

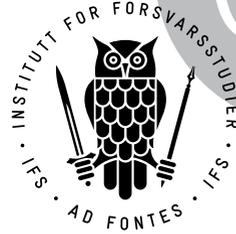


02

Saira Basit
Øystein Tunsjø

Emerging naval powers in Asia

China's and India's quest for sea power



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SUMMARY

This study offers a historically informed and comprehensive assessment of the contemporary naval policies of China and India, the leading rising powers. It shows how China and India, traditionally and predominantly concerned with their respective continental frontiers, in recent decades have shifted their strategic outlook towards the sea and development of sea power. The study examines the core drivers behind this increasing interest in maritime affairs and naval power and provides an analysis of the main constraints facing China and India in their bid to achieve their naval ambitions.

By comparing and contrasting the findings of the respective studies of India and China, the study reveals certain common drivers, though the hierarchy of causes explaining the countries' growing ambitions to develop their naval power differs.



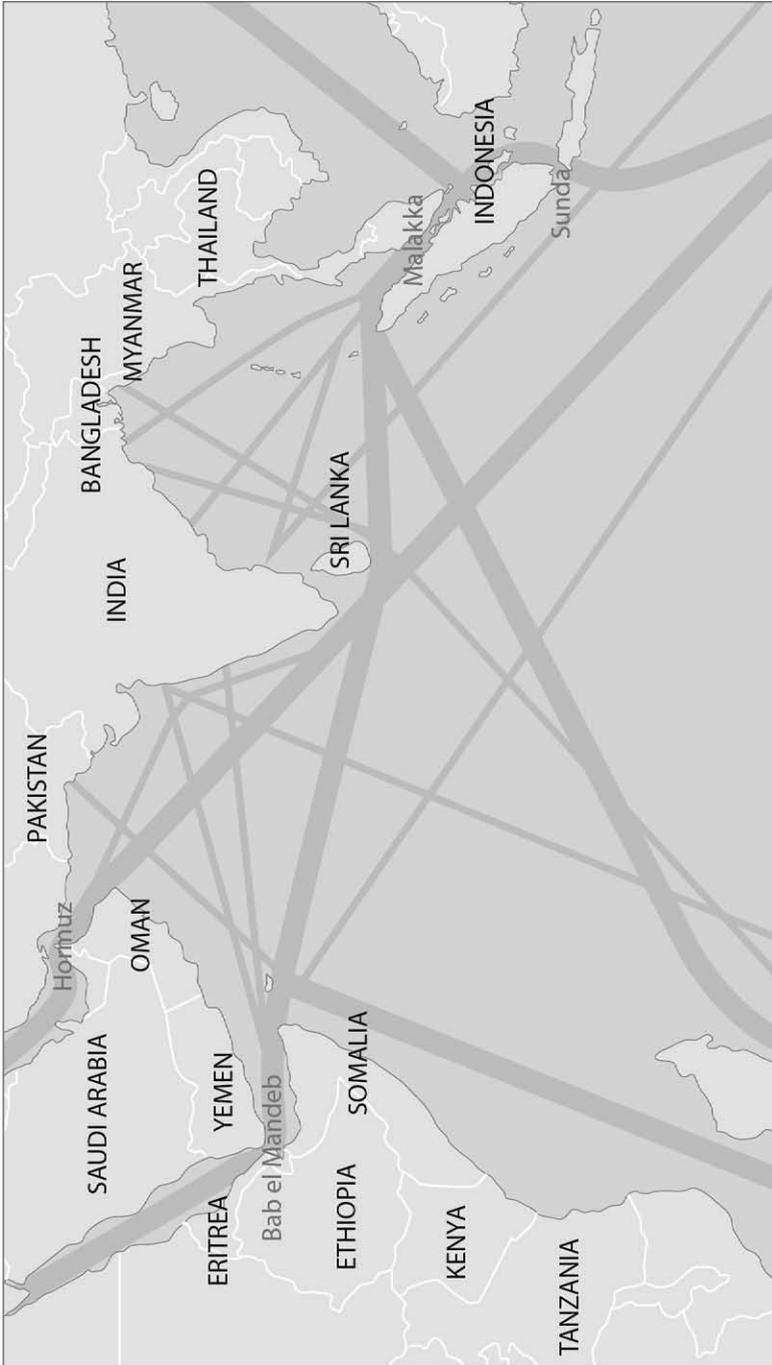
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The map shows shipping lanes in the Indian Ocean and through the Strait of Malacca. Source: Norwegian Military Geographic Service.

Emerging naval powers in Asia

China's and India's quest for sea power

With the re-emergence of Asia's two historically leading powers, China and India, the global economic balance is becoming increasingly Asia-centred. These developments have prompted action on the part of the US and other powers to shift more of their resources to the Asia-Pacific. But in addition to these geopolitical and geoeconomic implications, we must add the ambitious naval policies of China and India, two principally land-based powers both of which aspire to greater global influence. The historical record of land powers going to sea tells us that rivalry, tensions and conflict often result. China, Asia's leading land power, increasingly challenges US naval supremacy in Asian waters. The outcome of this accelerating quest for sea power will clearly influence the geopolitics of the 21st century.

This study offers a historically informed and comprehensive assessment of the naval policies of China and India. It examines why China and India, both of which have traditionally concerned themselves with their continental frontiers, have spent the past few decades realigning their strategic outlook towards the sea and the development of sea power. Although both countries still recognise the need for a strong army and their armies still dominate their respective armed forces, Beijing and New Delhi are allocating more resources to their navies and increasing their share of the overall force structure. All the same, compared to the US, China's and India's respective force structures remain strategically defensive, and are not particularly concentrated on military power projection capabilities.

The study asks what is driving this stronger interest in maritime affairs and naval power. The findings of the respective studies of India and China reveal certain overlap-

ping drivers, though the hierarchy of causes in the two cases differs. Most importantly, while China's rising power and increasing involvement in maritime affairs in the Indian Ocean are key factors in India's naval build-up, the latter is not an explanatory factor in China's search for sea power. China has a "bigger fish to fry", i.e. the preponderance of US naval power.

Another reason for China's naval build-up resides in its ambition to patrol and establish a presence in disputed territorial waters. This is of less concern to India, which has no unresolved sovereignty disputes at sea. On the other hand, while maritime terrorism is a key factor in India's contingency and naval expansion plans, this is a threat that does not preoccupy China's naval planners. India is determined to develop naval power as a deterrent against China and PLAN (Chinese People's Liberation Army Navy) operations in the Indian Ocean, while China's focus is on developing naval capabilities that can deter the US from operating in China's waters. Again, this illustrates the nature of the relations between these two great powers: China is a key factor in India's expansionist naval policy, while India figures, at best, only marginally in China's.

Both India and China are anxious to safeguard sea lines of communication (SLOCs) and protect their growing global interests. Secure SLOCs are vital to stability, economic growth and development in both countries. Collaboration on missions to secure the global commons offers both countries an opportunity to gain influence and status. Developing a large navy is also seen as a question of prestige and something great powers naturally aim for. In that sense then, the development of maritime power fulfils the respective nationalist ambitions of India and China.

The reader should note that neither maritime ambitions nor naval plans are implemented and executed in a straightforward way. So while both countries are acquiring new weapon systems and ships and their navies have participated in an unprecedented number of exercises, missions and tasks – all indicative of the shift in naval policy, strategy and doctrine – both navies have a long way to go to achieve their ambitions. India and China both seek a balance in their naval build-up between traditional war fighting missions and participation in military operations other than war (MOOTW), including constabulary missions against piracy, anti-terrorism, humanitarian and disaster relief operations. Insofar as carrier battle groups and nuclear submarines are expensive to develop and operate, continuing naval expansion will rely on sustained economic growth in both countries, along with domestic and external stability.

New acquisitions often involve advanced technology, requiring highly skilled personnel. It remains to be seen whether the two countries' respective navies will manage to recruit the "best and the brightest" to develop and operate their new naval platforms. It obviously takes time to build naval forces capable of carrying out complex operations, and neither China nor India has much combat experience at sea. They also need to put in place new production chains to facilitate maintenance and logistical support at sea and on shore. In sum, insofar as India and China both face several challenges in their respec-

tive bids to become first-class sea powers, the long-term implications of these ambitions remain uncertain.

Even more uncertain is the likelihood of conflict. This study argues that a naval confrontation is unlikely in the short term and will remain so in the long term as well. Although China is increasingly active in the Indian Ocean and India is currently manoeuvring into the South China Sea and both countries are developing closer ties with littoral states in these waters, the expansion of their respective navies is unlikely to shift the balance of power in the South China Sea or the Indian Ocean to such a degree that war is warranted. In addition, neither the PLAN nor the IN is capable of controlling or blockading vital SLOCs for an extensive period in a conflict with another great power, and any such attempt would be dangerously escalatory, increasing the risk of all-out war.

Both navies are capable of sea denial and sea control for limited periods in their respective coastal waters. China can harass and attack Indian vessels in the South China Sea, and the Indian Navy can disrupt Chinese maritime trade and challenge the PLAN in vital areas of the Indian Ocean. A territorial conflict over disputed border areas is a more likely scenario, which, of course, could lead to war at sea. For example, the IN could retaliate in the Indian Ocean against border clashes or a land war with the PLA. However, the IN would not be able to blockade or control China's vital SLOCs and would be vulnerable to an attack by China's superior submarine fleet in any naval war.

Although the deployment of Chinese naval vessels to the Indian Ocean upset New Delhi, China and India continue to work together on constabulary patrols and protecting SLOCs. While these missions go some way to legitimising PLAN's growing presence in the Indian Ocean, a primary concern of India, the missions also offer India and China an opportunity to work together to protect the global commons, to build trust and manage conflicts of interest.

China's naval build-up: drivers and ambitions

Øystein Tunsjø¹

When land powers go to sea, the result can be an increase in geopolitical friction. One of the most visible areas of tension in international relations today is in US–China relations. The United States is determined on the one hand to preserve its dominance at sea, while China, an emerging great power, is seeking at the same time to expand its sea power and challenge US predominance. China's ambitions are stoking rivalry among China, India, Japan and several other Asian states. What explains China's quest for naval power, what naval capabilities is China developing and how is China intending to deploy its naval forces?

This study is divided into four parts. Part 1 examines the drivers behind China's efforts to develop its naval capacities. It is argued that changes in the strategic environment during the 1980s and after the Cold War prompted China to realign its orientation from addressing the threat of land war with the Soviet Union to potential conflict at sea, not least given the unresolved issue of Taiwan, a particular concern of the People's Liberation Army (PLA). By deterring hostilities from across the Taiwan Strait, the PLA Navy (PLAN) has enjoyed sufficiently stable conditions to focus on other tasks in the maritime domain. PLAN's new capabilities and deployments indicate the priority it gives to protecting China's maritime rights and sovereignty. But it also conducts missions to safeguard China's oil supplies, trade routes and sea lines of communication (SLOCs).

After this review of the main features of China's naval modernisation, the second part assesses the links between China's oil import, SLOC (in)security, China's search for sea power and its ability to patrol SLOCs. Many Chinese experts, military officers and analysts would like to see China build a larger carrier-based navy to boost national status and prestige. They justify their commitment under the banner of enhancing

China's energy security and protecting SLOCs. As China becomes increasingly reliant on seaborne oil supplies to maintain economic growth, the country is also becoming more and more vulnerable, it is often maintained. Since anxiety over the perceived vulnerability of seaborne oil imports has become a prominent topic in the literature, it is worth examining the issue more closely.

Hence, the third part critically discusses the so-called "Malacca dilemma" and asks whether China is vulnerable to a blockade of its seaborne trade routes. To understand China's vulnerability to interruptions of its vital trading routes at sea - in addition to providing analytical clarity - it is helpful to distinguish between risks in peacetime and threats in wartime. A blockade of China's trading routes at sea would most likely lead to war. As few states are willing to go to war with China few would dare interdict shipments to China unless conflict or war was imminent. A blockade of China's SLOCs and coast is something only the US Navy might be capable of, but both the US and China are determined to avoid war.

The PLAN will remain inferior to the US Navy for the foreseeable future and China's capacity to secure its seaborne trade routes by military means will also be limited. Were war to break out between China and the US, China would find it difficult to prevent disruption or blockades of its SLOCs. However, as will be argued, a blockade of Chinese oil supply does not pose an existential threat to China, so the country is not, strictly speaking, facing a Malacca dilemma.

Given that war between the US and China seems unlikely then, it would be more fruitful to analyse China's SLOC security contingencies and what China has been doing to manage risks in peacetime. Accordingly, part four examines the other non traditional missions or Military Operations Other Than War (MOOTW) assigned to the PLAN in the twenty-first century, including attending to accidents at sea; anti-piracy missions; protecting Chinese citizens abroad; humanitarian relief operations; and maritime terrorism.

CHINA'S NAVAL DEVELOPMENTS

With a strategic culture shaped by land wars and a continental orientation, the PLAN has traditionally focused on defending the PRC from attack from the sea rather than developing sea power to strike, invade or conquer other countries (McDevitt 2007, 494; Cole 2010). While China's naval modernisation accelerated after the 1995-96 Taiwan Strait crisis, China's naval strategy since the establishment of the PRC in October 1949 has largely been defensive.

Li (2009) has shown how China's naval strategy gradually developed from a "near coast defence" prior to the mid-1980s to a "near seas active defence" afterwards, becoming at a later stage a "far-seas operations strategy". During the "near-coast defence" period the PLAN focused on supporting land operations in a major war with the Soviet Union and counter-amphibious landing operations from Taiwan-based Kuomintang (KMT) forces (Li 2009; Cole 2010; Howarth 2006). The PLAN fleet of the 1950s

and 1960s consisted mainly of mine sweepers and torpedo, gun and missile boats, supplemented by a few Soviet-made light destroyers, frigates and land-based short-range bombers. Because capabilities were limited, the PLAN initiated the development of what would later become a formidable force of conventionally powered submarines, i.e. the *Romeo* class submarines, copies of an early 1950s Soviet design (Li 2009, 148; Howarth 2006).

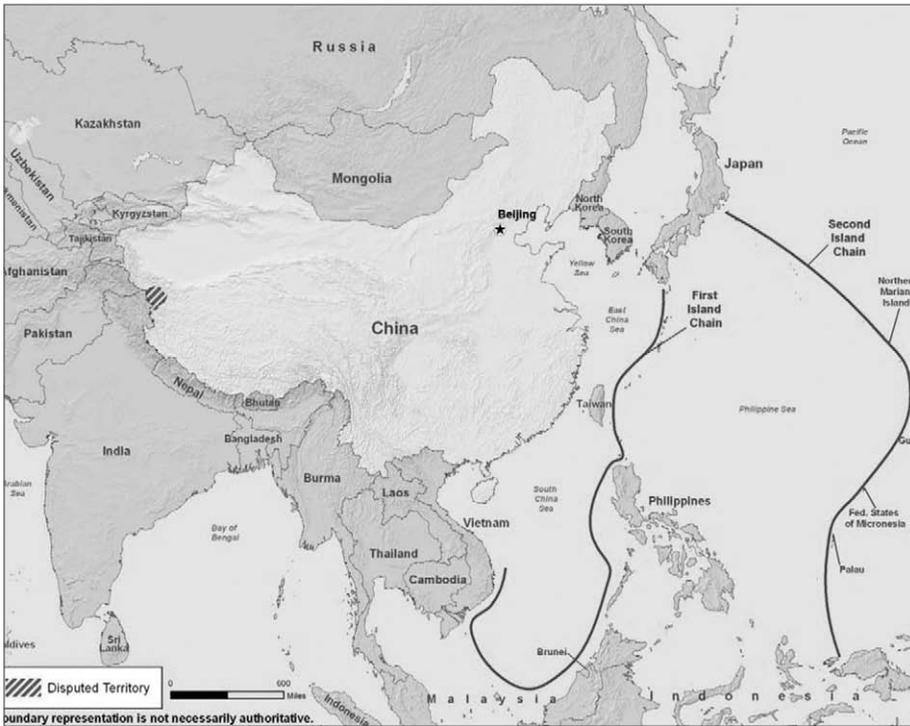
The first *Ming* class, an improvement on the conventionally powered *Romeo* class, became operational in the 1970s. China began building a nuclear-powered submarine armed with ballistic missiles called the *Xia* class in the 1960s. Apparently, the *Xia* ran into engineering problems. Operational patrols were difficult and the Chinese also struggled with the propulsion technology. The launching of missiles from submerged submarines also ran into technological problems (Cole 2010, 138–39; Li 2009, 149). China started building the first generation of the *Luda* class guided missile destroyer (DDG) and *Jianghu* class guided missile frigate (FFG) in the 1970s, laying the basis for the recent development of a number of new classes of surface ships.

Real changes, both in strategy and naval capabilities, did not occur until the mid-1980s with the adoption of the “near-seas active defence” policy. A grand strategic shift followed Deng Xiaoping’s bold announcement in the summer of 1985 that the threat of a major war with the Soviet Union had diminished (Cole 2010, xiv): the military became less preoccupied with the continental frontier and more with building up the PLAN’s access denial capabilities and protection of China’s coastal waters (McDevitt 2007, 487–88; Cole 2007, 552).

The PLAN benefited from this strategic transition but it is difficult to estimate how influential prominent figures were in promoting the shift. Li (2009, 155) notes that relations between Admiral Liu Huaqing, PLAN commander from 1982 to 1988, and Deng were close. However, Liu waited until Deng had proposed the new strategic direction before advocating a new naval strategy. Nonetheless, Liu was influential in implementing the change from the near-coast defence strategy to the near-seas active defence strategy, or what other experts term the new strategic concept of “offshore defence”.

