be singularly driven by the Indian navy's (IN) growing profile and its nuclear force posture.

In May 1999, the Pakistan navy was assigned a 'nuclear role' and the 'Strategic Directorate' was constituted at the Naval Headquarters. Reportedly, a nuclear submarine project KPC-3 was set up in Peshawar in 2001⁴¹. Soon thereafter, the Pakistan navy publicly debated the deployment of nuclear weapons aboard its submarines, arguing that it had to keep pace with developments in India. In January 2003 Islamabad rescinded its statement, reaffirming Pakistan's commitment to a "minimum credible deterrence." However, in the wake of India's short-range Agni-I test in the same month, the then chief of naval staff Admiral Shahid Karimullah left the option open, saying that while the country had no plans to deploy nuclear weapons on their submarines, they would do so only if "forced to".⁴²

Since then, stray voices have been heard in Pakistan about the naval nuclear option. If it has to counter the IN's superiority, the PN will need to equip its submarines with a strategic missile firing capability. Arguably, the thrust of its efforts would be to counter the threat posed by the Indian Navy's 'Klub' land attack missiles by developing its own nuclear tipped submarine launched missiles – an enormously complex and arduous undertaking. But as intricate an operation as it is, it is not inconceivable that the PN would seek to miniaturise its Harpoon missiles to be mated with a small nuclear warhead.

In recent days there have been indications that Pakistan might be trying to modify the ground-launched cruise missile 'Babur' (Hatf-VII) to develop a sea-based version. In February 2011, this missile was test fired from a new round canister

instead of the typical box like canister used in the past, a firm indication that there might be plans to install the missile on PN's ships and submarines.⁴³

Pakistan's Maritime Strategy

Since its inception in 1947, the Pakistan navy's development has been shaped by the more powerful presence of the Indian navy⁴⁴. The Pakistan navy had historically followed a defensive strategy by deploying its naval forces in a sea-denial role. This aimed to deny the Indian Navy the use of the waters close to its coast in the Arabian Sea to launch attacks on Pakistani maritime assets and port facilities. In the early 2000s, the PN's operational philosophy started to change, as it began to adopt a more proactive posture. The change in the PN's strategic mind-set appeared to have been driven in part by a perception of the Indian navy's declining ability to enforce a blockage off Karachi. By the end-1990's Pakistan's naval planners had begun to believe the PN had the capability to render invalid the threat posed by the Indian navy to the safety of assets at Karachi port. Thus, began a shift from a strategy of 'sea-denial' to one of 'limited sea-control'. While the former is a defensive concept aimed at blunting the enemy offensive by the denial of space, the latter is a more proactive (if not "offensive") approach and involves a more vigorous and imaginative use of maritime resources. Sea control, as the PN sees it, is essentially predicated on the notion of controlling sea-lanes close to the Pakistan coast, maintaining "presence" and developing linkages that would establish Pakistan as a major stake-holder in the maintenance of maritime security in the region.

To understand the evolution in Pakistan's maritime thinking, it may be useful to consider the essential elements of the PN's strategic outlook until the early 1990s:

- (a) **Denial of Space.** The threat of a blockade has remained central to the PN's strategic thinking⁴⁵. Pakistan learnt this lesson from the debacle of the 1971 war, when despite the PN positioning its surface fleet along Pakistan's shores in bid to deny Indian naval forces any space, Indian missile boats were able to hit Karachi. But this was not seen, so much as a failure of the sea denial strategy, as it was construed to be a case of inadequate resources in safeguarding Pakistan's coast. Since then, Pakistan has placed a special emphasis on developing maritime reconnaissance and sub-surface warfare capability to mitigate the threat of a blockade off Karachi.
- (b) **Negate IN's Numerical Advantage.** Every single acquisition of the PN seems in pursuit of one paramount objective: to deny the Indian navy the control of sea lanes close to its shores. The mine-hunters that Pakistan acquired in

the 80s were primarily meant for obviating the possibility of any potential damage that India could cause by planting mines in Pakistani waters.

- (c) **Protecting Critical Port Infrastructure.** The 1971 war and the attack on Karachi seem to weigh heavy on Pakistan's consciousness. There is an almost obsessive focus on insulating the critical port and neutralising the prospect of a possible blockade. Also by spreading its operating bases, the PN perhaps appreciates that it would be in a position to threaten Indian access to the oil supply routes.

