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# Indian Ocean Rising:

## Maritime Security and Policy Challenges

Edited by **David Michel**  
and **Russell Sticklor**

**JULY 2012**



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Policy Challenges

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# Glossary

<b>AAB</b>	Abdullah Azzam Brigades
<b>ABOT</b>	Al Basra Oil Terminal
<b>AMISOM</b>	African Union Mission in Somalia
<b>APEC</b>	Asia-Pacific Economic Cooperation
<b>APFIC</b>	Asia-Pacific Fishery Commission
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>ATS</b>	Amphetamine-type stimulants
<b>AQ-AP</b>	Al-Qaeda in the Arabian Peninsula
<b>AQ-I</b>	Al-Qaeda in Iraq
<b>ArBL</b>	Archipelagic base lines
<b>BAB</b>	Bab al-Mandeb
<b>BIOT</b>	British Indian Ocean Territory
<b>BMP-4</b>	Best Management Practices Version 4
<b>BOBP-IGO</b>	Bay of Bengal Programs Intergovernmental Organization
<b>CBMs</b>	Confidence-building measures
<b>CENTCOM</b>	United States Central Command
<b>CS</b>	Continental shelf
<b>CTF-151</b>	Combined Task Force 151
<b>EEZ</b>	Exclusive economic zone
<b>EIA</b>	Energy Information Administration (US)
<b>E&amp;P</b>	Exploration and production
<b>ESMR</b>	Evolving strategic maritime regions
<b>EU NAVFOR</b>	European Union Naval Task Force
<b>FAO</b>	Food and Agriculture Organization
<b>FDI</b>	Foreign direct investment
<b>FPDA</b>	Five Power Defense Agreement
<b>FSDS</b>	Far Sea Defense Strategy
<b>GCC</b>	Gulf Cooperation Council
<b>HMG</b>	Heavy machine gun
<b>HRA</b>	High risk area
<b>ICZM</b>	Integrated coastal zone management
<b>IMO</b>	International Maritime Organization
<b>IOC</b>	International oil company
<b>IOR</b>	Indian Ocean Region

<b>IRGCN</b> . . . . .	Iranian Revolutionary Guard Corps Navy
<b>IRTC</b> . . . . .	Internationally Recognized Transit Corridor
<b>ISA</b> . . . . .	International Seabed Authority
<b>IUU</b> . . . . .	Illegal, unregulated, unreported
<b>IWRM</b> . . . . .	Integrated water resources management
<b>LNG</b> . . . . .	Liquid natural gas
<b>LOS</b> . . . . .	Law of the Sea (also see UNCLOS)
<b>MBD</b> . . . . .	Million barrels per day
<b>MCEs</b> . . . . .	Maritime centers of excellence
<b>MDA</b> . . . . .	Maritime domain awareness
<b>MPA</b> . . . . .	Maritime patrol aircraft
<b>MSC-HOA</b> . . . . .	Maritime Security Center – Horn of Africa
<b>MSO</b> . . . . .	Maritime security operations
<b>NATO</b> . . . . .	North Atlantic Treaty Organization
<b>NOC</b> . . . . .	National oil company
<b>P&amp;I</b> . . . . .	Protection and Indemnity
<b>PAG</b> . . . . .	Piracy attack groups
<b>PCASP</b> . . . . .	Privately contracted armed security personnel
<b>PLAN</b> . . . . .	People’s Liberation Army Navy (China)
<b>PMSC</b> . . . . .	Private military security company
<b>SALW</b> . . . . .	Small arms and light weapons
<b>SIOFA</b> . . . . .	South Indian Ocean Fisheries Agreement
<b>SNMG</b> . . . . .	Standing Naval Maritime Group
<b>SOH</b> . . . . .	Strait of Hormuz
<b>SOLAS</b> . . . . .	Convention on Safety of Life at Sea
<b>SPM</b> . . . . .	Single point mooring
<b>SSBN</b> . . . . .	Ballistic missile submarines
<b>STS</b> . . . . .	Ship-to-ship transfer
<b>SUA</b> . . . . .	Suppression of Unlawful Acts
<b>SWIOFC</b> . . . . .	Southwest Indian Ocean Fisheries Commission
<b>TFG</b> . . . . .	Transitional federal government
<b>TS</b> . . . . .	Territorial sea
<b>TSA</b> . . . . .	Technical sharing agreement
<b>UAV</b> . . . . .	Unmanned aerial vehicle
<b>UKMTO</b> . . . . .	United Kingdom Maritime Trade Operations
<b>UNCLOS</b> . . . . .	United Nations Convention on the Law of the Sea
<b>UNEP</b> . . . . .	United Nations Environment Programme
<b>WBIED</b> . . . . .	Water-borne implemented explosive device
<b>VBSS</b> . . . . .	Vessel boarding, search, and seizure
<b>VLCC</b> . . . . .	Very-large crude carrier

# **Naval Power in the Indian Ocean: Evolving Roles, Missions, and Capabilities**

Rupert Herbert-Burns

## **Strategic Environment**

During the Cold War, strategic ocean theaters centered largely on the Atlantic and Pacific Oceans—the former in particular—with naval forces from NATO deployed against those of the USSR and the Warsaw Pact. Naval missions included: ensuring sea lines of communication (SLOC); deploying ballistic missile submarines (SSBNs) to key patrol areas; using attack submarines and major surface warships to identify and track opposing units; and deploying exercising amphibious groups. During this time, the Indian Ocean was not considered a major theater for potential superpower confrontation. The primary US objective was to ensure sufficient force deployment to deter any potential Soviet moves against critical oil supplies. Nevertheless, the Indian Ocean remained vital for secure exports of crude oil from the Persian Gulf producers (as it does today), and parts of the ocean's northern reaches were the setting for a major inter-state war between Iran and Iraq during the 1980s.