In proceeding from a coastal defence force to a more active offshore defence, the PLAN could draw on both its own war-fighting experience, lessons learned and strategies pursued during the Cold War by the Soviet Union, another major land power. Inspired by the PLA’s thinking in terms of a battlefield’s interior and exterior lines, the PLAN envisioned operations within and around what has been termed “island chains”, though it is crucial to emphasise that the seas are seamless and that building operational capability is more important than drawing lines in the ocean.

The first island chain constituted the interior-line defence and offence, “a near and narrow realm where a relatively clear front would develop to define the engagements of the two sides”. The space beyond the first island chain “was the far and vast realm for external-line operations” (Li 2009, 155). China’s distance-related island-chain defen-



THE FIRST AND SECOND ISLAND CHAINS. PRC military theorists refer to two “island chains” along China’s maritime perimeter. The First Island Chain includes Taiwan and the Ryuku Islands, the Second Island Chain extends from Japan to Guam. Source: Department of Defense, Annual Report to Congress, Military and Security Developments Involving the PRC, 2011, p. 23.

sive perimeters paralleled the Soviet Union’s “linear ground combat approach to thinking about maritime defense”, often referred to as a “layered defence”. By establishing layers of defence, the Soviet Union aimed “to deny the use of the sea to its canonical threat, the United States” (McDevitt 2007, 490). Admiral Liu had studied under Admiral Gorshkov at the Voroshilov Naval Academy in St. Petersburg from 1954 to 1958, but how much Gorshkov and Soviet naval strategy influenced Liu’s thinking is still the subject of debate (Li 2009; Holmes and Yoshihara 2008; Cole 2010).

Liu’s notion that “if the enemy advances, we advance as well, i.e., when the enemy launches attacks on our coastal region, we launch attacks on the enemy’s rear”, suggests that PLA strategists had expanded on the Soviet’s layered defence and incorporated Chinese “characteristics” to the approach favoured by the Soviet naval strategists (Li 2009, 155). A more active defence, including exterior-line operations, may well differ from Gorshkov’s thinking. As Li argues, the Chinese approach “places emphasis on manoeuvre-based offense to deal with the enemy’s offense”, while Gorshkov “stressed reinforced and expanded defense against the enemy’s offense”. Still, argues McDevitt (2007, 490), similarities between the Soviet and the PLA naval strategy can be attrib-

uted to a continental strategic culture, Soviet mentorship and the operational challenge of “defending the homeland against a force approaching from the sea”.

“Anti-access” or “access denial” is a cornerstone of the “near-seas active defence strategy”. Improving surveillance, ballistic missiles, naval aviation, submarines and surface ships has been an important element in efforts to deny the US Navy access to the waters between 100 to 1,000 nm from China’s shore, deter the US from intervening in a conflict over Taiwan, “or failing that, delay the arrival or reduce the effectiveness of intervening U.S. naval and air forces” (O’Rourke 2011; US DoD 2011; McDevitt 2007). China has placed a strong emphasis on its space-based programme, a critical ingredient of open-ocean surveillance, navigation and targeting. According to the annual Pentagon report on China’s military power, “China has the most active land-based ballistic and cruise missiles in the world” and is working on using complex military platforms to attack moving surface ships (US DoD 2011). Much has been written about China’s ambitions to develop a shore-based antiship ballistic missile.² This work is not controlled by the PLAN itself, but by the Second Artillery. However, the weapon programme requires highly advanced technology and it remains to be seen if it becomes operational within a few years (Cole 2010, 111).

China’s naval modernisation intensified after the turn of the twenty-first century. China modernised its submarine force and developed a nuclear acquisition programme. Twelve Russian-built *Kilo* class submarines have been acquired since the late 1990s and the PLAN has developed the *Song* and *Yuan* classes as its primary diesel/electric-powered attack submarines (SS) (Cole 2010, 93).³ China has expanded its force of nuclear-powered attack submarines (SSN) with the addition of two domestically built *Shang* classes to replace the 3–4 relatively noisy *Han* class subs. The PLAN will likely add five third-generation type 095 SSNs in the coming years. China has also decided to replace its six old *Xia* class SSBNs, which haven’t seldom been at sea, with three *Jin* class SSBNs commissioned in 2010, and carrying the JL-2 ICBM with an estimated range of some 7,400 km (US DoD 2011, 3).

The force of approximately 60 submarines has been complemented by a modernising surface force with several new domestically built classes of surface combatants with anti-surface ship capabilities and AAW and ASW systems (Cole 2010, 93).⁴ China has also purchased four *Sovremenny* class destroyers from Russia designed specifically to target US aircraft carriers. Amphibious warfare capability has expanded and although experts disagree on how much attention China has paid to mine warfare, its ability to lay and clear minefields has improved (Cole 2008, 140; Erickson 2008, 77; Ross 2009, 58–60).⁵ The succession of classes developed by the PLAN, often with one to four ships or submarines, represents a ship construction paradigm that seeks to incorporate advances in foreign system purchases more rapidly and while increasing indigenous construction capabilities (Cole 2010).

Given the improvements of the surface fleet and development of domestically con-

structured classes, the PLAN should largely be a well-honed, capable force for twenty-first-century multi-mission tasks and naval warfare. Nonetheless, China's naval modernisation has weaknesses on two fronts. First, PLAN shipbuilding is still dependent on foreign design in almost all areas. Second, the PLAN "has yet to demonstrate the command and control capability necessary successfully to conduct net-centric operations in a twenty-first-century maritime battlespace". This emphasis on hardware and capabilities should not, however, overlook the people operating the new ships, submarines, missiles and airplanes. Open-source reporting and performance over two years of China's naval task groups operating in the Gulf of Aden demonstrate how far the PLAN has progressed in personnel training. However, China's ambition to develop twenty-first-century sea power will depend on the Navy's ability to attract talented, intelligent and dedicated personnel (Cole 2010, 102–43).

PLAN aviation and PLAAF have traditionally been the weaker siblings in China's military forces, but progress is being made on this front as well. China has also improved its airborne anti-ship capabilities (ASM). A RAND report on the military balance in the Taiwan Strait concluded in 2009 that China now has the capabilities to achieve and sustain air superiority over the Strait. That notwithstanding, the Second Artillery and the PLAAF, rather than the PLAN aviation, is likely to carry out most of the strikes and missions (Shlapal et al. 2009). As Cole has pointed out, joint flight operations between the two "air forces" are still few and far between, and PLAAF operations over water are likely to "concentrate on classic air intercept and pursuit operations, while PLANAF operational doctrine concentrates on fleet support missions such as surveillance and ASW" (Cole 2010, 77–78).

The Taiwan issue has been at the top of the agenda and a key driving force in China's naval modernisation. The core objective of the anti-access strategy has been to develop the capabilities to keep US forces from getting close enough to attack the Chinese mainland, or to intervene in a PLA attack on Taiwan. However, as McDevitt (2007) notes, "the PLAN has *not* played a central role" in deterring Taiwan from declaring independence or in China's readiness to punish it in the event. To "reach out and touch Taiwan" in a way that was not possible in earlier decades" has largely been the task of the Second Artillery's hundreds of ballistic missiles and the PLAAF's tactical aircraft systems.

Additional aims, such as protecting maritime sovereignty claims, patrolling SLOCs in the near seas, conducting strategic nuclear deterrence and asserting China's status as a major world power, have also informed the "near-seas active defence" strategy (Li 2009; O'Rourke 2011). According to McVadon (2009), Taiwan and economic imperatives provide "dual incentives for modernization" of the PLAN. As China grows increasingly dependent on trade, including in the energy realm, the PLAN has a "classic maritime mission" of safeguarding the SLOCs. China's booming economy and exceptional economic growth over the past three decades have largely benefited the coastal cities and

provinces. This is a further “spur to naval expansion and modernization”, notes another expert (Cole 2010, 190).

China has accomplished some of the major objectives of the “near-seas active defence” strategy. The PLAN has acquired “limited deterrent” capability and sufficient force to deny access and “compel U.S. carriers to operate at a greater distance from China’s coast”. It complicates considerably “the operation of the U.S. Navy [...] especially in a Taiwan contingency” (Ross 2009, 59–60; Erickson 2008, 108). Indeed, Chinese military and political leaders are becoming more confident about China’s ability to deter and win a military showdown over Taiwan, in addition to safeguarding maritime interests in the near seas.

While the Taiwan issue may no longer preoccupy China’s naval planners, safeguarding China’s sovereignty and protecting its territorial integrity remains a cornerstone of China’s naval modernisation policy. China is party to several maritime territorial disputes in the East and South China Seas. Chinese officers have long expressed an interest in acquiring aircraft carriers, arguing that carriers are indispensable for protecting China’s interests (Cole 2010, 89–90). China’s first aircraft carrier, the ex-Soviet carrier *Varyag*, renamed *Shi Lang* in 2008, began sea trials in early August 2011. However, it will take many years before a Chinese carrier can operate with a viable air group of fixed and rotary wing aircraft and safely manoeuvre around Asian waters as a carrier battle group.

A Chinese carrier need not necessarily be deployed to provide air power in distant theatres around the world, but rather to present a show of force in “gunboat diplomacy” terms and provide additional air power in contested waters in the East and South China Seas. The fact that China has not invested in more replenishment-at-sea ships, enabling the PLAN to remain at sea for extended periods, suggests that at least the logistic focus of maritime thought in Beijing remains on Taiwan and other regional scenarios such as the East and South China Seas (Cole 2010, 107). Nor has China chosen to group its war-fighting capabilities together in a single fleet, presumably for use against a single, mission-specific objective, such as Taiwan, but has instead assigned new ships, submarines and aircrafts across the North, East and South Sea Fleets.

China’s economic growth, its integration with the world economy and successful resolution of most of its border disputes have provided an opportunity for China’s leaders and analysts to develop a broader strategic outlook and pay more attention to protecting the SLOCs on which China increasingly depends. Some Chinese strategists are looking towards “far-seas operations”, which they believe will not contradict the goal of forming “a more solid basis for resolving the Taiwan issue” and maritime territorial disputes (Li 2009, 158–60). According to many observers, this new naval orientation, which will lay the basis for far-seas operations or a “blue water navy” by around 2020, has been fuelled by the argument that China needs to protect its oil supplies and maritime trade routes (Li 2009, 161; McDevitt 2007, 506; Cole 2010).

CHINA'S OIL SECURITY AND NAVAL AMBITIONS

China became a net importer of oil in 1993, which suggests that energy security has not been a major factor in the formulation of the “near-coast active defence” strategy. Nonetheless, energy security undoubtedly features in China’s diplomatic and strategic calculations today, though the uncertainty of China’s future naval ambitions makes it difficult to assess the extent to which it is driving China’s naval expansion. Chinese leaders have expressed concern about energy security and President Hu stressed the issue when he declared at the G8 meeting in 2006, “[g]lobal energy security has a bearing on the economic lifelines and the people’s livelihood of various countries and is of utmost importance to maintaining world peace and stability and promoting common development of various countries” (Hu 2006; Jaffe and Lewis 2002).

Premier Wen, heading the State Energy Leading Group, argued in 2005 that “energy is an important strategic issue concerning China’s economic growth, social stability and national security” (Xu 2006, 268). China’s 2006 *Defence White Paper* identified access to raw materials and the various media upon which economic development depends as a major national security concern: “security issues related to energy, resources, finance, information, and international shipping routes are mounting.” According to the 2008 *Defence White Paper*, “struggles for strategic resources, strategic location and strategic dominance have intensified” with the 2010 *Defence White Paper* noting that “non-traditional security concerns, such as existing terrorism threats, energy, resources, finance, information and natural disasters, are on the rise”. However, the defence white papers do not directly address oil security.⁶ Indeed, energy and oil security is only briefly mentioned and alluded to in the 2006, 2008 and 2010 defence white papers (Erickson and Goldstein 2009, 48).

Still, the question of reliable and safe import of oil was allegedly elevated to China’s national security interests when President Hu Jintao in late 2003 voiced concerns about the security of energy imports to China, in that about 80 per cent of China’s oil imports is shipped through the Strait of Malacca (Downs 2006, 14; Cole 2007, 545, Zweig and Bi 2005, 34). The state-run media soon dubbed the issue China’s “Malacca dilemma” and the Chinese news agency Xinhua reported Hu advocating a revised strategy to deal with the possibility that “some big countries” or “certain major powers” might attempt to control the Malacca Strait (Storey and Kang 2008, 201).⁷

Speaking to representatives of the Navy at the Communist Party’s 10th national congress on 27 December 2006, the *People’s Daily* reported Hu calling “for the building of a strong and modern navy force [which is] of vital importance in defending state interests and safeguarding national sovereignty and security” (People’s Daily 2006). While pointing out that Hu had stressed that China should continue moving towards “blue water” capabilities, two US Naval War College observers of the Chinese Navy simultaneously noted that “oil security is not mentioned directly in Hu’s redefinition of PLA policy,

raising the question of whether an oil security/SLOC mission is specifically sanctioned by China's leadership (Erickson and Goldstein 2009, 48).

There is clearly a debate over China's future oil security strategy. "Alarmists" and "mercantilists" believe that China must be capable of controlling its foreign oil supply through military means in a zero-sum competition over energy resources. Conversely, "free marketers" and pragmatists favour market mechanisms, consider mutual interdependence as facilitating common and absolute goals and stress the probability of a large-scale military and naval build-up undermining China's successful and peaceful rise.

The alarmists have taken advantage of Hu's alleged concerns about the "Malacca dilemma" to promote the build-up of China's naval power. Since roughly 80 per cent of China's seaborne crude oil imports arrive via the Malacca Strait, one often hears the argument that "it is no exaggeration to say that whoever controls the Strait of Malacca will also have a stranglehold on the energy route of China. Excessive reliance on this strait has brought an important potential threat to China's energy security" (Shi 2004). Erickson and Goldstein's excellent survey of the Chinese literature on this issue finds those "who believe that greater reliance on the international oil market is the best path to oil supply security have gained strength over the past several years", but also note "that the mercantilists still exert significant influence" (2009, 51). The alarmist writers see the narrow Malacca Strait as "easy to blockade", because of its status as "the strategic throat of China's energy and economic security". Accordingly, "whoever controls the Strait of Malacca [...] effectively grips China's strategic energy passage, and can threaten China's energy security" (Erickson and Goldstein 2009, 52; Ross 2009, 70). Other analysts in the alarmist camp are therefore urging China to focus on sea power to protect its "resource security". China's fate, they argue, "is connected to naval modernization" and without an aircraft carrier, "an interruption of natural resource imports, would plunge China's economy into a crisis, blockading the rise of China" (Ross 2009, 69-71). With imported oil accounting for roughly half of China's current oil consumption, protecting oil supplies and securing the sea-lanes for a commerce-driven economy is seen by many as an important pillar of a "far-sea operational" strategy and an incentive driving China's naval ambitions. As Scott Bray (2009) of the US Navy's Office of Naval Intelligence stated in December 2006,

China's emergence on the global stage as an economic power and as a net importer of oil has had a significant impact on China's maritime strategy. In order to protect oil and other trade routes, the PLA(N) is beginning to develop the foundations of a naval capability that can defend sea lines of communications (SLOCs).

Another author notes China's increasing need to import oil for its growing economy, and how this "highlights the issue of energy transportation safety and threats to its sea lanes of communications (SLOCs), prompting Beijing to invest more in national defence, espe-

cially naval building” (You 2007). Some envisage China’s future energy supply as “overly dependent on the sea lanes”; indeed, a scenario in which the “U.S. might cut them off as a result of the deterioration of Sino–U.S. relations over the Taiwan issue drives much of Beijing’s modernization of its navy and air force” (Wu and Shen 2006, 40).

Other international observers support Wu and Shen’s view: “commerce and energy [...] compel Beijing to cast anxious eyes on [SLOC]” as China focuses on a Mahanian-driven bid for “command of the commons”. Accordingly, “the security of energy supplies transiting critical sea lanes has become a top foreign-policy priority for China” (Holmes and Yoshihara 2008, 52, 73; Kaplan 2009). Anxiety to safeguard seaborne oil has led Beijing to build “powerful naval forces that can secure the nation’s sea lanes of communications stretching across the Pacific and Indian Oceans” (Boutillier 2006; Niazi 2006; Storey 2006; Gay 2005). One writer even paraphrases Mackinder’s oft-quoted dictum: “he who controls not just the production of oil and gas but also the supply and has discovered substitutes, will rule the world” (Malik 2007).⁸

Pragmatists and free marketers challenge alarmist propositions and convictions. China’s seaborne oil supply represents less than 10 per cent of its total energy usage; China’s ability to secure and control SLOC will remain limited; and a carrier-based blue water navy, instead of benefiting Chinese security and energy interests, may undermine China’s national interest.