In the two decades since 1990, the overall strategy seems to undergone a qualitative shift, in terms of the added emphasis on principles of more assertive sea control. Apart from the three core areas mentioned above, the navy now seems to be focusing much more on proactive measures to control the waters in its immediate vicinity. The emphasis now appears to have shifted to the following:

- (a) **Active Control of Sea-Lanes.** The PN today, does not merely attempt to deny the Indian navy the control of sea lanes close to its shores, but actively control the sea corridors themselves. At the same time it is developing the capability to interdict the flow of Indian maritime trade in critical sea lanes closer to Indian shores.
- (b) **Safeguarding of Energy-lines.** With over half of the world's crude oil being exported through the choke point at the Strait of Hormuz, Pakistan can ill afford to neglect the security of energy lines. Islamabad realises that given the sky rocketing prices of oil, access to the supply routes would be critical for energy hungry nations like China, Japan and India. It thus appears focused on enhancing its naval footprint by setting up naval bases along its coast. This would also result in the spreading of PN assets beyond Karachi, which would reduce vulnerability in future wars.
- (c) **Hedging against the Indian Nuclear Submarine Capability.** The launch of the Indian navy's nuclear submarine *INS Arhant* has caused great anxiety within the Pakistan naval establishment. Pakistan feels the submarine is a threat to regional peace, and that its presence disturbs the regional strategic balance. It therefore is seeking to adopt measures that could effectively neutralise the Indian navy's nuclear submarine advantage.
- (d) **Gwadar as a 'Geo-strategic Hub'.** The new deep sea port at Gwadar, developed with Chinese assistance, is primarily aimed towards an expansion of Pakistan's maritime role, and the facilitation of Chinese trade to and from the landlocked Central Asia. It is strategically significant as it offers a geo-

economic and geo-strategic pivot to China⁴⁶. With a strategic location on the south western coast of Pakistan, Gwadar is likely to emerge as a key shipping hub, and could also, in the future, serve as an important naval base.

- (e) **A Strategic-Doctrinal Expansion.** The development of new naval facilities at Ormara, Pasni and Jiwani points to a doctrinal expansion in PN's strategic plans. These provide the PN with viable options for dispersing its assets. This is likely to prove crucial during a conflict with India. Pakistan is also cognizant of the enormous threat its navy faces in the form of terrorist attacks on bases, ships and facilities. The new ports provide the PN with alternate basing facilities away from 'sensitive' Karachi⁴⁷.

Analysis of Pakistan Navy's Maritime Strategy

Since it is still in a growth phase, the PN may yet not have the instruments and capabilities at its disposal to affect a comprehensive sea-control strategy. However, with an operational port at Gwadar and its attendant facilities, the PN can be expected to make good on a "limited sea-control threat". Even so, it is unlikely to ever seek a direct conflict with the Indian navy. Its primary focus will be to keep the sea lines of communication (SLOCS) open and to defend important maritime assets.

Through its enhanced interaction with Western and regional navies the PN seeks to evolve a maritime security regime in the larger region. Its proposed security architecture does not appear have a place for the Indian navy, which the PN often portrays as a force with imperial designs. To bolster its own image, the PN positions itself as a facilitator of sorts in the maritime domain. Its invitation to China for participating in multi-national naval exercises (Aman-07) has been hailed in the Pakistani media as a landmark first, and there are now suggestions that the PN is playing a role in bringing Iran into the security regime by inviting the Islamic Republic's naval forces to participate in multi-national exercises.

In a conflict, the Pakistan navy can play a vital role by creating diversions using submarines and air-launched missiles, while protecting sea lines, in particular the Gulf sea lane that is vital to Pakistan's national energy needs. With its recent capability infusion, not only can the PN counter a blockade, it has the capacity to force a counter-blockade of vital Indian shipping. While the F-22Ps with their all-round capability and long-range patrolling prowess effectively counter the threat posed by Indian ships and submarines, the PN's potent Agosta 90B submarines could be deployed close to India's strategic energy and commercial lanes along its west coast, causing economic problems. All this would then improve the flexibility and liberty of action for the Pakistan army and air force.