China’s domestic sources of coal (70 per cent), oil (10 per cent), gas (three per cent), nuclear (one per cent) and hydro power (five per cent), in addition to alternative energy sources such as wind, biomass and solar power (one per cent), provide more than 90 per cent of China’s energy requirements. China depends, say two researchers with the Energy Research Institute at the National Development and Reform Commission in Beijing, China’s leading governmental energy body, “to a remarkably low level, on overseas energy resources with net import taking only 8.2 per cent of the total energy consumption” (Xiaoli and Xinming 2009, 87). Rather than highlighting the connection between China’s energy security fate and naval modernisation, Xiaoli and Xinming maintain it is

crucial for China to invest more capital and human resources in the research and development of energy technologies and improve its independent innovation capability, especially to encourage the technologies of clean coal, nuclear power, new energy automobile, renewable energy resources and important energy conservation technology, strive to make breakthroughs in key technologies and therefore ensure China’s energy security. (2009, 92)

Energy saving and efficiency have also been highlighted by President Hu, the Political Bureau of the Central Committee of the CCP and other influential governmental bodies in the PRC. Hu is reported as saying, “the Party and society must realise the importance and urgency of energy efficiency ... Saving resources and energy [is] crucial for China

in pursuit of sustainable development and economic and national security. It [requires] more attention and effort ..." (People's Daily 2009; Speed and Dannreuther 2010). "Free marketers", such as Zha Daojiong at Peking University and Zhao Hongto at China Institute of Contemporary International Relations (CICIR), are not only strong believers in market mechanisms and interdependence, they are convinced the domestic aspect will remain a crucial element and be the key issue in determining China's future energy security policy (interviews, Zha 2008/2009; Zhao 2008-2011).

Energy security is not the primary factor driving China's naval modernisation. One Chinese expert even goes so far as stating that there is little evidence to suggest that expanding the PLAN to safeguard SLOCs has already been adopted as part of China's national energy strategy or policy (interviews, Zhao 2009-2011, 2011b). In the eyes of most experts, China will be unable to protect its seaborne energy supplies in face of US naval preponderance in wartime for a long time to come. As one analyst following the PLAN modernisation process closely has argued, the

only country that could seriously disrupt merchant traffic destined to or from China is the United States, and it is not clear to this observer what the PLAN could do about it. It will be many years before the PLAN is able to operate surface ships independently at sea in the face of a hostile United States. (McDevitt 2007, 508)

And as another leading US expert on the US and Chinese navy concludes, "the security of such global SLOCs demands international cooperation because the PLAN does not possess the forces to defend other than coastal SLOCs" (Cole 2010, 109).

Pragmatists and free marketers in China therefore advise China to cooperate with other naval powers in protecting SLOCs; such a strategy would best secure China's seaborne oil supplies, they aver. Multilateral cooperation is the most effective way of dealing with a complex maritime environment, contends Zhao (interviews 2008-2011) and Zha (interviews 2008/2009), and also with a number of risks. The forces of globalisation and economic interdependence are bringing China face to face with common security challenges in the maritime domain. Thus, energy security should be framed in terms of "geo-economics" and "economic threats and market solutions," writes Zha. "Economic interdependence [...] serves as perhaps the single most powerful deterrent against embargo or blockade by China's neighbours." In short, argues Zha (2010), "China has no choice but to learn how to live in a world of (complex) interdependence".

Some of the researchers who see market mechanisms and cooperation as key to China's energy security are also wary about the possible counterproductive effect of a more aggressive Chinese naval posture and ambition to control China's successful peaceful-rise strategy (interviews, anonymous 2011; 2010a, 2009a, 2010b; Wang 2011/2010; Zhao 2008-2011; Zha 2008/2009). The primary factor, Zha (2010) notes, "in maintaining the stability-based security China has enjoyed for the past three

decades is China itself". A naval build-up can increase tension and potentially fuel a regional arms race, creating less security for China. While most states in East Asia view China's rise positively and are reluctant to define China as a threat, China's more recent assertive diplomatic stand and military posture have led some to seek to balance China's power by accelerating their own military build-up and developing closer ties with the US.⁹

Instead of embarking on a strategy to build an ocean-going navy that could, in the event, actually undermine China's energy security and endanger its foreign policy objectives, resources could, it has been suggested, be allocated differently. For example, China's national interests, maritime rights and energy security could be enhanced by combining an access denial strategy with a limited power projection capability that could be used cooperatively to safeguard the global commons while enhancing China's domestic energy supply infrastructure, demand management, energy efficiency, and alternative energy sources, which are at least as important as securing SLOCs and foreign supplies (Zha 2010). While rejecting the idea that the PLAN will challenge the US Navy in the foreseeable future, this is not to say, notes Rear Admiral McDevitt (ret.) (2007), "that maintaining distant squadrons lacks high utility in peacetime and in periods of crisis", an assessment shared by several US naval and energy experts (interviews, anonymous 2007-2010).

The linkage between oil security and naval power is largely grounded in a pseudo-national interest argument advocated and developed by China's naval nationalists to justify a carrier-based blue water navy, according to one observer (Ross 2009). Naval nationalism - "the demand for great power status and domestic legitimacy" - drives China's naval ambitions, rather than security, it shapes the policy making process and informs evaluations of the need for capabilities, and finally affects perceptions of China's national interests (Ross 2009; Diamond 2006). The alarmists' intermingling of oil security and national interests "serves naval nationalism" by providing justification for PLAN's budgets, modernisation plans and procurement priority (Ross 2009, 69; Erickson and Goldstein 2009, 47). There is "growing society wide nationalist pressure on the Chinese leadership to construct a power-projection navy centred on an aircraft carrier". An expanded naval power projection capability is essential, say these advocates, to protect oil import and maritime sovereignty rights (Ross 2009, 47; Diamond 2006). But as Ross forcefully argues, "China's naval nationalists do not establish that Chinese interests require naval power projection or that a carrier based navy can make China more secure" (2009, 69).

Alarmists are sceptical of US dominance of the sea lanes and potential ability to interfere with or blockade China's oil supply in the event of mutual hostilities. They are also concerned about the uncertainty of the international oil market. But in challenging US maritime supremacy and seeking to pre-empt China's vulnerability to seaborne energy supply, China needs to expand its naval power. As one analyst puts it, "China should ac-

quire naval facilities and expand its naval power in the Indian Ocean and into the Persian Gulf, where, he argues it would face no resistance” (quoted in Ross 2009, 70). And as Ross convincingly contends,

if China’s supply is threatened, the threat comes from the U.S. Navy. But Chinese advocates of expanded naval power do not assess the power-projection capability necessary to neutralize the U.S. threat and whether China can develop such a capability, especially if the United States continues to develop its maritime capabilities. Thus, China’s naval nationalists merely assert that development of a blue-water navy will make China more secure, without critical examination of either the necessity or the feasibility of such a project. (2009, 69)

In the opinion of one western observer, China is developing an “indirect strategy”, which assumes

that China’s prospective enemies, finding themselves encircled or obstructed by powers aligned with Beijing, will be unable to envision a military campaign to deny China oil at an acceptable level of cost. They will, therefore, be deterred from threatening China, e.g. by interrupting its oil supplies. (Newmyer 2009)

However, China’s ties with a number of countries around the Indian Ocean – or what some refer to as the implementation of China’s “string of pearls” strategy – often consolidated through arms sales and political, economic and diplomatic support, will not “neutralize the SLOC defense challenge” or “insulate China from an energy-related challenge” as some writers suggests (Newmyer 2009, 205, 218).¹⁰ For others, the evidence “simply does not support” a strategic string of pearls ambition by Beijing (Cole 2010; Ross 2009). The only power capable of severely disrupting oil supply to China is the US. There is little China could do to prevent this in a wartime contingency (McDevitt 2007), but a major war between the US and China is, as mentioned above, highly unlikely.

This line of reasoning is supported by other leading American observers of China’s naval build-up. In a comprehensive study of Chinese discussions and debates about oil security and naval development two researchers affiliated with the US Naval War College find the “mercantilist” and “zero sum” perspectives, seen for instance in the writings of Zhang Wenmu, “conspicuous for [their] apparent lack of calculation of costs or of potential balancing reaction by others, or any clear estimate or plan about exactly what kind of naval capabilities China would need for what kind of scenarios” (Erickson and Goldstein 2009, 46). In short, China’s naval nationalists’ assertions “are characterized by expansive definitions of Chinese global security interests, extreme assessments of the threats to Chinese interests, and grand expectations of China’s ability to develop expanded military power to protect Chinese interests” (Ross 2009, 69). In addition, while

naval nationalist and alarmist writers maintain that the possession of an aircraft carrier would help secure sea lanes vital to China's oil imports and continued rise as a major world power, they often neglect the possible negative effect of the build-up of Chinese naval power projection capabilities, in particular its acquisition of an aircraft carrier, on China's security environment. More importantly, many researchers and commentators only loosely examine why China is vulnerable to a maritime blockade of its vital SLOCs.

THE "MALACCA DILEMMA": WHY FEAR A BLOCKADE?

The 1950–71 US-led blockade and embargo of China interfered with oil shipments to China. Since then there have been only rare attempts to disrupt oil and other goods flowing to China. Based on the estimates of forces required for a blockade of tankers passing through the Strait of Malacca, only large navies and probably only the US Navy would have sufficient clout to enforce a blockade of the 900 km waterway that borders Malaysia, Singapore, Indonesia and Thailand (Collins and Murray 2008, 87).

However, even for the mighty US Navy, enforcing a blockade of China's oil shipment without triggering a major war is probably not as straightforward as many commentators, analysts and observers seem to think. A limited blockade, a distant blockade, a close blockade or precision strikes on China's oil infrastructure and installations would be difficult to undertake without escalating the situation into a major conflict with China.

A quick look at the map could alleviate some of the worries of the Chinese leadership and pundits. Clearly, as McDevitt points out, "if this vital strait [Strait of Malacca] were closed, there would still be other deep-water passages through the Indonesian archipelago" (McDevitt 2007, 505). Even if a determined power managed to block alternative routes through the Lombok, Sunda (too shallow for very large crude carriers), Makassar and Mindoro Straits, tankers could circumnavigate around Australia and approach East Asia via the Pacific. Depending on whether tankers re-routed through the Lombok Strait or all the way around Australia, sidestepping a blockade of the Malacca Strait would result, Collins and Murray estimate, in four to sixteen days of disrupted oil shipments to East Asian consumers. That would drive up shipping costs, but also "render a distant blockade even more unlikely to achieve its goal and would necessitate additional forces" (Collins and Murray 2008, 86). The key point, as McDevitt (2007, 505) reminds us, "is that the oceans of the world are seamless, and stopping traffic once it is operating on the high seas is very difficult".

To counter circumnavigation, the US could impose a more distant blockade at another choke point, such as at the Strait of Hormuz. While this could interrupt oil shipments from the Middle East, which is the region with the largest export of oil to China (roughly 45–50 per cent), it would not affect oil coming from Africa or Latin America. More important, short of a major war between the US and China, a US blockade of oil shipments to China in the Straits of Malacca and Hormuz would probably be unfeasible and highly unlikely not only because of the havoc it would create in the international

petroleum market, but strong diplomatic reactions. It could even encourage littoral states to side with China against the US.

More importantly, as Collins and Murray's (2008, 84–85) excellent analysis shows, the implementation of blockades of vital choke points, such as the Strait of Malacca, faces immense challenges. In today's oil market, it is very difficult to say where oil shipped from Africa or the Middle East bound for East Asia will end up. Price and speculation often determine the destination of an oil cargo. Normally, oil on tankers shifts hands a dozen times while at sea. The flexibility embedded in today's oil trade complicates the execution of a distant blockade. A tanker's destination can change after inspection, the bill of lading can be manipulated, shipping documents can be forged and oil cargos are frequently "parceled out" with one tanker carrying oil bound for several consumers.

As of today, roughly 20 per cent of China's oil shipments is imported on tankers flying a Chinese flag. Since China largely relies on third-party operators, it would be difficult to isolate tankers bound for China from those heading for other Asian and East Asian states. China could therefore successfully "hide" in the market, as any blockading power would struggle to interdict, for instance, the fifty or so oil tankers that daily pass through the Malacca Strait alone (Collins and Murray 2008, 84; Erickson and Collins 2007, 681). Once stopped and inspected in the Malacca Strait, Chinese NOCs can purchase the shipments of oil in the South China Sea, thereby avoiding the blockade.

And as the US might be unable to discriminate against tankers bound for China by intercepting tankers bound for Asia through a distant blockade in the Strait of Hormuz, or prior to entering the Malacca Strait, or throughout the Indonesian archipelago, or even in the South China Sea, the US might end up interrupting oil supplies to some of its closest allies in the region, endangering diplomatic support for its stance to the crisis that initiated the blockade. China is also today the largest trading partner of most states in Asia and all major powers except the US. Since China maintains a vital role in the international trading system, a blockading power will immediately come under the pressure to desist. As Collins and Murray point out, "[s]uch pressure would rise steadily as economic damage mounted, whereas even if conducted flawlessly the blockade would probably take months or even years to register its full effect; eventually the blockader would alienate its allies and even become an international pariah" (2008, 88).

China, of course, would not be a passive observer to attempts to blockade or interrupt its energy supplies. Despite lacking military power projection capabilities to counter a distant blockade by the US Navy, China possesses growing diplomatic, economic and military means to hamper and deter any attempts to blockade its energy imports. Its diplomatic clout is significant and unless China committed atrocities on such a scale as to unite the international community against it – a conflict over Taiwan would hardly be enough – alliances with states sharing its energy and economic interests cannot be ruled out. This would further complicate the issue and raise the cost for the blockader. As Collins and Murray (2008, 88) succinctly state, "although China would not be able

to counter a distant oil blockade effectively by traditional military might, it would likely be able to reduce a blockade's effectiveness greatly by commercial, diplomatic and unconventional military means".

The role of the littoral states would also complicate any attempt to control or blockade choke points. How would Indonesia, Malaysia and Singapore in addition to states in the Persian Gulf, the Gulf of Oman and the North Arabian Sea, react to an outside power violating their sovereignty and territorial integrity by enforcing a blockade of vital straits? Is it likely that littoral states would act in concert with the US against China and would the blockading power need to dominate littoral states to control navigation in the strait? Indeed, one of the best ways China has "to protect its sea lanes and commercial traffic," argues McDevitt (2007), "is to maintain good diplomatic relations with trading partners and littoral states adjacent to them" (also Zha 2010).

In Collin and Murray's (2008, 84-92) opinion, tankers and crew refusing inspection must be boarded by marines and escorted, which will be operationally challenging given the number of ships passing through vital choke points on any given day. Besides, not many marines will "have the necessary knowledge to operate oil tankers, and certainly naval ship-manning requirements are not set with an eye to prize crews". And what would the blockading power do with seized tankers and their crews? Selecting a marshalling area would be problematic if littoral states refused to cooperate, and even if they openly assisted the blockading power there are few harbours deep enough for VLCCs. Not only that, but the crews and cargos are often multinational. Ship and cargo owners would naturally protest strongly and urge their respective governments to put pressure on the blockading state(s) to release the ships. This, in turn, could undermine diplomatic support for the blockade and effectively lead to a situation in which blockading states might have to seize the same ship more than once.

Finally, short of a major great power war, the blockading states could hardly sink uncooperative tankers for refusing to stop and be inspected. The environmental destruction, the diplomatic repercussions resulting from endangering the lives of civilian crew and the high value of the cargo would deter any blockading power unless the stakes were extraordinarily high.

Other alternatives, such as a close blockade, blockade by convoy, a supply-side blockade and precision strikes against key Chinese energy installations and infrastructure, would be either dangerously escalatory, resource-exhaustive, ineffective or unfeasible, short of a major war. Since in most experts' estimation the PLAN is capable of the offshore defence of littoral SLOCs and coastal areas, it would be an act of recklessness on the part of the blockading power to place tens of warships close to the Chinese coast without defending these forces by striking at military installations and targets on the Chinese mainland, at sea and in the air. An engagement of this magnitude with Chinese forces could trigger a major war, undermining the limited objective that initiated the blockade.

A blockade by convoy might be initiated, explains Collins and Murray, “not for defensive purposes but to ensure compliance with an energy embargo against China” and to escort tankers bound for neutral and friendly Asian states. Excluding Taiwan and the Philippines, roughly 10 mb/d of oil or 5 VLCCs (carrying about 2 million barrels of oil each) per day are required for an operation to supply Japan and Korea. Around-trip sailing time of twenty days between Singapore and Japan and Korea for each group of five VLCCs should be expected. With a two-day turnaround, twenty-two separate convoy groups with escort, replenishment and maintenance ships will be needed, while simultaneously enforcing and upholding the blockade of China. In short, the logistical requirements of supplying US allies and East Asia’s largest non-Chinese consumers would, say Collins and Murray, “overwhelm most or even all navies” and require “the active cooperation of neighbouring states”.

A supply-side blockade would be an even more daunting task, not least because China receives most of its oil from a flexible international oil market and even contemplating the use of force against non-cooperative oil suppliers would broaden the conflict considerably. Historically, “the embargoed country eventually receives oil, even from the embargoing states, at increased prices and through third parties” as the 1973 Arab oil embargo demonstrated. As Collins and Murray conclude, “[a] supply-side blockade, consequently, would be neither effective nor feasible”.

Conducting strikes against energy infrastructure on the Chinese mainland to make the energy blockade more effective is essentially “antithetical to the purpose of naval blockade, which could be considered a desirable use of military power specifically in that they rely on a limited use of force that can be modulated and, if necessary, withdrawn quickly, with little permanent damage done”. Precision strikes against Chinese energy facilities and territory would force Chinese leaders to consider all necessary means of retaliation, including nuclear weapons, to protect China. Much more than oil and energy security would have to be at stake before a blockading power would contemplate putting Chinese leaders under such extreme escalatory pressure. Judging from China’s build-up of its strategic petroleum reserves, with storage plants located near China’s coastline and mainly constructed as above-ground tank farms, China does not seem to regard the destruction of its energy infrastructure as a major threat. As a last resort, China could draw on its large coal reserves to produce synthetic oil.