An Enhanced International Profile

The last two decades have contributed significantly to the offensive capability of the Pakistan navy. Not just has it procured state-of-the-art platforms and weapons but also gained operational experience from joint operations and training with the USN and navies of the other Western countries. Since 2004, the PN has been taking an active interest in expanding its cooperation with other regional and western navies. In April, 2004, naval ships from the US, UK, France, Italy, Spain, Australia, Kuwait and Bahrain took part in the 'Arabian Shark' naval exercise. A series of joint interactions have also been conducted with friendly nations⁴⁸.

In June 2005, for the first time in more than two decades, PN ships - *PNS Tipu Sultan* and tanker *PNS Moavin* – took part in a two day French naval exercise. In another 'first', in 2008 Pakistan naval ships, participated in joint naval exercises with the North Atlantic Treaty Organisation (NATO) naval forces in the Mediterranean at the invitation of Turkey⁴⁹. In 2009, the PN carried out exercises with vessels from ten nations including the US and China, in and off Karachi. The sea phase lasted 10 days and observers from 24 other nations participated. This was followed by another exercise in April 2009, in which warships from Netherlands, Portugal, Spain, Canada and Germany took part.

It is instructive that the PN's recent joint-naval exercise 'Aman-11', held in early-March 2011, has seen the enthusiastic participation of a broad and diverse set of naval forces. Naval ships from Australia, China, France, Indonesia, Japan, Malaysia, Saudi Arabia, Sri Lanka, Turkey, UK and the USA took part in 'Aman-11' which had participating navies evolve common procedures for countering piracy, drug-running and human-trafficking⁵⁰. Whilst assisting in the realisation of the stated objective of developing common tactics against asymmetric air, surface, and mine threats, the exercises have also clearly contributed to improving PN's maritime tactics and strategy, as well as inter-operability and tactical proficiency. Two years ago, Aman-09 had met with similar success, and witnessed participation by navies of 23 nations.

There is a palpable sense that the PN believes the success of the exercises may accrue to it a benefit of the same nature and scale, as the Indian Ocean Naval Symposium (IONS) gave to India after its first meeting in Mumbai in 2008. The fact that navies of 39 countries participated in the joint interaction is a pointer to the 'respect' and 'influence' the PN is beginning to command around the world.

The PN is assisted in its endeavour by its active participation in the Combined Task Force-150 (CTF-150) - the US led multi-national naval grouping that conducts

Maritime Security Operations in the Gulf of Oman, the Gulf of Aden, the Red Sea and the Arabian Sea⁵¹. The PN has, in fact, gained significantly through its operations with western and regional navies, since it joined the Coalition Maritime Campaign Plan (CMCP) in 2004. It has been given command of CTF-150 on four occasions (in April 2006, April 2008, July 2009 and October 2011) and has twice led the CTF-151 – another task force formed in 2009 to counter piracy off the coast of Somalia. In its 'constructive engagement' with regional and extra-regional navies, the PN has shared operational and doctrinal expertise, and improved its interoperability with other navies.

Conceivably, some of the participating nations in PN's 'Collaborative Maritime Security Exercises' - Aman-09 and Aman-11 - were obliged to participate because they are also members of the CTF-150. Notwithstanding, that it still does not detract from the fact that the PN is being seen as a professional force, capable of being a reliable and durable partner.

Greater Interaction with Gulf Navies

It is pertinent that Pakistan appears to be working diligently towards fostering close relations with Islamic states and enhancing existing relations. Since February 2004, when the Saudi Navy participated in exercises with the PN, Pakistan's naval units have consistently engaged with Gulf navies, including those of Oman, Kuwait, Bahrain and UAE⁵². Kuwait and Bahrain's naval units participated in Arabian Shark in 2004. The same year, four ships and a submarine of Pakistan navy went on a good will tour of Saudi Arabia, Kuwait and Iran. In May 2007, *PNS Shahjahan* paid a five day visit to Kuwait.

PN ships now regularly exercise with ships of the Royal Saudi navy (exercise "Naseem-E-Bahar" held in November 2005 and June 2008), and have an increased interaction with the Turkish navy. In March 2007, PN signed a Memorandum of Understanding with the Turkish navy to collaborate in naval research, technology and development. As recently as in July 2011, the PN units carried out a naval exercise (Deniz Aslan –II) with four ships of Turkish Maritime Task Group⁵³, and Pakistan Navy's new frigate, *PNS Alamgir* visited Kuwait on a mission to reinvigorate bilateral cooperation and interoperability between the two navies⁵⁴.

Needless to say, in any future exigency involving India, the possibility of Pakistan seeking to use its naval relations with Gulf nations as a hedge against any action by the Indian navy, cannot be discounted.

Radicalisation of Cadres

The terrorist attack on PNS Mehran and the disclosures by slain Pakistani journalist Saleem Shehzad starkly highlight the radicalisation of Pakistan navy cadres. The attacks on PNS Mehran pointed to a systematic and large scale permeation of militant ideology into the ranks of the navy, and to scores of compromised units within the organisation. Saleem Shahzad, in a sensational report filed a few days before his death claimed that the Al Qaeda had infiltrated the ranks of the Pakistan navy, and that extent of the infiltration went beyond a few renegade cadres⁵⁵. The Pakistan navy's pro-active interrogation of defaulters, ostensibly to gather more information on other compromised cadres, enraged the Al Qaeda and led them to hatch a plan to 'teach the PN' a lesson.

Within a week of the May 2, 2011 killing of Osama Bin Laden, insiders at PNS Mehran had gathered all necessary information to orchestrate the attacks. Shahzad's report highlights the in-depth information at the militants' disposal that helped them penetrate the heavily guarded facility. The targeting of P3C Orions, the report claims, was no coincidence. The militants came in to destroy naval assets and they were intent on hitting the expensive P3C Orions – an aspect only too evident, when seen that the Pak air force planes, parked nearby, were not touched at all. The attack was apparently so well conceived and precisely executed that one group of militants even managed to escape, under covering fire provided by the others – an incredible occurrence, considering that security forces had surrounded the establishment and blocked all exit routes.

Manpower and Training

Notwithstanding the Saleem Shahzad disclosures, the issue of the radicalisation of PN cadres is sometimes overplayed by the media. The Pakistan navy is known for its deeply committed and professional cadres who display an abiding devotion for their cause. In their exercises with Western and regional navies, the professionalism of the PN has been widely vouched for. There have been reports that it has been struggling to retain skilled manpower, but this is an issue that is common to navies around the world, including the Indian navy.

Reports suggest that the PN has taken cognizance of the supposed threat that the Indian navy poses to its interests in the maritime domain, especially in the wake of speculation about the Indian Army's supposed "Cold Start" doctrine. In November 2010, Pakistan held a major conceptual exercise (Shamsheer-e-Bahr IV) to assess various conflict scenarios at sea and formulate responses⁵⁶. The exercise was aimed at developing a comprehensive strategy to counter "Cold Start", the new Indian war-fighting doctrine.

Future Challenges

The Pakistan navy has expanded enormously in the last two decades with imports and production within Pakistan. But, given its assortment of Chinese, American and European ships and equipment, the PN faces enormous complexities of repair, maintenance and spares, which could prove to be a challenge in the future. While the new platforms are procured, the Pakistan navy cannot be assured of a life-long US supply of spares, given the record of the US-Pak relationship. The PN also has not been able to decide on the right mix of equipment and platforms for its forces. Even as new capability is being inducted, there is little indication that it is as per any long-term comprehensive plan for future development. If Pakistan wishes to play a pivotal role in the regional security regime, it will have to display far greater vision.

While a majority of the PN's acquisitions have been from the US, UK and France, the supply from China has been restricted to the smaller surface ships. Naval aviation, on the other hand, is largely dependent on French and US equipment. Although the indigenous development is taking place, Pakistan remains largely dependent on imports due to lack of R&D within Pakistan which is directly linked to the lack of technical manpower within Pakistan.

Conclusion

It is clear that the Pakistan navy has been in the process of a major expansion in size as well as in terms of a substantive up-gradation of its technology. With the induction of the new platforms, equipment and missiles, Pakistan's naval combat capability extends over most of the Arabian Sea. The PN now appears to be focussing on building its long range surveillance capability and enhancing its anti-surface fleet and anti-submarine warfare capabilities.

While 'sea-denial' still remains the centre-piece of its naval strategy, the latest acquisitions - Agosta 90B's, the upgraded P-3C Orions, the four Zulfiqar class ships - as well as the planned induction of the Jiangkai II class ships, place the PN in a suitable position to establish some form of 'limited sea-control' in the region. The emphasis now is also on building stronger bonds with both regional and Western navies. In the future, a greater offensive capability and an enhanced profile of the PN are likely to make it more assertive in the extended region around the Markan coast.

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