Last but not least, many alarmist writers seem to forget that China currently relies on seaborne oil imports for less than 10 per cent of its total energy needs. Petroleum can be transported overland to China through pipelines, by rail and by truck. China also produces just under 50 per cent of its oil needs domestically; domestic production stand at roughly 4.2 mb/d. It is therefore interesting to note that “in fiscal year 2004 the U.S. military, fighting wars in Iraq and Afghanistan and sustaining normal operations as well, used approximately 395,000 bpd of oil”, ten times less oil than China produces domestically. The Chinese government has enforced restrictions on the commercial us-

age of petroleum products even in peacetime – the 2008 summer Olympics are but one example – and on the purchase of new automobiles in larger cities. In the event of a war, conflict or blockade, China would likely channel energy and oil to strategically important industrial and military units. In summary, given the alternative supply routes, a strategic petroleum reserve and a domestic oil production that is more than ten times higher than what the US needs to operate militarily on a global scale, it is clear that interrupting China's seaborne oil supplies is not a prerequisite for the PLA to conduct military operations or maintain China's economic growth.

This suggests that China would be able to withstand a blockade, not least because blockades normally take years to have an effect. As Collins and Murray (2008) conclude, "it is difficult to imagine a limited-war scenario that would justify such actions by any blockading nation" and "contrary to what appears to pass for conventional wisdom among naval analysts and observers in the PRC, China is not fundamentally vulnerable to a maritime energy blockade in circumstances other than global war".

Another indication that a blockade of China's seaborne energy supplies and SLOCs is not the predominant focus of its naval ambitions and energy security policy lies in China's plans to develop a state-owned tanker fleet that can transport more than 50 per cent of China's oil imports (Erickson and Collins 2007). For many experts, this seems to undermine Chinese interests since a large state-owned tanker fleet would make it "easier for the United States to determine which ships are carrying oil to Chinese ports" (McDevitt 2007, 505). However, China's ambition represents an important hedging strategy to manage the risk of disruption of oil supplies in the event of a conflict or crisis in which China is not directly involved, for instance, if another conflict erupts in the Middle East (Tunsjø 2010).

Prior to or during such a crisis, Beijing could call on their oil and shipping companies to work in tandem with the government. Now if oil supplies to China can be maintained through a hedging strategy, the country might be able to manage the risk of interrupted supplies and rising prices, and could "secure" oil supplies during a conflict in an oil rich region. It could do so at a lower price (by shipping China's overseas equity oil production back home) and at lower shipping costs (by using its state-owned tanker fleet) than if it were to import all its oil supplies through the international market.

The oil China's NOCs produce overseas is not enough to meet China's demand and today only accounts for about 30 per cent of China's import. But a state-owned tanker fleet would also allow China to operate at high-risk levels in a conflict zone where other shipping companies may not be able to operate, to access oil terminals. Finally, by having its own tanker fleet, China can insure itself and avoid the high insurance premiums demanded by international shipping and oil companies when a war risk exclusion zone has been declared by the major insurance companies (Tunsjø 2010, 37-40).

On the one hand, then, a large tanker fleet is important because it generates revenue, boosts the competitiveness of the Chinese commercial fleet and produces important spill-

over effects from shipbuilding. It provides critical infrastructure on which China's naval build-up depends, and is beneficial to the entire industrial sector. It stimulates investment and creates a significant number of jobs. On the other hand, a large state-owned tanker fleet can be an important insurance or hedge, securing oil supplies in a crisis or conflict in which China is not directly involved. Finally, the state-owned tanker companies may well profit from a crisis in the international tanker market.

Finally, as noted above, a state-owned tanker fleet would most likely undermine Chinese strategic interests in the event a war or blockade because a blockading power could more easily identify tankers going to China. However, China's ability to protect its merchant fleet is growing as the navy gains capabilities to safeguard global SLOCs. In the long term, then, a large state-owned tanker fleet might become an important plank in China's energy security policy both during peacetime crises and wartime contingencies.

Energy security considerations and a potential blockade of China's vital SLOCs should not be regarded as the key drivers of China's naval modernisation and maritime ambitions. It will be a long time before the PLAN is able to protect or control China's SLOCs and China is not vulnerable to a blockade short of a major war. Instead, protecting China's maritime rights and sovereignty, including a Taiwan contingency, deterrence, developing access denial capabilities and a navy able to protect China's coastal waters and its exclusive economic zone, will remain top priorities for the PLAN in the twenty-first century. Nonetheless, these core missions have been accompanied by a number of non-traditional security missions.

MILITARY OPERATIONS OTHER THAN WAR

The PLAN is increasingly involved in managing risks to China's expanding interests around the world and safeguarding the global commons that encompasses the bedrock of China's SLOCs. China participates in missions to prevent accidents at sea and in anti-terrorism operations. China is also more active in United Nations peacekeeping missions and supportive of other UN-sanctioned missions, such as anti-piracy, humanitarian aid and disaster relief. It protects Chinese citizens abroad to an increasing degree, evacuating nationals where necessary. All this also serves to demonstrate China's strength and determination to reclaim status as a great power. But, this more active involvement in protecting China's growing interests worldwide is something new for the PLAN as well. It is a corollary of China's evolving foreign policy as well as its policy on sovereignty and non-interference. These seagoing missions require a "two-vector navy", fit for area-denial and peacetime operations, a different mix of naval capabilities than the wartime offshore active defence.¹¹ As McDevitt and Vellucci Jr. point out, "during wartime surface ship components of the PLAN [are] much less significant than its submarine force and land-based naval aviation arm. However, during peacetime missions the surface force has pride of place" (McDevitt and Vellucci Jr. 2012). The following sections examine the PLAN's new missions.

ACCIDENTS AT SEA

According to two Chinese energy experts at the ERI, NDRC, the worry is not primarily a blockade of the Malacca Strait or the “Malacca Dilemma”, but the fact that this “crucial transportation channel [...] will be even more crowded in the future”, increasing the “threats of oil tanker accidents, pirates and terrorist attacks (computer system attack included) as oil and LNG trade escalates day by day” (Xiaoli and Xinming 2009, 85–86).

At the Phillips Channel near Singapore, the Strait of Malacca narrows to 2.8 km (1.5 nautical miles), creating one of the world’s worst traffic bottlenecks through which about 33 per cent of global seaborne crude oil moves on its journey through the 965 km (600 mile) long Strait. With approximately 15 mb/d of oil flowing through the Strait of Malacca, and a daily oil flow of 17 mb/d through the Strait of Hormuz, vital oil choke-points are vulnerable to collisions, groundings and oil spills. Any accidents run the risk of forcing a closure of the strait, interrupting oil supplies, compelling the use of alternative routes and driving up shipping costs, all of which affect the affordability of oil.

Accidents are rare considering that at least 94,000 ships pass through the Malacca Strait each year. A Taiwanese oil tanker carrying 58,000 tonnes of naphtha fuel did in fact collide with a Greek-managed bulk carrier in the Malacca Strait in August 2009. Malaysian police told reporters that neither the burning ship nor the oil spill were a threat to other ships in the Strait and were not disrupting traffic (OilVoice 2009). However, the chairman of the Japan’s Nippon Foundation, Yohei Sasakawa, an organisation involved in the navigational safety of the strait, was still concerned for the “potential for accidents to happen. If it involves crude oil tankers, there will be a major spill. This could disrupt international trade” (China Post 2009).

It became safer to navigate through the Strait of Malacca when regional governments implemented a dual-traffic system in 1997. International shipping associations, the International Maritime Organisation (IMO) and the International Association of Independent Tanker Owners (IAITO) have been discussing measures to increase safety and avoid accidents. Getting users and states to agree on who pays how much to use the Malacca Strait and who foots the bill of maintaining buoys and other navigation aids in the Strait are not new issues. At a London meeting in December 2007, an agreement was struck between the Nippon Foundation in Japan and the Round Table of international shipping associations to set up a voluntary fund to pay for aids to navigation. The Nippon Foundation agreed to pay a third of the estimated cost of USD 28.2 million for the first five years with the Republic of Korea, the United Arab Emirates and Greece pledging their support (Smith 2008).

While China did not contribute directly in this process, back in September 2005, China agreed to sponsor a USD 2.6 million project to replace several lighthouses and beacons along the eastern coast of Sumatra that had been damaged by the 2004 Indian Ocean tsunami (Kong 2010, 132). Bilateral and multilateral diplomacy has been used by the Chinese government to promote cooperation with littoral states on the maritime

security of the Malacca Strait. In July 2007, during a state visit to Indonesia, President Hu signed an agreement to conduct “various joint activities in such areas as navigation security, maritime security, ship building, naval cooperation, and maintenance of security across the Strait of Malacca”. Similar cooperation has been initiated with Malaysia in December 2005 and the Chinese government has worked with the ASEAN, the Association of Southeast Asian Nations Regional Forum (ARF) and Council on Security Cooperation in the Asian Pacific Region (CASCAP) on improving the safety of passage through vital straits (Kong 2010, 132; Zheng 2012).

ANTI-PIRACY MISSIONS

Piracy, hijacking and robbery constitute a larger risk to shipping than accidents, and drive up insurance rates on vessels passing through shipping lanes known to piracy attacks and hijacking. Piracy costs the world economy an estimated USD 7-12 billion per year (Marine Log 2011). According to the International Maritime Bureau (IMB), the total number of reported actual and attempted attacks fell from 445 in 2003 to 293 in 2008, but grew again to 406 in 2009 and 489 in 2010.¹²

Southeast Asia has witnessed a dramatic *drop* in piracy attacks in the last few years. While piracy in Southeast Asia grew rapidly after the Cold War, from six to seven attacks annually before 1989, to 50 in 1991 and 469 in 2000, figures show a dramatic fall in frequency in the last few years. Indonesia reported 121 attacks in 2003 and 28 in 2008, while there were 28 actual and attempted attacks in the Malacca Straits in 2003 and only two in 2008 according to the IMB.¹³ This is largely accounted for by national, bilateral and multilateral measures (Ho 2009a, 2009b). The littoral states of Indonesia, Malaysia, Singapore and Thailand have all taken measures to address the issues of piracy and robbery, which include more naval and coast guard patrols, improved surveillance, coordinated patrols by littoral states, capacity-building, training, technical assistance, more contact between command centres and the shipping community and a focus on improving living standards and welfare in areas bordering the key sea lanes (Ho 2009a). Collaboration with other regional actors, including China, has been enhanced through capacity-building, training and technical assistance (Ho 2009b).

A multilateral framework was established under the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP).¹⁴ Seventeen countries are contracting parties to ReCAPP and Norway was the first non-regional country to participate, followed by Denmark and the Netherlands, in this multilateral programme promoting a common effort in the fight against piracy and armed robbery of ships in Asia. The important steps taken to deal with piracy in Southeast Asia show it is possible to manage and limit the risk. China has been one of several actors engaged in these joint measures to increase safety along vital SLOCs in Southeast Asia, but the four littoral states around the Malacca Strait have played a decisive role patrolling the area.

Efforts to curb piracy off the coast of Somalia and in the Gulf of Aden have not been as successful, with many writers pointing to the difference between piracy in Southeast Asian waters and outside the coast of Somalia (Raymond 2012).¹⁵ Most of the attacks in the Gulf of Aden and off Somalia's coast occur on the high seas with small high speed open boats that operate from a "mother ship" carrying supplies, personnel and equipment to facilitate attacks at a great range from the shore.¹⁶ By contrast, Southeast Asia pirates are less organised and conduct opportunistic raids closer to shore (Bateman and Ho 2008).

Another difference between Southeast Asia and East Africa and the Gulf of Aden is that many of the attacks along the East African coast involve the hijacking of large ships whose crews are taken hostage for ransom.¹⁷ By comparison, hijacking for ransom is rare in Southeast Asia and piracy tends to be limited to robberies of valuables and conducted secretly under the cover of darkness. Firearms are seldom used. The most important difference, however, is the lawlessness on land in Somalia and the inability of the Somali government to respond, both of which encourage the pirates. This type of disorder is not found in many places in Southeast Asia, and there is anyway only a small number of places in Southeast Asia, if any, where pirates can take a large vessel, hold it and its crew for ransom and protect it from recovery (Bateman and Ho 2008). According to the International Maritime Bureau, robust measures by national governments and navies have been necessary to restore the safety and security of this major trading route.

China supported the unanimously adopted UNSC Resolutions 1836 of 7 October 2008 and 1851 of 16 December 2008, under Chapter VII of the United Nations Charter, calling

upon States with naval vessels and military aircraft operating in the area to use, on the high seas and the airspace of the coast of Somalia, the necessary means to repress acts of piracy in a manner consistent with the 1982 United Nations Convention of the Law of the Sea.¹⁸

With the consent of Somalia's Transitional Federal Government to enter Somalia's territorial waters and use "all necessary means" to repress acts of piracy and armed robbery, China decided soon after to deploy two navy destroyers and a supply vessel to the Gulf of Aden.

PLAN's first operational combat deployment far beyond China's territorial waters was a historic mission for the Chinese military. The two destroyers - the Haikou 171 and the Wuhan 169 - arrived in the Gulf of Aden in January 2009, operated along with a supply vessel 887 Weishanhu, and carried together about 800 crew, including 70 special operation troops and two helicopter crews. According to the Chinese news agency Xinhua, during the three-month mission the first Chinese fleet escorted 206 ships, including 29 foreign merchant vessels, and successfully rescued three foreign merchant

ships (2009a). China replaced its first flotilla of ships with a second in April 2009 and a third in July 2009, illustrating the success of the deployment.¹⁹ Between January 2009 and the end of November 2011, China had deployed ten different escort taskforces to the Gulf of Aden and conducted 393 escort operations (PLA Daily 2011). These destroyers and frigates are some of China's most sophisticated and modern surface warships. China clearly considers its first potential combat mission beyond its territorial waters as an important and prestigious task.

The piracy attacks off the coast of Somalia have shocked the international maritime community, especially after VLCCs were hijacked.²⁰ Rear-Admiral Du Jingcheng, the task force commander of the first flotilla, told reporters, "the primary missions of the destroyers [were] to protect Chinese merchant ships, especially tankers with crude oil, that traverse the gulf" (McDonald 2008). Both the Chinese defence ministry spokesperson, Hu Changming, and the Chinese foreign ministry spokesperson, Liu Jianchao, have stated that the "main mission would be to protect the safety of Chinese vessels and their crew", noting that 20 per cent of the 1,265 Chinese ships passing through the area have come under attack and seven hijackings have involved Chinese ships and crew (BBC 2008).

PLAN's protection of Chinese and foreign merchant vessels contributes to energy security, both for China and the global commons. The deployment also shows the military capabilities China has developed to help it protect its growing global economic interests and overseas presence (Saunders 2009; Hartnett 2009). While this highlights the connection between military power and Chinese energy security, at least two other considerations should be taken into account. First, by patrolling international waters and contributing to international security and stability, China is behaving as a responsible permanent member of the UN Security Council and meeting its international obligations as a great power (Xinhua 2009b). It gives China status and prestige and boosts its image as a peacefully rising and developing China.

Second, the escort mission in the Gulf of Aden provided the PLAN with an opportunity to gain experience from long-range military deployments. Although the mission may be defined as an escort task somewhere between a policing and a military operation, it allowed for the important testing of combat readiness, long-range logistic supply, real-time C4ISR connections with PLA headquarters in Beijing and Haiku, surveillance training, improvement of navigation skills and exposing sailors and commanders to long-term deployments at sea. Operating alongside, and collaborating with, advanced foreign navies means the PLAN obtains intelligence information (You and Lim 2009). Finally, by protecting its overseas interests, the PLAN deployment can demonstrate to China's domestic public some of the returns on China's high military spending and promote the view that China's growing capabilities ensure world peace and mutual development (Saunders 2009; Hartnett 2009).

PROTECTING CHINESE CITIZENS ABROAD

The Gulf of Aden deployment facilitated other missions for the PLAN as well. When fighting broke out in Libya, China decided to send the missile frigate Xuzhou, operating on anti-piracy missions in the Arabian Sea and the Gulf of Aden, through the Suez Canal to Libya. Arriving off Libya's coast on 2 March, it was one of the PLA's first deployments to the Mediterranean to assist, facilitate and provide security for the evacuation of more than 35,000 Chinese workers based in Libya by commercial ferries and ships (Xinhua 2011). While this operation is not directly comparable to US military intelligence gathering in China's EEZ, it shows that China needs to protect its global interests by military means and enjoy freedom of navigation for military purposes inside a country's EEZ. According to most reports, the frigate did not enter Libya's territorial waters, but this information is difficult to verify (Collins and Erickson 2011). If it did so without the approval of the Gaddafi regime, it would indicate a softening of China's stand on national sovereignty. However, rising naval powers have in the past changed their position on the issue of freedom of navigation for military purposes as they became more dependent on the global connections provided by the seas and more capable of protecting their global interests at sea.

HUMANITARIAN RELIEF OPERATIONS

Naval vessels from the US, India and China cooperated and participated in humanitarian relief operations in the aftermath of the 2008 tropical cyclone in Myanmar. This was the first time the PLAN had carried out a maritime humanitarian relief operation. Again, such missions may both improve China's national interests and energy security. First, China's participation in these operations enhances China's status and prestige in Asia, and promotes an image of China as a responsible stakeholder in the international community. Future relief missions may allow for more cooperation between the PLAN and regional navies and between China and other naval powers. In addition to joining wider multilateral maritime operations to safeguard the global commons (Dutton, Ross and Tunsjø 2012).

Second, it is acknowledged that natural disasters at sea can have security implications and affect the international petroleum market. Hurricane Katrina, which hit the Mexico Gulf and southern US in August 2005, affected oil production, refinery capacity and the international petroleum market. China is often visited by natural disasters and along China's 18,000 km coastline, an estimated 100 natural disasters or more of various types happen at sea every year (Zheng 2012). China's experience of participating in humanitarian relief operations could benefit missions to natural disasters affecting China while also improving China's energy security.

MARITIME TERRORISM

Narrow straits, big ships, large ports and an unprotected coastline have facilitated or been the target of terrorist attacks in the past. In contrast to pirates seeking money,

terrorists tend to pursue political goals. A number of initiatives and measures has been taken to prevent nuclear terrorism and the proliferation of nuclear material. In July 2003, in the aftermath of the 9 September 2001 terrorist attacks, China signed the Container Security Initiative (CSI) with the US, whereby cargo leaving Chinese ports must be inspected in advance before shipping to the US. China, together with roughly 150 other flag states, joined the International Ship and Port Facility Security Code (ISPS) of the IMO (Zheng 2012).²¹ In cooperating to prevent nuclear proliferation, China also joined the Global Initiative to Combat Nuclear Terrorism (GICNT).²²

CONCLUSION

The first part of the analysis is an historical summary of the drivers behind China's naval developments and ambitions. SLOCs and energy security were not a dominant factor. Instead, China shifted its grand strategy from a continental to a maritime orientation in the mid-1980s and began its development of a near-seas active defence. This included modernising the PLAN, with an emphasis on access denial capabilities, a Taiwan contingency, protection of Chinese sovereignty in the EEZ and defending Chinese interests in disputed maritime areas.

The second part discussed the more contemporary linkages between China's oil import security and quest for sea power. With China becoming increasingly more reliant on seaborne trade and oil supplies to maintain economic growth, it is often contended that China is becoming more vulnerable. The scenario most often put forward by alarmist analysts is that the US, and potentially its Asian allies, "would likely move to cut off China's overseas 'oil lifeline'" in the event of a conflict over Taiwan (Storey and Wu 2008). That scenario means war over Taiwan. US-China relations have been hostage to cross-Strait developments for many decades and China's leadership and military will not let their wartime contingency planning regarding Taiwan be affected or dependent on seaborne trade or overseas oil supplies.

It was argued that the insecurity of seaborne petroleum imports to China has become inflated. China's energy security policy is often presented as a "pseudo-national interest argument" advocated and developed by China's naval nationalists to justify a carrier-based blue water navy. China cannot simply safeguard its petroleum supplies by military means. Instead, it was highlighted, China for the foreseeable future is unlikely to secure its seaborne oil supply – or SLOCs, in particular – if the threat comes from the US Navy. Indeed, China's development of a large navy capable of challenging the US for control of vital SLOCs, rather than enhancing China's SLOC and energy security, could be counterproductive.

When analysing whether China is vulnerable to SLOC disruptions it is necessary to differentiate between wartime and peacetime scenarios. Too much of the literature fails to make this important distinction. Bluntly put, if there is a war between the US and China, all bets are off and China's coast will most likely be blockaded by the US navy.

China could not expect to rely on seaborne oil supplies because it would lack the naval power capability to withstand a blockade by the US in a major war.

However, as was emphasised in part three, China is not vulnerable to a blockade of its seaborne trade routes and oil imports short of a major war with the US. Any blockade, it was contended, short of a major war, would be ineffective. A distant blockade would not prevent supplies of oil from reaching China; a close blockade would be dangerously escalatory and likely to undermine the limited objectives of a blockade; a blockade by convoy would logistically and operationally overwhelm the blockading states, including the powerful US navy; and precision strikes on Chinese oil installations and infrastructure would be unthinkable short of total war. In addition, seaborne oil imports constitute about 10 per cent of China's total energy mix and China has developed a hedging strategy in the form of a large state-owned tanker fleet, strategic petroleum reserves and cross-border pipelines to manage the peacetime risk of seaborne energy supply disruption. In short, there is little China can do to withstand a blockade in a major war, but China is not vulnerable to a blockade during peacetime according to this risk scenario.

The fourth and final part analysed the new peacetime missions undertaken by the PLAN. China's naval strategy has prioritised the modernisation of China's submarine fleet and access denial capabilities, aimed predominantly at protecting China's coastal waters and responding to a Taiwan contingency. The more recent build-up of a modern surface fleet will carry out both conventional war fighting missions in China's near seas and participate in MOOTWs. China's re-emergence as a great power with global interests and responsibilities has fuelled the development of this naval ambition. However, it will be difficult in the years ahead for China to develop a first class modern navy that is capable of both war fighting in the seas surrounding China, where a conflict with China is most likely to play out, and conducting worldwide peacetime missions to safeguard its growing global interests.²³ Whether China and the PLAN will manage to balance these ambitions will indicate the kind of leadership China is likely to take in world affairs in the twenty-first century and the kind of naval and great power China is likely to become.

India's growing maritime power

Saira Basit²⁴

Fortunately, after almost a millennium of inward and landward focus, we are once again turning our gaze outwards and seawards, which is the natural direction of view for a nation seeking to re-establish itself not simply as a continental power, but even more so as a “maritime” power – and, consequently, as one that is of significance upon the global stage.

(Former Indian External Affairs Minister Mukherjee 2007)

India still has a long way to go in terms of solving the serious challenges posed by poverty, corruption and inadequate infrastructure. But that does not make many aspects of its development less intriguing: one sixth of the world's entire population is Indian. India's is the eleventh largest economy in the world, and coped with the economic crisis at the end of our century's first decade much better than most observers predicted. India achieves remarkable things. For instance, despite the devastating poverty and a size resembling a continent more than a country, it has avoided famines. By 2030, India's population is likely to surpass China's, becoming the largest in the world, with a young and thriving labour force. India's economy, according to some, is likely to become the world's third largest by 2050, or even earlier, by 2035, according to others (PricewaterhouseCoopers 2011).

New Delhi is an increasingly influential actor on the global stage and together with China and other growing Asian powers is making Asia an epicentre of world politics. It is going through comprehensive modernisation processes that involve the transformation

not only of the economic sector but also of its capacities in the security sector. Military modernisation has in this context acquired particular importance, not least with the upgrading of the Navy as an essential part.

In recent years, the Indian Navy (IN) has been on an expansion drive. In terms of size, the Navy ranks between fifth and seventh in the world, depending on the estimate criteria: tonnage, number of officers, quality of education, capacity in operations, state and type of platforms and vessels, and other naval equipment. Among Asian states, only the navies of China and Japan are larger than the Indian. The US Navy presence in Asian oceans is in any case far more advanced and larger than all the Asian naval forces. Nevertheless, the IN is one of the most powerful navies in the region. Indeed, military analyst Robert Kaplan believes it will be the third largest in the world in a few years (Jane's 2007). This could well prove true if India manages to fulfil its plans. In August 2008, India's former Chief of Naval Staff Sureesh Mehta said the IN's goal was to have more than 160 ships by 2022 (Indo-Asian News Service 2008). This would be a major enhancement in both quality and quantity. The current Chief of Naval Staff Admiral Nirmal Kumar Verma talks of an Indian nuclear triad. Commenting on the commissioning of India's first ballistic missile submarine *INS Arihant*, in December 2010, he said, "the nuclear triad will be there when it [i.e. the *INS Arihant*] is commissioned" (India Today 2010).

The main focus of this study centres on the question: *why is India modernising its Navy?* Because this modernisation and expansion of India's maritime capabilities could significantly impact maritime security in one of the most important regions of the world, it is important to understand what is driving it forward. Besides purely naval strategy, navies can obviously be modernised and expanded for economic, diplomatic and social reasons.

India is located next to some of the world's most important shipping lanes. The IN's enhanced maritime capabilities could contribute greatly to securing and stabilising the Indian Ocean, which is crucial for the free and uninterrupted flow of international seaborne trade. All the same, competition to secure strategic energy resources among the Asian countries that are rapidly modernising their navies could cause friction and have major implications for global security and relations between the big powers in Asia. It could also affect the policies of United States and NATO.

A study of India's maritime modernisation will require close attention to the official statements of the official and security elite, available primary documents such as the maritime doctrine and strategy, analytical literature, media commentaries and interviews with the former and current policy elites. However, it should be noted that despite the growing importance of maritime modernisation and the rising investment in this sector, the Indian academic community has displayed limited, albeit increasing, interest in the topic. Also, the government at the apex level has not issued an authoritative document on the subject. The maritime doctrine and strategy, the two principal primary sources

on the subject, do not carry political imprimatur as they were issued by the Chief of the Naval Staff, not the Minister of Defence or Prime Minister's Office.

Despite these shortcomings, however, there is enough open-source material to help analysts pick out the broad contours of India's maritime policy. The Indian media, a growing think-tank community and mandated public documents such as the annual defence budget's public iterations, as well as statements of the leadership, offer useful insights. This study also draws on the author's 30 interviews with academics, members of the policy elite and think-tank analysts largely in India, the United States, Singapore, the United Arab Emirates, Sweden and Norway during four field trips and several shorter trips in the period 2008-2010. Many interviewees requested anonymity.

The study is divided into three sections. Section one examines India's maritime developments. Section two discusses the drivers behind India's maritime modernisation. The concluding part offers some thoughts on the future of the Indian Navy as an actor in the Indian Ocean.

GOING SEAWARD

There has been a clear change in India's defence orientation over the last few years. Globally, the Indian Navy was not much heard of in the early 2000s. That India now has the fifth largest maritime force in the world, and even larger ambitions, was increasingly acknowledged in the last part of the decade. Paired with India's rapid economic growth, it has created a global awareness of India's armed forces. Since 2008 publications on India and issues of maritime security have proliferated. One of the most substantial works is that of James Holmes and Toshi Yoshihara at the U.S. Naval War College. Navies, they argue, are physical expressions of strategic thinking, and therefore also of the political and strategic culture of a society (Holmes, Winner and Yoshihara 2009).

In an edited volume by the same authors, Asian powers are said to be building up their navies almost unnoticed at the same time as navies of Western countries are retrenching (Holmes and Yoshihara 2008). Two clear signs of this prioritisation are the growing defence budgets and increasing allocations to the navy.

THE DEFENCE BUDGET

India's defence expenditure is significant in a global context. In 2007, India had the tenth highest military expenditure in the world in terms of market exchange rate dollars and the fourth highest in terms of purchasing power parity (Behera 2009). Commenting on the defence budget of 2008-09, an *Institute for Defence Studies and Analyses* (IDSA) scholar calculated an increase of nearly 95 per cent in "the proportion of financial allocations made available to the defence establishment *vis-à-vis* its demand" in recent years (Behera 2008). This convergence of demand and allocation could be explained by a consensus between the government and the armed forces before the budget proposals are handed over to the Ministry of Finance, which coordinates - but does not determine - the budgetary allocations (interview, anonymous 2008a).

We read regularly about growing defence budgets in Asia, and their fascinating and sometimes worrying numbers. The figures do not always represent real growth; inflation, for instance, needs to come into the equation. In 2008-09, India's defence budget was as high as Rs. 105,600 crore (1 crore=10 million in Indian English (and Hindi)), that is, about USD 26.4 billion. Table 1 presents the defence budget allocations for the fiscal years 2004-05 and 2008-09. As can be seen from the graph, the government has been allocating increasing finances to its defence establishment. The defence budget, it is worth noting, does not cover allocations for para-military forces, military-related nuclear activities, the Ministry of Defence's "civil" allocations and defence pensions (Behera 2009). According to Laxman Kumar Behera, the actual 2008-09 defence budget could be as much as 27 per cent higher than the official budget, accounting overall for nearly 2.5 per cent of GDP.

At the same time, there is no clear reason to suspect opacity in the budget exercise because these allocations do not come under the Defence Ministry. The para-military forces are under the Ministry of Home Affairs, military-related nuclear activities come under the Department of Atomic Energy, which is directly under the charge of the Prime Minister's Office, and pensions are under the Department of Personnel. Most of these figures are given in the Union budget statements, except for military-related nuclear activities for reasons of security.

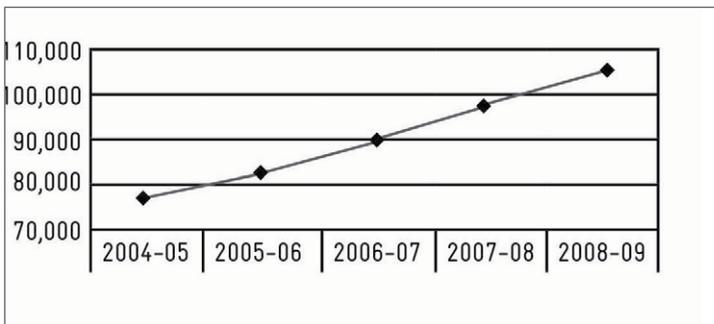


TABLE 1. India's defence budget The currency is INR (Indian Rupees) (Behera 2008).

Table 2, factoring in inflation, shows how the defence budget has risen faster than the inflation rate; the defence budget in other words has enjoyed real growth. The large 34.2 per cent growth figure expected for 2009-10 must be seen in the context of increased salaries for officers, though it could also reflect expected finalisation of significant defence equipment contracts.

A key indication of how the government prioritises its budget is what it spends on when it has money to spare. While the defence budget has been growing in dollar/rupee terms, the budget as part of India's GDP has been declining gradually since the late 1980s (see table 3). However, the percentage received by the defence establishment of

YEAR	APPROXIMATE DEFENCE BUDGET ALLOCATION (RS. CRORE)	APPROXIMATE INCREASE PERCENTAGE	INDIA'S INFLATION TRENDS
2000-01	49,622	28	-
2001-02	54,266	14	-
2002-03	55,662	8	3.4
2003-04	60,066	-	5.5
2004-05	77,000	18	6.5
2005-06	83,000	7.8	4.4
2006-07	89,000	7.2	5.7
2007-08	96,000	7.8	4.6
2008-09	105,600	10.0	≈5
2009-10	141,703	34.2	4 (7)*

TABLE 2. India's defence budget growth and inflation rates, 2000-01 to 2009-10. 1 crore = 10 million. All figures are approximate; some are budget estimates and some are revised estimates. These differences do not affect the point made. The Reserve Bank of India forecasts a 4 per cent inflation rate for 2009-10, while other sources forecast 7 per cent (Wall Street Journal India 2009; Media Monitors Network 2004; Tribune India 2005; Indian Export Import Portal [2009]) The inflation rates are from Shankar Acharya (2008).

YEAR	DEFENCE EXP AS % OF GDP	DEFENCE EXP AS % OF CENTRAL GOVT. EXP
1989-90	2.97	15.52
1990-91	2.27	14.65
1995-96	2.25	15.06
2000-01	2.36	15.24
2005-06	2.25 (P)	15.91
2006-07	2.06 (Q)	14.64
2007-08 (RE)	1.97 (A)	13.04
2008-09 (BE)	1.99*	14.06

TABLE 3. Defence Expenditure as % of GDP and Central Government Expenditure. RE=Revised Estimate; BE=Budget Estimate; P=Provisional; Q=Quick Estimate; A=Advance Estimate.

India's central government expenditures, which is the more relevant figure when detecting government priorities, has only seen minor variations (Behera 2009). To put this in perspective, it can be mentioned that the prioritisation percentages of the defence sector have declined in all NATO countries, with the exception of the United States and Turkey – although there has been growth in relative terms – in a period of economic growth in the 1990s and early 2000s.

THE NAVY'S SHARE

The three main branches – the Army, the Air Force and the Navy – debate budget allocations among themselves and with the political leadership in the Ministry of Defence (interview, anonymous 2008g). Integration is quite poor and there is little synergy between the three services, although steps are being taken to change this. In addition to competing with the Army and Air Force for resources, the Indian Navy also competes with the Defence Research and Development Organisation (DRDO). The DRDO part of the budget is limited in comparison with the services' share.

The IN has been pushing for a bigger share of the budget. Former Chief of the Naval Staff, Admiral Arun Prakash (interview 2008), said India was aiming for a reasonably sized navy, and had enough money to realise its plans. At the same time, the naval leadership thinks it would be fair with a bigger share of the budget: "we should be happy if the economy continues to grow and we reach 20 per cent [i.e. share of the defence budget]."

In fact, during the last few years the Army's share of the defence budget has been declining while those of the Navy and Air Force have increased. In the fiscal year 2000–01, the percentage differences between the Army, Navy and Air Force respectively were 61.8, 14.9 and 21.4. The Defence Research and Development Organisation accounted for most of the remainder. By 2008–09 these percentages had changed to 48.3, 18.5 and 28.9, respectively, after a few years of stability (IDSA 2008). Certainly, these percentages can change if any of the services enter into big defence equipment contracts, but it is quite clear that the Indian leadership is giving greater priority to the Navy than it has in earlier years. The fact that the naval leadership has presented well-founded and detailed plans compared to the other services might also have increased the attention of government circles towards the IN. Some defence analysts find it likely that the IN's share will keep on growing in the coming years due to a rising awareness of security concerns in the Indian Ocean (DefenceNews 2010).

STATUS OF THE FLEET

Another way of estimating how the Navy has been prioritised in India is to study equipment acquisition and plans. Table 4 presents details of India's naval acquisitions and their source country. It shows that India has an aircraft carrier, destroyers, frigates, corvettes, submarines, amphibious warfare ships, petrol ships, minesweepers, replenishment tankers, survey ships, as well as research and training vessels. Not all acquisitions

are included, but the table gives a reasonable picture of the status of India's fleet. The acquisition of an aircraft carrier and replenishment ships gives it the status of a blue water navy. As the table shows, the Soviet Union/Russia has been the main source of import. India was a close partner of the Soviet Union during the Cold War, when a significant weapon import relationship was built up. In addition to India's economic prioritisations, its relations with the Soviet Union framed its procurement policy. India has been using Soviet and Russian weapons for about 50 years. The IN has regular naval exercises with the Russians, as its officers need training from Russian teachers to run the equipment.

CLASS	NUMBER OF SHIPS	ORIGIN
AIRCRAFT CARRIERS (1)		
Centaur	1	United Kingdom
DESTROYERS (8)		
Delhi	3	India
Rajput	5	Soviet Union
FRIGATES (13)		
Shivalik	1	India
Talwar	3	Russia
Brahmaputra	3	India
Godavari	3	India
Nilgiri (Leander)	3	India (UK)
CORVETTES (24)		
Kora	4	India
Khukri	4	India
Veer	12	-
Abhay	4	-
SUBMARINES (16)		
Sindhughosh	10	Russia
Shishumar	4	Germany
Foxtrot	2	Soviet Union
AMPHIBIOUS WARFARE SHIPS (22)		
Austin	1	United States
Shardul	3	India
Magar	2	India
Polnochny C/D	5	Poland (Soviet Union)
Nicobar	2	India

MK.8/MK.3 Landing craft	10	-
PATROL SHIPS (28)		
Sukanya	6	South Korea
Seaward defence boats	5	-
Car Nicobar	2	India
Bangaram	4	India
Trinkat	2	-
Makar	2	-
Super Dvora MK.II	7	Israel
MINESWEEPERS (13)		
Pondicherry	13	-
REPLENISHMENT TANKERS (10)		
Jyoti	1	-
Aditya	1	-
Deepak	1	-
Ambika	1	-
Poshak	6	-
SURVEY SHIPS (8)		
Sandhyak	8	-
RESEARCH VESSELS (1)		
Sagardhwani	1	-
TRAINING VESSELS (2)		
Leander	1	-
Akula	1	Russia
SAIL TRAINING VESSELS (2)		
Varuna	2	-

TABLE 4. Present fleet.

Problems after the collapse of the Soviet Union forced the Indians to critically reconsider its strategy of dependency on other countries for significant parts of its arms supply, giving a boost to the idea of greater self-reliance. It became necessary to realign import sources. Other countries from which India has imported naval equipment since the Cold War are the United Kingdom, Germany, Israel, South Korea, Poland and the United States. In the last few years, India has had a strong focus on developing an indigenous arms and shipbuilding industry.

Many of the IN's ships, including its only aircraft carrier in service, are ageing. As a result, it is undergoing extensive modernisation and capability expansion. According to table 5, modernisation of the fleet seems to be a high priority. Today, around 35-40 ships are under construction for the IN.

CLASS	NUMBER	ORIGIN
AIRCRAFT CARRIERS (2)		
Vikrant (Project 71)	1	India
Kiev	1	Russia
DESTROYERS (3)		
Kolkata (Project 15A)	3	India
FRIGATES (5)		
Shivalik	2	India
Advance Talwar	3	Russia
CORVETTES (4)		
Project 24	4	India
NUCLEAR SUBMARINES (6)		
Advance Technology Vessel	6	India
SUBMARINES (6)		
Scorpene	6	France
MINE COUNTERMEASURE VESSELS (2)		
MCMV	2	India
PATROL SHIPS (17)		
Saryu	9	India
Car Nicobar	8	India
REPLENISHMENT SHIPS (1)		
Replenishment tanker	1	Italy
SURVEY VESSELS (6)		
Survey vessel	6	India
TRAINING SHIPS (1)		
Sail training ship	1	India

TABLE 5. Ships under construction and upgrading. Some of the ships have been ordered, but are not under construction as yet. The figures may not include all details of India's acquisition plans.

The most ambitious acquisitions are the two additional aircraft carriers – one from Russia and one indigenously built – and the six nuclear powered submarines. The nuclear powered submarine project is referred to as the Advanced Technology Vessels (ATV) programme. In 1985, the projecting of India's first nuclear powered submarine got under way with the assistance of the Soviet Union. In July 2009, India launched the ballistic missile submarine named INS *Arihant*, a part of the ATV programme, for sea trials (RIA Novosti 2009b). The ATV can purportedly be equipped with the nuclear-capable submarine-launched ballistic missile *Sagarika*, and is an important component of India's planned nuclear triad capacity. According to former Chief of Naval Staff Admiral Sureesh Mehta, the launch of India's nuclear submarine has “[...] sent out a strong signal of our [India's] desire to acquire the appropriate strategic military technology and capability”. The successful completion of the project has belied some of the scepticism of some military analysts about India's capacity in this field (interview, Winner 2008, Hoyt 2008).

The plan to acquire two more aircraft carriers and nuclear powered submarines also indicates the determination of the IN to strengthen its blue water capacity, as well as develop the naval leg of its nuclear triad. All in all, it suggests a shift in India's defence spending towards strategic systems and force multipliers (DefenceNews 2010).

PLANNED ACQUISITIONS

The IN's procurement plans (table 6) indicate an increasing focus on indigenisation. The goal is to build 70 per cent of the ships on Indian soil (interview, anonymous 2009b). The IN has no governmental regulations on how many ships it can have. India has technology and arms transfer cooperation with foreign arms companies, most significantly with Russian businesses. US Secretary of State Hillary Clinton's visit to Delhi in July 2009 and President Barack Obama's in 2010 opened the doors for India to import more arms from the United States (India Daily 2009; Gulf News 2009). However, many members of the Indian military forces do not view the United States as a reliable source of defence supplies. In addition, American equipment would probably imply a higher inventory management cost on new source platforms, etc. India has been integrating Western operational concepts/doctrines while using Soviet equipment for a long time. This dichotomy will most likely continue for decades to come. India has valued its military relations with Russia because of Russia's willingness to share technology which no one else would. Nevertheless, India might not remain Russia's second largest defence customer. A number of difficulties have beset their defence trade of late, and India is anyway seeking to diversify its import sources. In the last few years, Indian-Israeli ties have been tightening, with Israel becoming an increasingly important defence equipment distributor for India.

On this evidence, the IN's consolidated aim is to have three aircraft carriers, with two carrier groups in service at all times and one in reserve. The IN also plans to build a fleet of six ATVs. Other important procurement programmes, the details of which are

CLASS	NUMBER OF SHIPS	ORIGIN
AIRCRAFT CARRIERS (1)		
Project 71	1	India
DESTROYERS (4)		
Project 15B	4	India
FRIGATES (7)		
Project 17A	7	-
CORVETTES (16)		
Project 28	8	India
Project 28A	8	India
NUCLEAR SUBMARINES (5)		
Akula	2	Russia
Advanced Technology Vessel	3	India
SUBMARINES (6)		
Project 75I	6	-
MINE COUNTERMEASURE VESSELS (8)		
MCMV	8	India
AMPHIBIOUS WARFARE SHIPS (17)		
Landing platform dock	3	-
Landing ship tanks	14	-
PATROL SHIPS (10)		
Car Nicobar	10	India

TABLE 6. Planned ships. The figure may not give an accurate view of the Indian Navy's future procurement plans.

not included in the figures above, include advanced submarine and air launched cruise and ballistic missiles. India has several advanced missile programmes, completed and under development, such as the *Prithvi* (short-range ballistic missiles), *Agni* (short-range, medium-range and intercontinental ballistic missiles), *BrahMos* (supersonic and hypersonic cruise missiles), *Dhanush* (short-range ballistic missile), *Nirbhay* (subsonic cruise missile), *Shaurya* (tactical ballistic missile), *Sagarika* (submarine-launched ballistic missile), *Popeye* (air-to-surface missile), *Ametist* (anti-shipping missile), *Moskit* (supersonic cruise missile) and, allegedly, *Surya* (intercontinental ballistic missile). Some of these could possibly be used for strategic purposes. The IN also aims to develop a highly effective satellite surveillance system. India already has an advanced satellite technology.

Growing defence budgets, higher defence budget allocations to the IN including

salary hikes for officers, upgrading of the current fleet as well as plans for a stronger blue water fleet with a nuclear leg are all indications of a country with ambitions to develop a powerful navy capable of handling a vast set of challenges and tasks.

DRIVERS

The Indian Maritime Doctrine INBR 8, released June 2004, was a milestone achievement for the IN. It was the first official document in the public domain that elucidated India's maritime doctrine and was meant to be available "to every officer, civil servant, politician, analyst and professionals concerned with the maritime affairs of our country" (Indian Navy 2004, ii). The doctrine describes the IN as a powerful instrument of India's foreign policy in times of peace and tension, and India's foremost expression of its maritime power in times of conflict. Large sections of the doctrine are devoted to general rather than India-specific maritime philosophy and practices.

The document clearly points to India's need for a blue water navy, with aircraft carriers and submarines as a focal point. It underlines the importance of the IN as a strong part of India's nuclear triad. In 2005, after the release of the first maritime doctrine, former Chief of the Naval Staff Admiral Sureesh Mehta (2009) said with reference to an Indian naval strategy:

For a strategy [...], the start point has to be a threat. Without a specific threat, whether real or perceived, there is no need for a strategy. [...] In the national security arena, we are concerned with threats to our national interests [...]

In May 2007, India spelt out its maritime strategy in the document *Freedom to Use the Seas: India's Maritime Military Strategy*. In his foreword, Admiral Mehta put it in a nutshell: "[T]he freedom to use the seas for our national purposes, under all circumstances." The IN aims to be a compact but capable navy, though, and the document also seeks, says Admiral Mehta, to rationalise the direction and reasons for India's maritime capabilities in the future (Indian Navy 2007, iii, v).

This study discusses the three major drivers behind India's plans for its Navy: 1) India's dependence on safe sea lines of communication (SLOCs), especially for oil and gas imports and other trade goods. This effort includes the fight against piracy and rescue missions after natural disasters, as well as responding to other non-traditional maritime threats such as the Mumbai terrorist attack of November 2008; 2) the danger of military conflict, especially uncertainty about the intentions of its neighbour China in expanding its maritime power; and 3) national pride, i.e. India's quest for a more assertive role in the Indian Ocean, considered by the country as its traditional area of influence, in keeping with its growing aspirations for big-power status. All three drivers are reflected in India's official maritime documents, and are in many ways interrelated.

NON-TRADITIONAL THREATS TO SLOCs

In India's maritime doctrine, the need to secure SLOCs stands out as a strong driver behind maritime modernisation (Indian Navy 2004). Indian naval researchers and strategists highlight the linkages between India's growth as a maritime power and its energy security needs (interviews, Bateman; Sakhuja 2008, Holmes 2008; Hoyt 2008; Winner 2008; Yoshihara 2008, and anonymous 2008a, b, and c). Without safe SLOCs, India's economy and growth would be at risk. The biggest perceived non-traditional threats to the security of SLOCs are organised crime (piracy, raiding and terrorism), accidents, and natural disasters (tsunamis, etc).

The Indian Ocean is the world's third largest oceanic basin and accounts for 20 per cent of the earth's water surface. It is surrounded by or surrounds fifty-six countries. Some of these states have vast mineral resources, including oil and natural gas, and some are among the world's fastest growing consumer markets. The users of the Ocean range from the world's richest countries to the poorest, from the United States of America to Somalia. Historically, the Indian Ocean has been home to some of the world's most vital sea lines of communication for global trade, and its importance has risen again: the SLOCs in the Ocean account for 50 per cent of the world's container traffic and 70 per cent of petroleum product traffic.

Nine straits lead into the Indian Ocean and five of these are choke points, i.e. vulnerable to disruptions of traffic. For example, 60,000 ships annually, more than 160 every day, sail through the Strait of Malacca carrying about 55 per cent of world merchandise. A blockade of this strait would cause the economies of Asian states to crumble. Maintaining security along these commercial sea lines, particularly at choke points, is thus crucial for many countries. While facilitating global maritime trade and economic growth, the Indian Ocean has also become an area of strategic rivalry and great-power competition.

A substantial amount of South and East Asian energy imports comes from the Middle East and Africa. In the absence of well-developed onshore pipeline infrastructure in Asia, energy resources must be carried thousands of miles by sea. It is often difficult to get oil and gas pipeline projects off the ground for topographic, economic and political reasons (Basit 2008).

As India's economy has grown, so has its energy needs, making the country increasingly dependent on external energy sources, particularly oil. Some estimates indicate that India will become the fourth largest net importer of oil by 2025, second only to the United States, China and Japan (EIA 2009). The rapidly increasing gap between the country's oil production and consumption will, in the coming years, be a serious challenge to the Indian economy and national security.

Three-quarters of India's crude oil requirements are met by countries in the Persian Gulf. Its largest oil import partner is Saudi Arabia, followed by Iran. India's natural gas imports are also mainly transported by sea from the Persian Gulf. This dependence on

sea routes will continue despite the many suggested overland gas pipeline projects, such as the Iran–Pakistan–India pipeline, the Turkmenistan–Afghanistan–Pakistan–India pipeline, and a pipeline from Myanmar. These projects have proved politically and economically difficult, and will not in the short term at least give much relief to the SLOCs.

Geographically, India is located close to the Persian Gulf, so it has a distance advantage over, for instance, China. Also, in the event of a conflict with Pakistan, the latter would probably not have the courage to disturb India's seaborne energy supplies, given India's already far superior indigenous naval power in the region and the possession by both countries of nuclear weapons. The worst-case scenario of a blockade of the Strait of Hormuz would most likely not last for long. If, for instance, Iran tried to either block the Strait or tamper with the shipping traffic, it would hurt its own economy in addition to further antagonising the other Persian Gulf countries, which are equally dependent on exporting their oil and gas. As regards scenarios of wars in the Persian Gulf, the USN is well placed to handle things for many decades to come. The Iraq–Iran War of 1980–88 showed that the Strait of Hormuz is difficult to block: in the whole period it was blocked only for seventeen or eighteen hours (interview, anonymous 2009c).

Several factors pose serious challenges to the safety of SLOCs. Drug smuggling and piracy off the coast of Somalia are two examples, the latter being the more prominent. The pirates are targeting vessels ever closer to Indian territorial waters off its western coast, moving the anti-piracy battle zone closer to the Subcontinent (Indian Express 2011). The importance of the Indian Ocean SLOCs to India, China, and Japan can be seen, for example, in their willingness to deploy anti-piracy ships off the coast of Somalia. This notwithstanding the fact that Japan has not deployed warships since 1945 and China did not take part in the multi-national rescue actions after the Tsunami in 2004, despite having one of the world's largest navies. India was one of the first states to deploy forces to the area.

Piracy in the Indian Ocean clearly presents a severe challenge to international trade. Every month, about twenty-five Indian cargo ships sail through the Gulf of Aden, and much of India's export merchandise is carried by foreign ships (BBC 2008b). The Somali coast and the Gulf of Aden are far from the vital transportation route of most of India's oil and gas imports, but since oil and gas are strategically important raw materials on which the country is so dependent, piracy leads to increased vulnerability. In a crisis, ensuring the continued import of energy resources would be more important than being able to export merchandise. Without adequate access to oil and gas, things would simply stop working. The Indian Strategic Petroleum Reserves Ltd has started the development of strategic petroleum reserves in the country (Allianz 2008; ISPR 2009). The planned size of these oil and gas reserves, according to media sources, would be enough to meet two to four weeks of the country's demand (Financial Express 2008; SiliconIndia 2004).

Piracy will become increasingly relevant to India's energy security because of the country's plans to import larger amounts of oil and gas from African countries in the

future and because the pirates are carrying out attacks closer to Indian waters. India is already importing oil from Nigeria, for instance, although far from the amounts it imports from the Middle East. Russia is another new source of oil. Furthermore, India imports coal from South Africa and is likely to start importing large amounts of LNG from African countries (Kaplan 2009).

The frequency of pirate attacks on tankers has risen. One was the hijacking of the Saudi Arabian *Sirius Star* in 2008 off the East African coast. Three times the size of an aircraft carrier, it was so far the largest ship to be hijacked by pirates (Guardian 2009; Sunday Times 2008). Another more recent example is the February 2011 hijacking of the Greek tanker *Irene SL*, which was carrying Kuwaiti crude oil to the United States. The tanker's load, close to two million barrels, represented about a fifth of the United States' daily import of crude oil, and accounted for about 12 per cent of daily Middle East exports (Forbes 2011). Besides the concrete problem of attacks on tankers and attempts to block a vital strait, there is a psychological effect, which can make shipping companies and countries take extra – and financially demanding – precautions.

It is not known if there are links between pirates and terrorists. Maritime terrorism has so far been a very rare phenomenon: USS *Cole* was attacked in the Gulf of Aden in 2000 and the French supertanker *Limburg* was attacked off Mukalla in Yemen in 2002. There are also very few examples of military conflicts and maritime terrorism affecting energy supply security for sustained periods. However, the challenge to India's coastal security posed by terrorism via the ocean was amply demonstrated in Mumbai on 26 November 2008. The terrorists that carried out the attacks, taking 164 lives and wounding almost twice as many, had entered Mumbai from the sea, travelling apparently from Pakistani territorial waters.

THE THREAT OF MILITARY CONFLICT

An early outspoken Indian advocate of maritime-power thinking was the historian, scholar, diplomat and journalist Kavalam Madhava Panikkar (1895–1963). In his monograph *India and the Indian Ocean: An Essay on the Influence of Sea Power on Indian History*, he argued that it was essential for India's future to concentrate on being a maritime power, even though a strong army would always be important. According to Panikkar (1962, 15):

If a steel ring can be created around India with air and naval bases at suitable points and if within the area so ringed, a navy can be created strong enough to defend its home waters, then the waters vital to India's security and prosperity can be protected and converted into an area of safety. With the islands of the Bay of Bengal properly equipped and protected and with a navy strong enough in its home waters, security can return to that part of the Indian Ocean which is of supreme importance to India.

Panikkar's words were written half a century ago. Today, it could be said that India is creating precisely a "steel ring" around its territories. The IN has a surveillance post on Madagascar, friendly naval ties with the Maldives, naval bases in its own territories in the Andaman and Nicobar Islands in the Bay of Bengal and on the Agalega Islands of Mauritius, a port project in Chabahar in southern Iran, and partnerships with Oman, several countries such as Mozambique and South Africa on the African continent's east and south coast, as well as a number of South-East and East Asian countries, including Japan and Vietnam.

Much of the reason for these developments is the perceived challenge from China. Indian security officials are alarmed by reports of Chinese plans to upgrade communication and helipad facilities on Myanmar's Coco Islands off India's east coast, as a part of what India believes is Beijing's strategy of encircling its territory (Jane's 2008). The Indians are seeking to balance China's growing involvement with its own engagements with the littoral states where it has certain traditional advantages. India follows China's moves in the ocean carefully, as China's activities there are seen to challenge India's security interests.

The American coinage, "string-of-pearls strategy", is used with reference to how China supposedly is seeking to build military bases throughout the Indian Ocean in order to secure its energy supplies and counter the USN's – and perhaps the IN's – capabilities (Spinetta 2006; Hamilton 2005). Some analysts have suggested that China's string-of-pearls strategy will encircle India, with or without intent (interviews, anonymous 2008b and d). Others are sceptical about the actual presence of Chinese "military bases" in the Indian Ocean (Seth 2007).

Rather than military bases, the People's Republic seems to be building strategic partnerships and commercial ties. It is contributing to the construction of deep-water port facilities in Gwadar in Pakistan's Baluchistan, and has commercial presence in Chittagong in Bangladesh, on Burma's Coco Islands and Sittwe, as well as in Hambantota on Sri Lanka. It has also shown interest in the Seychelles (Le Monde Diplomatique 2009). China, like India, has strategic interests in the Ocean, and, as already mentioned, its economic prosperity depends on these vital sea lines. This conjunction of politics and geography has made China seek strategic footholds throughout the Indian Ocean by strengthening diplomatic ties and building strategic and commercial bases and perhaps future supply stations in a number of countries (Spinetta 2006; Holmes 2007).

China has an interest in protecting its shipping traffic in the Indian Ocean. Supposedly, 20 per cent of China's 1,265 ships that passed through the Gulf of Aden in 2008 came under attack by pirates (BBC 2007). By deploying an anti-piracy force, China also demonstrates its capability to have a naval presence far from its shores, something it has not done otherwise in modern history. The Indians could perceive this as a distressing development. There are stories of smaller-scale tensions between the two countries off the coast of Somalia: Allegedly, one Indian submarine and two Chinese warships had a

standoff in the Gulf of Aden in February 2009, when the submarine was forced to surface (International Herald Tribune 2009). Indian officials later stated that no such thing had taken place (Times of India 2009). Regardless, if tensions between India and China persist, similar scenarios could be seen in the future.

One factor that stands out in India's maritime doctrine and strategy document is the need to deter China and its People's Liberation Army Navy. On the domination of an enemy's littoral, probably with Pakistan in view, the need for strong air support in terms of aircraft carriers is also stated. The need for submarines is mentioned in regard to the scenario of a conflict with an extra-regional power, with deterrence against China mentioned specifically. Furthermore, the acquisition of the maritime part of India's nuclear triad is legitimised with the following:

The 21st century is expected to comprise the following major players: USA, European Union, Russia, China, Japan and India. All these states have an independent nuclear/missile capability or are protected by such an umbrella through military alliance. India stands out alone as being devoid of a credible nuclear triad. It is one of the tenets of the post-Cold War era that the ability of a nation to adopt a truly independent foreign policy/posture is inexorably linked with such a strategic capability either directly or indirectly. Thus there is a strong case for India to acquire a non-provocative, strategic capability and the most viable platform by all accounts is the submarine. (Indian Navy 2004, 54)

As regards references to China in the maritime strategy, the aim is to enhance cooperation with the neighbouring giant. At the same time, China, according to the document, is building a blue water navy with aircraft carriers, nuclear submarines and ballistic/cruise missiles and seeking to gain a strategic foothold in the Indian Ocean region; hence India's need to deter China. The importance of a strong Indian nuclear triad is emphasised. In terms of acquiring blue water capability, the strategy document also indicates plans to build replenishment ships (Indian Navy 2004, 41). More than the doctrine, the strategy document describes the value of a multilateral scene in the Indian Ocean. States that are hostile to Indian interests are becoming increasingly influential in and around the Indian Ocean, warns the document, and India has an acute need to stem this influence.

The Chinese Navy is set on the path to becoming a blue water force. It has an ambitious modernisation program. Notable amongst those are the renewed interest in the aircraft carrier program, the nuclear submarines and the ballistic/cruise missile projects along with the attempts to gain strategic toe-hold in the IOR. (Indian Navy 2007, iii)

About three years after its release, public access to the doctrine was withdrawn. The IN's new classified maritime doctrine of August 2009 has, according to media sources, gone

through a number of changes, including an increased focus on the Chinese threat and the stated need for a stronger maritime counterterrorism force. The last-mentioned point must be viewed in light of the 2008 Mumbai terrorist attack.

China and India, the two currently fastest emerging powers in Asia, share a long and disputed land border. There are recurring low-level tensions in the border areas. In 1962, the two countries went to war over border issues. Before the war, India expressed its diplomacy towards China as “hindi-chini bhai bhai”, meaning “Indians and Chinese are brothers”. The Chinese attack came as a shock to the Indian leadership and created a long-lasting wound in the Indian political mind. China is regarded as untrustworthy by elements of the Indian leadership and people, although other aspects of the relations between the two countries have had a tremendous boost during the last decade.

In fact, much has been done to improve diplomatic relations between India and China since the early 1990s. The 2000s saw a number of landmark visits between the two countries, with a focus on bilateral trade. The two countries also moved a small step closer towards resolving their border dispute, with China’s recognition of Indian sovereignty of Sikkim in 2003. They have conducted joint anti-terrorism military exercises, and China is India’s biggest trading partner. In 2007, their bilateral trade reached USD 38.7 billion, 33 times that of 1995 (China Daily 2008).

All this being said, they have a long way to go and their mutual distrust persists, especially in military circles. The modernisation and mobilisation of India’s armed forces are often legitimised by an alleged threat from China. This also applies to the expansion of the naval forces. Paying attention to threat perceptions of members of the Indian armed forces, the threat from China and its increasing presence in the Indian Ocean is clearly one of the main reasons why India is said to need a blue water navy (interviews, anonymous, 2008 a,b,d-f; 2009 b and c).

There may be even more worry in store for India: Today, many new tankers are being built for Chinese shipping firms. Most of these tankers will fly the Chinese flag. According to Andrew Ericson and Gabe Collins of the U.S. Naval War College, a state-owned tanker fleet of this kind could make it easier to set a legal basis for protecting the tankers militarily, i.e. the Chinese leadership could use its need to secure its energy supplies to justify its ambitions to acquire a blue water navy (Ericson and Cole 2007). This in turn could aggravate tensions even more, and accelerate India’s quest for a blue water navy.

NATIONAL PRIDE

In the introduction to India’s maritime strategy document, Admiral Sureesh Mehta uses the term “manifest destiny” to describe certain aspects of India’s ambitions:

Current projections indicate that India will be among the foremost centres of power – economic, technological and cultural, in the coming decades. This repositioning in the international geopolitics would call for a concomitant accretion of national

power, of which the military power will be a critical dimension. [...] Our primary national interest therefore is to ensure a secure and stable environment, which will enable continued economic development and social upliftment of our masses. This in turn will allow India to take its rightful place in the comity of nations and *attain its manifest destiny*. [My emphasis] (Indian Navy 2007, iii)

Indeed, one of the main aims of the IN, states the strategy, is to help “attain India’s manifest destiny” (Indian Navy 2007, 130). The term *manifest destiny* was used in the nineteenth century in the sense that the United States had a divine destiny to expand across the continent and, at times, even beyond North America. However, in Admiral Mehta’s terms, rather than domination, it is probably more about thoughts of an inherent responsibility and obligation to be an important player in the strategic area of interest. Some senior-level officers of the IN view the Indian Ocean as India’s backyard – its *mare nostrum*. According to India’s maritime strategy, within a decade India will become “an acknowledged maritime power capable of exercising strategic maritime influence” (ibid, 6). The means for attaining this objective is a versatile, three-dimensional, blue water navy (ibid. 9). Long-range vessels will be needed, accompanied by logistical support ships (ibid, 19). Also,

building the future Indian Navy, optimally equipped to perform the full spectrum of missions at sea, will require an integrated approach which synergises the induction of platforms, modern weapons and sensors, with the creation of infrastructure, basing facilities, maintenance, material and logistics support, and finally, with the provision of human resources. (Ibid., 15)

Professor Robert Ross of Boston College, while specifically referring to the Chinese case, argues that nationalism is the most significant factor in continental powers’ drive to develop advanced and blue water naval capacities, especially aircraft carriers (IFS 2009). India and China belong to different planets in terms of political culture and decision-making processes, but share a common quest for international recognition. Both are seeking to assert their influence in the world after centuries of decline or stagnation. And both have sought to invest in military modernisation, not only to secure against direct threats. India’s national pride is an important driver behind India’s plans for its navy.

As noted above, it was imperative for India’s future prosperity, according to Kavalam Madhava Panikkar (1962, 92), to dominate the Indian Ocean.

It is an obvious fact to any student of history that India’s security lies on the Indian Ocean: that without a well considered and effective naval policy, India’s position in the world will be weak, dependent on others and her freedom at the mercy of any

country capable of controlling the Indian Ocean. India's future therefore is closely bound up with the strength she is able to develop gradually as a naval power.

It is natural for India to look seaward, Panikkar adds, because of its central position in the Indian Ocean, long coastline, glorious naval heritage, and simply because a country cannot establish itself as a great power without a powerful navy.

While the fifteenth-century voyages of the Chinese admiral Zheng He in the Indian Ocean are well known, it is less well known that India also had its era of oceanic glory. Indeed, as far back as 3,500 BCE, India enjoyed lucrative trade links with other civilisations such as those of Arabia, Persia and China. Several ancient Indian kingdoms had sea-going navies. While the Arabian Sea was largely used for trade, Indian dominance of the Bay of Bengal was more political and naval. According to Panikkar (1962, 28), India was largely in control of the Indian seas until the thirteenth century AD, when the South Indian Chola Empire and its advanced navy crumbled. Panikkar's book continues to be a reference for scholars (interviews, Bateman 2008; Sakhuja 2008). India's becoming a maritime nation is hence about natural re-emergence.

According to former Chief of Naval Staff Admiral Arun Prakash, however, India's decline as a maritime power came with the invasion of the Moguls in the sixteenth century. Coming from a landlocked region they ignored the maritime aspect of India's security (interview, Prakash 2008). India was therefore vulnerable to British and Portuguese invasions from the sea. The British rulers made the army the cornerstone of India's military defence. The history of wars on India's land borders accentuated the need to strengthen the Indian Army. The Indian Army has been an important contributor to the United Nations' peacekeeping operations post WWII in a number of countries, especially in Africa and Asia, while, until a few years ago, the IN had limited participation in multinational naval operations.

However, it will be many decades or even centuries before India has the capability or interest to enforce an exclusive claim on the ocean with even an extremely powerful blue water navy. According to a retired high-ranking Indian official, India has no issues with the presence of the USN, which also considers itself an Asian naval power, or with specialised forces on specific missions such as fighting piracy, terrorism, or relief after a natural catastrophe (interview, anonymous 2008d). A retired Indian admiral stated that he had no objection to Chinese presence in the international waters of the Indian Ocean as long as it did not include a submarine fleet (interview, Chopra 2008).

India's naval deployment to the Gulf of Aden to fight piracy could also partly stem from national pride. India is not there solely to secure SLOCs or save Indian lives. Many state actors have deployed ships to the area, China, Japan, Norway, EU and NATO, among others. By playing a significant role there, India can join the international community in its fight against piracy and at the same time show it is a maritime power with the capacity to operate far from home. India was one of the first nations to flex its muscles

in the fight against piracy in the area. Indian participation in the rescue efforts for victims of the 2004 Indian Ocean tsunami is another example of India demonstrating its naval capacity, although the main driver there was of course humanitarian.

Indians often refer to its ancient maritime legacy when talking about its natural re-emergence as a maritime power. It is all about national self-assertion and national pride, as conceived by the power elite, and couched in terms of the destiny argument. The naval elite in India is largely unified in pushing for a blue water navy, and although the political elite are not ready to – or just cannot – have this as a main priority, they seem to agree on the idea that India ought to have a powerful navy. The fact that the defence budget percentage has been stable, in spite of massive economic growth, shows the priority given the defence sector in India. It also shows that India has a high degree of national self-consciousness and significant military ambitions.

India has a degree of self-confidence when it comes to its continental defence capacity that allows it to look seawards as well. Developing a powerful navy might well be an expression of nationalism in many, or most, countries. But this needs to be tempered by the absence of military populism, at least in the Indian case. Here, military nationalism is found mostly among the elites.

WHAT IS MORE IMPORTANT?

Usually, when an oil tanker puts to sea somewhere in the Middle East heading for Asia, the cargo-owners will not know which country will eventually buy the oil. Deals are struck only after the vessel is seaborne. That is why securing energy supplies along the whole sea route ought to be a joint effort of the implicated nations, precisely like the anti-piracy forces. Powerful anti-piracy forces with smaller surface ships would be more fitting for piracy, along with a strong coast guard, than aircraft carriers and nuclear-powered submarines with the capacity to carry strategic missiles. Close dialogue and cooperation between coast guards and navies are also required for detecting terrorists coming by sea.

Yet even if different countries' goals and interests are the same, their navies may not necessarily work together despite being out on the same mission. There have been several cases of communication failures in the anti-piracy missions off the coast of Somalia and India has had difficulties relating to Chinese presence in the area. Had, for instance tensions, between the IN and the People's Liberation Army Navy turned into a conflict, a strong blue water fleet would have been an important asset. In any case, the USN has naval hegemony in the Indian Ocean and will for a long time remain the main contributor to SLOC security in the Indian Ocean. A more capable and cooperative Indian Navy could take more part in securing its own, as well as international shipping lanes. With better out-of-area operational capabilities, a blue water fleet would help India gain greater control over straits and SLOCs that are essential for its security.

There is no such thing as a race for military bases in the Indian Ocean today. However, there is certainly a trend for building up navies and low-level competition to gain influ-

ence in Indian Ocean countries, especially between India and China, which are watching each other's moves in the region. The use of strategic partnerships, friendly commercial bases and supply stations is indicated in future scenarios of conflict and also of cooperation. Nevertheless, even if the Chinese wanted to encircle India by creating a ring of military bases around it, it would probably be difficult for China to carry this through without first solving more pressing issues closer to home, such as Taiwan. Also, it is difficult to anticipate a Chinese blue water navy evolving before China has fully sorted out its dispute with Taiwan. A China with blue water capabilities, sailing in the Indian Ocean close to Indian territories, would be perceived as a direct security threat by the Indians.

China is probably not a direct military threat to India today, and given the situation, it is hard to justify the development of a blue water navy in light of the challenge from China alone. Most likely, China will remain a land-based threat for the next few decades because of the time it takes to develop blue water navies. Rather, trumpeting this perceived threat in Indian military circles might have been a way to legitimise maritime power growth, and procure a larger share of the defence budget. Elements of the Indian political leadership have been working for better relations with the country's neighbour, but there seems to be a significant gap in how China is perceived by strategic and political elites respectively. However, in the event of a full-scale conflict at sea, a powerful blue water navy would be essential for India to sustain national security, and it would also be natural for a country to seek to protect itself from worst-case scenarios.

In the geo-strategic scenario applicable to the Indian Ocean, the key to controlling the Indian Ocean lies in controlling the choke points, important islands and the vital trade routes. Geography is the handmaiden of strategy and geography has been kind to India, placing her in a favourable geo-strategic position to control the vital northern areas of the Indian Ocean. (Indian Navy 2004, 47)

Safety of SLOCs and control of choke points have already been mentioned as important non-traditional security challenges. What might damage India's oil and gas supply, and thus security, on a greater scale is precisely military conflict.

SLOC security and the China factor cannot explain alone why India wishes to develop its blue water capability, although both factors are important. National pride and great-power ambitions seem to be equally - if not more - important variables.

Also, because of a stronger navy, India has been able to change certain things: The IN was not able to evacuate its citizens from Kuwait after the Iraqi occupation in 1990. This was an embarrassment; India wanted to do something about it. In 2006, the IN evacuated Indian, Sri Lankan and Nepalese citizens from Lebanon in the wake of the Israeli attack.

The IN has grand plans and the government has allocated resources to give it a good start. It has developed a perspective plan, probably a roadmap on how to achieve

its goals. There is harmony between the investments made by the government and the IN's current and planned capacity-building and its doctrine and strategy, but there is no plain sailing.

THE FUTURE OF THE INDIAN NAVY

There is a significant risk of both low-scale and high-scale tension in the Indian Ocean. It is a necessary but difficult area in which to manoeuvre for India and its navy. On top of that, the Indian Navy is facing a number of challenges that is slowing down its plans of upgrading and procurement. This section will look at the security dynamics of the Indian Ocean and the Navy's challenges, and round off by discussing how far these challenges are likely to constrain the Navy's modernisation processes and how India might prioritise the utilisation of its maritime forces with the resources available.

SECURITY IN THE INDIAN OCEAN

The North Sea, the Mediterranean and the Far East were at the centre of great-power rivalry from the early nineteenth century. The past two centuries have belonged to the European and American empires, challenged only by the rise and expansion of Imperial Japan from the late nineteenth century, and, for a short period beginning in the 1960s, by the Soviet Union. In the post-Cold War era, the tide has turned rapidly towards the Indian Ocean.

According to Robert Kaplan (2009), the map of the Indian Ocean "exposes the contours of power politics in the twenty-first century". Rivalry in this "centre stage for the twenty-first century" will, in his assessment, be largely a matter between maritime powers. The Indian Ocean has already become a stage for maritime powers and its importance will keep growing for a number of reasons, not least its concentration of strategic resources vital to many Asian countries' economic growth, sea routes on which these resources are transported, and the ocean's turbulent zones of international concern such as Pakistan, Iraq, Yemen, Somalia and the Gulf of Aden. Also, the increased interdependency of the Indian Ocean littoral states has created a new Asian reality. Trade in this region has increased rapidly during the last decade.

In its report *Global Trends 2025: A transformed world*, published in 2008, the National Intelligence Council of the US, to which sixteen different intelligence agencies report, emphasised the risk of future rivalry and the danger of conflict between India, China and Japan, largely due to competition over energy resources, misunderstandings and distrust. To secure their national interests, all three countries will continue to upgrade their naval capacities and build strategic partnerships within the Indian Ocean region. Other Asian countries such as Vietnam, South Korea, and the Philippines are building up their navies too. Regardless of whether a race in naval arms build-up is intended, it is there.

Many observers see an already ongoing maritime power struggle between China and India, which in the worst case can lead to conflict (Berlin 2004; Kaplan 2009). On the

other hand, by building a framework of broad regional cooperation, which might foster mutual understanding, the rise of the Asian maritime powers can also strengthen the security of the SLOCs. As in the case of the multi-national anti-piracy cooperation in the Gulf of Aden, such regional cooperation could relieve some of the pressure on the USN, which has largely guarded the vital sea lanes since World War II, and give the Asian countries greater control over their life lines.

New Delhi's improved relations with Washington DC are a relatively new development and can be viewed as one of the foreign policy successes of the Bush administration. Especially in the 1970s-1990s, one of the main aims of the IN was to deter increasing American influence in the Indian Ocean. In contrast, today, the Indian authorities welcome American presence. This will most likely be the trend as long as the relationship continues to be balanced and India has room to manoeuvre. This is consistent with the IN slogan: "the freedom to use the seas for our national purposes, under all circumstances". The hitherto preferred level of cooperation with the USN has been in securing transport routes and rescue missions.

With its extensive peninsular coastline extending deep into the Indian Ocean and the country's growing integration with global trade, India is fated to be a key player in the Indian Ocean region in the coming years. In playing this role, it will meet other maritime powers in Asia, including China, Japan, the US Navy, and South-East Asian countries out on their own quests for strategic energy resources, export markets, and influence. The Indian Navy already plays an important role in the Ocean when it comes to, for instance, fighting piracy. However, there are some limitations that might delay the Navy from reaching its full potential within the planned time span.

PROCUREMENT CHALLENGES

An opportunity to buy more equipment does not necessarily mean that more equipment is acquired. Significant amounts of the capital expenditures allocated to the Indian armed forces are under-utilised and returned every year. There are three main reasons for this under-utilisation of the capital budget, namely, poor management and heavy bureaucracy; unreliable external suppliers; and unreliable indigenous suppliers. How will these challenges affect the future of the Indian Navy?

So far, neither the Prime Minister nor the Minister of Defence has professional advisers on military affairs attached to their offices. Their staffs usually consist of generalist civil servants that stay for short periods only. Hence, they lack the capacity to conduct expert assessments of plans and proposals suggested to them by the three chiefs of staff, of the Navy, Air Force, and Army. As a consequence, besides the politicians' own knowledge, the role of the political institutions is mostly limited to budgetary control and accountability of expenditures (interview, anonymous 2010c). This arrangement has had some negative consequences for relations between the civilian bureaucracy and military leaders. It has also impaired India's military - and maritime - modernisation processes. Not only this, but the process from the filing of an equipment requisition to delivery

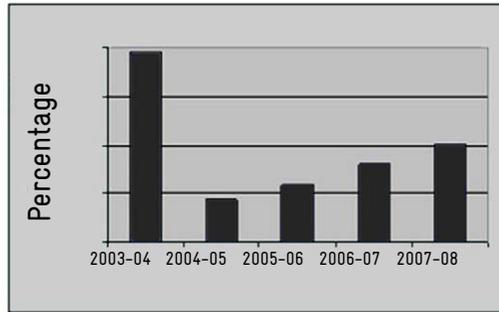


TABLE 7. Under-utilisation of capital expenditure in India's defence sector. Source: Laxman Kumar Behera, "India's Defence Budget 2008-09", *IDSAs Strategic Comments*, Institute for Defence Studies and Analyses, 19 March 2008.

and payment is long and complex (interview, anonymous 2008e). In a 2009 business survey, which assessed twelve Asian economies, the Indian bureaucracy was ranked the least efficient (Times of India 2009b). Indian bureaucrats are mostly generalists, which can lead to delays and sub-optimal decisions (anonymous, interview, spring 2009b). The ministries and different agencies are too vertical and lack sufficient coordination. Nevertheless, the government is making efforts to streamline defence acquisition processes and transform them by appointing committees such as a defence acquisition reform committee to study the problem and offer solutions.

Another serious challenge is that of unreliable external supply. The Russian aircraft carrier *Admiral Gorskov* is a classic example. The aircraft carrier, for which the agreed delivery date was 2008, is unlikely to be delivered until 2013 at the earliest. The original agreed price was USD 700 million, but the Russians revised the price upwards to USD 1.2 billion. India refused to accept a diesel-powered submarine the Russians had upgraded, following delays in the installation of a missile system (BBC 2008c; Indian Express 2007; RIA Novosti 2009a).

The unreliability of certain countries supplying spare parts also reduces the IN's options in equipment purchases. Therefore, preference is often given to the technology that comes hand in hand with the equipment; but with this proviso, that deals are not always easy to make.

According to Admiral Prakash, "the Navy has money for ordering new ships from indigenous industries, but these industries do not deliver" (interview, Prakash 2008). This reflects the third serious challenge: problems with indigenous suppliers. When the agreed schedules are not met, the budget allocation for that particular piece of equipment lapses. For instance, six French and Spanish-designed *Scorpène* submarines being constructed at the Mazagon Docks in Mumbai were originally scheduled to be delivered

in 2012 but are now postponed till 2014. The cost of the project has escalated too (Asian Defence 2009). India's military industry is run by the government, but there is likely great scope for privatisation. The Defence Research & Development Organisation, the body responsible for developing new technology, has not been running as planned.

Besides these procurement challenges, the IN frequently finds it difficult to find qualified personnel to meet the requirements of a growing fleet (interview, anonymous 2008f). And because equipment originates from many different sources, integration and coordination of the equipment procurement process is complicated.

CONCLUDING REMARKS

This study has looked at the clear shift in India's defence orientation towards the sea. The Navy has been allocated a larger part of the defence budget, which has been growing in absolute terms at the same time. India has grand plans of upgrading its navy, as shown in the table of planned maritime defence procurement. It includes aircraft carriers, replenishment ships that are necessary in a blue water fleet and nuclear-driven submarines with a focus on the nuclear component.

The main drivers behind India's maritime modernisation are a genuine need to protect the nation against non-traditional threats and guard SLOCs, underpinned by India's urge to go where its "manifest destiny" lies and a wish to take greater responsibility as an emerging power. The former point explains large parts of India's plans to upgrade its maritime capacities, but not so much the aircraft carrier and nuclear component. These would rather fit into the latter point of manifest destiny.

Considering the Indian Navy's acquisition challenges, it is likely that its plans will be delayed by many years, even decades. Most countries face similar situations in acquisition processes to various degrees. Delay is the most likely eventuality in the case of the blue water and nuclear components of India's navy, as these are currently not as crucial as a powerful anti-piracy force, a strong coast guard and a coastal-focused navy for protection of India's oceanic resources and to avert terror attacks such as the one in Mumbai in 2008. They would, however, give India an advantage in protecting long SLOCs were high-level conflicts to break out. Today, the risk of a full-scale war with Pakistan or China seems highly unlikely, and the Indian Navy cooperates with the US Navy.

There are additional factors that will regulate the Indian Navy's modernisation process. One is precisely how its neighbourly relations with Pakistan and China develop and how much potential future conflicts with these countries take out of the defence budget. Prime Minister Manmohan Singh's goal seems to be a stable region, a necessity for keeping up India's economic growth. This was indicated after the Mumbai terror attack when the peace dialogue with Pakistan froze and war rhetoric was exchanged on a daily basis. The political elite, however, decided at the time that a new war with Pakistan would cost too much. There again, it is not sure whether India would react in the same

restrained manner in the case of new terror attacks that could be linked to groups within Pakistan.

It also depends on India's future rate of economic growth and how much it can afford to prioritise defence and navy within the budget as a whole. As we have seen, it depends further on how India's indigenous defence industry develops and how defence relations with other countries are managed when it comes to equipment acquisition. But we also see that whenever something is deemed adequately important, India prioritises matters other than poverty – such as its presence in Afghanistan, where India is one of the largest civilian aid donors. A strong navy would also be an important asset for maintaining economic growth, of course.

In spite of the Indian Navy's partly national-pride-driven modernisation, especially in the Indian context where the military elite has very limited political decision-making power, how much the IN can demand is also related to budgetary limitations. Military investments do not have the greatest political traction in India and would not help in future elections. In the end, India is a democracy, and to win votes matters for the political class. Hence, the pace of India's maritime investments will also depend on the domestic political context.

When it comes to political will, two current trends are forcing India to take greater responsibility: on the one hand it is wielding more political influence, and on the other it has become more vulnerable. Viewed from New Delhi, there is a long-term requirement to help secure foreign supplies on which India is crucially dependent, as well as coastal areas. For Indian authorities, the need to reduce this strategic vulnerability is a pressing issue.

So far, it looks as if the political leadership will continue to support maritime modernisation. As India's Minister of Defence A.K. Anthony expressed it, "in the future, we have to give more support to the Navy. We have to be more careful in the seas, as 90 per cent of India's international trade is carried out through the sea route" (Express India 2009). In the aftermath of the Mumbai terrorist attack, the Indian government nominated the Navy as the main authority responsible for India's overall maritime security. The Coast Guard and the state marine police will function as assisting authorities upon request.

With a long coastline and both real and perceived large-scale maritime threats, India will most likely keep on upgrading its Navy. Although the modernisation process might move much slower than planned, it is important to keep in mind that India already has the world's fifth largest navy, it has aircraft carriers, and it has nuclear weapons. There is no doubt that NATO and Norway's merchant fleet – at times staffed by Indian citizens – will keep on meeting the world's biggest democracy out on the oceans. A strong Indian Navy could greatly contribute to enhancing security at sea.

ENDNOTES

- 1 Parts of this article draw on the book manuscript *Security and Profits in China's Energy Security Policy: Hedging Against Risk*. The Norwegian Ministry of Defence has generously provided economic funding for this research. I would also like to thank Robert S. Ross, Bernard D. Cole, Johannes Ro, Sven Holtsmark and several interviewees in the US and China for providing comments, suggestions and feedback for my research. Finally, the editor Therese Klingstedt has provided invaluable and efficient support. The opinions expressed, however, are solely my own.
- 2 Associate Professor Andrew Erickson at the US Naval War College has set up his own blog, *Cina analysis from original sources*, that provides a good starting point for those seeking information on China's anti-ship ballistic missile plans and the US response. Available at <http://www.andrewerickson.com>
- 3 In addition, China still uses the Ming-class SS. The PLAN has about 3-4 Yuan, 12 Kilo, 14 Song and 21 Ming SS.
- 4 China has about a total of 77 principal surface combatants, including 26 destroyers (4 Sovremenny, 2 Luzhou, 4 Luyang, 1 Luhai, 2 Luhu and 13 Luda) and 51 frigates (8 Jiankai, 14 Jiangwei and 29 Jianghu).
- 5 Bernard Cole from the NDU notes that "the PLAN seems to be investing little in mine warfare", while Andrew Erickson from the US Naval War College writes that China has devoted "considerable attention to ... the sea mine".
- 6 The full text of the 2010 Defence White Paper is available at http://news.xinhuanet.com/english2010/china/2011-03/31/c_13806851.htm
- 7 Based on the estimates of forces required for a blockade of tankers passing through the Strait of Malacca, only large navies and probably only the US would have sufficient naval forces to enforce a blockade of the 900-kilometer waterway that borders Malaysia, Singapore, Indonesia and Thailand.
- 8 Malik goes as far as to argue that oil security is "the single most important determinant of China's foreign policy" and reminds us that the US-imposed oil blockade on Japan led to Japan's attack on Pearl Harbour in December 1941.
- 9 A more assertive stand refers to the period 2009-2010.
- 10 The phrase "String of Pearls" was first used to describe China's emerging maritime strategy in a report titled "Energy Futures in Asia" by defence contractor, Booz-Allen-Hamilton. That report was commissioned in 2005 by the U.S. Department of Defense's Office of Net Assessment. See also Pehrson 2006.
- 11 This issue was thoroughly examined by three papers at the workshop International Order at Sea (IFS 2011).
- 12 See monthly and annual piracy and armed robbery reports by the International Maritime Organization. Available at <http://www.imo.org/ourwork/security/piracyarmedrobbery/pages/piraterreports.aspx> and International Maritime Bureau, Piracy Reporting Centre, 2009, p. 2. Available at <http://www.icc-ccs.org/piracy-reporting-centre> and "Guidance released on arming ship personnel". *MaritimeSecurity.Asia*, 8 June 2011. Available at <http://maritimesecurity.asia/free-2/piracy-update/guidance-released-on-arming-ship-personnel/>
- 13 It is likely that the 2004 tsunami that hit Indonesia and the Indian+ Ocean in December 2004 probably eliminated several piracy groups, including their supplies and infrastructure.
- 14 See <http://www.recaap.org/about/index.html>
- 15 See also selected conference briefing papers from "Global challenge, regional response: Forging a common approach to piracy," Dubai, United Arab Emirates, 18-19 April 2011. Available at http://counterpiracy.ae/briefing_papers/Forging%20a%20Common%20Approach%20to%20Maritime%20Piracy.pdf According to the IMB annual report 111 incidents were reported for the Gulf of Aden and the east coast of Somalia in 2008, an increase of nearly 200% from 2007.
- 16 See monthly and annual piracy and armed robbery reports by the International Maritime Organization. Available at <http://www.imo.org/ourwork/security/piracyarmedrobbery/pages/piraterreports.aspx> and International Maritime Bureau, Piracy Reporting Centre, 2009, p. 2. Available at <http://www.icc-ccs.org/piracy-reporting-centre>
- 17 According to the IMB, out of a total number of 49 vessels that were hijacked, and 889 crew taken hostage worldwide in 2008, 42 vessels were hijacked by Somali pirates and 815 crew taken hostage. See IMB, 2008, p. 26.
- 18 See the resolution 1836 and 1851 published on the UN webpage: <http://www.un.org/News/Press/docs/2008/sc9467.doc.htm> <http://www.un.org/News/Press/docs/2008/sc9541.doc.htm> See also UNSC resolution 1814 (2008) and 1816 (2008).
- 19 The second flotilla consisted of the destroyer DDG-167 Shenzhen and the frigate FFG-570 Huangshan, while supply ship Weishanhu, part of the first flotilla, remained in the gulf. The third flotilla included the frigates FFG-529 Zhoushan and FFG-530 Xuzhou, while the supply ship Qiandaohu replaced the supply ship Weishanhu. See China's Defence Ministry's webpage <http://eng.mod.gov.cn/#>
- 20 On 15 November 2008, the VLCC *Sirius Star* was hijacked off the East African coast and taken into Somali territorial waters while the pirates negotiated a ransom for the release of ship and crew.
- 21 China joined the ISPS on 1 July 2007.
- 22 Former President Putin of Russia and President Bush of the US, announced the creation of the GICNT during the G8 Summit in St. Petersburg, Russia on 15 July 2005. See http://www.nti.org/e_research/official_docs/inventory/pdfs/gicnt.pdf
- 23 This is, for example, illustrated by the challenges in finding a balance between developing state of the art SSN and aircraft carriers.
- 24 A sincere thanks to Narendra Sisodia and IDSA, Rolf Tamnes and IFS, my interviewees and all others who supported me throughout the process of writing and publishing this paper.

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