Though general maritime trade within and via the Indian Ocean was important during the Cold War era, volumes were far smaller compared to the trans-Atlantic and trans-Pacific trades. Today, however, the picture has altered significantly. The astonishing economic growth of China, the steady rise of India's trade and productivity, increasing exports of raw materials from developing countries, and rising exports of crude oil from the Middle East to Asia has totally recalibrated the Indian Ocean's strategic importance to the world. When this economic and trade picture is viewed within the context of the numerous, serious ongoing security challenges in the Indian Ocean Region (IOR), it is no surprise that the major naval powers and regional navies have placed the Indian Ocean as a priority theater in current and future operations, and strategic planning.

Following a concise description of the geographical parameters of the IOR, this chapter examines the primary security threats and capability requirements in the region, considers the contributions, sizes, and missions of some of the numerous extra-regional and regional navies operational in the IOR, and explores the evolving role of Asia's rising major powers as they implement strategic maritime posture in the IOR.



## Current Threats and Critical Requirements

At the time of writing, there are a substantial number of extant maritime security and safety concerns, threats, and intrastate conflicts that necessitate the active involvement of naval and/or coastguard forces. Further, several concerns exist for potential future insecurity that variously involve senior naval commanders and their political masters from numerous states. When viewed in totality, the Indian Ocean has a greater number of serious current and potential future security issues than any other ocean in the world.

### Iranian Threats to the Persian Gulf Region and Military Operations in 2011–2012

The Iranian armed forces and the Iranian Revolutionary Guard Corps (IRGC) conduct military exercises and drills throughout any given year. Usually there is nothing particularly remarkable about this; the maneuvers are often at expected times of year and are generally publically announced by the government-controlled media. However, the five-day exercise between November 16–20, 2011—‘Defenders of the Sky of Velayat III,’ the largest exercise ever held at the time<sup>1</sup>—occurred at a time of increasingly elevated tensions between Iran and Western powers, following the release of a damning International Atomic Energy Agency report that stated Iran had carried out tests ‘relevant to the development of a nuclear device.’<sup>2</sup>

This major exercise, which also saw the testing of a new air defense missile system, was followed by other major maneuvers by Iranian air, army, naval, and IRGCN forces in the Persian Gulf and the Straits of Hormuz in December 2011. The 10-day Velayat-90 exercises began on December 24, and occurred following further increases in tensions over announcements of US-led plans to seek far more exacting sanctions that would curb the Iranian’s ability to sell its crude oil on the global market. Velayat-90 involved the full spectrum of Iranian naval capabilities, including corvettes, fast attack gunboats, shore-launched anti-shipping missiles, ship-based helicopters, minelayers, and special forces.

On December 28, 2011, Iran’s Vice-President, Mohammad Reza Rahimi, threatened to effectively close the Straits of Hormuz if Western powers imposed further sanctions against Iran—specifically those targeting its oil exports.<sup>3</sup> (Ironically, Iran needs the Straits of Hormuz open more than other Gulf exporters, as it has no alternate route for its crude exports and needs to import high volumes of refined products such as gasoline, diesel, and Jet-A due to its declining domestic refining capacity). In one of the Iranian leadership’s more aggressive statements, Tehran threatened on January 3, 2012, to take unspecified action if the US Navy sent the strike carrier *USS John C. Stennis*—or any other carrier—back into the Persian Gulf. The *USS Stennis* had previously transited through the Straits of Hormuz on December 27, 2011, to take up position in the Arabian Sea to provide air support for the war in Afghanistan.<sup>4</sup>

This remarkable series of events reveals important factors concerning Iran’s domestic political and economic state. Fundamentally, international sanctions are working, which is exacerbating the country’s fragile capacity to maintain sufficient rates of crude production and generate export earnings. This is forcing the leadership to conduct provocative military exercises in an attempt to regain some control by trying to keep the international

community off-balance and divide the P5 in the UN Security Council. Nevertheless, Iran's recent behavior must also be viewed with serious consideration for its potential to spark further instability and insecurity in the region, disrupt key maritime trade, and induce oil price and insurance premium spikes in the market.

It is true that Iran could not blockade the Straits of Hormuz for long, yet it could sufficiently threaten commercial shipping and warships with shore-launched anti-shipping missiles (the Qader, Nour, and C-802), sea mines, high-speed gun boats, and Kilo class submarines to deter vessels from transiting the Straits of Hormuz for a short period. Though a substantive US-led international naval and air campaign would eventually force an Iranian capitulation and reopen the Straits of Hormuz, even a short war would have an inimical impact on oil prices and trade, force Iran further into a dangerous isolation, provoke Iranian interference in Iraq, and deepen wider insecurity in the Gulf region.

Two days after Velaya-90 ended in early January 2012, the IRGCN commander, Admiral Ali Fadavi, announced that Iran would hold the largest naval exercises ever staged by the country—called ‘The Great Prophet’—in February 2012.<sup>5</sup> That did not auger well for diplomatic attempts to diffuse tensions in a key part of Asia that has altogether too many extant flashpoints and on-going conflicts.

## Naval Force Presence, Scale, and Operations in the Indian Ocean Region

This section examines the range of extra-regional and regional naval forces in the IOR, and provides details of numbers of vessels and operations. Where applicable, details will be given concerning the various multilateral task groups in operation, their composition, and primary mission. The overview of the various naval forces in the IOR will be divided into three categories: extra-regional; regional (large); and regional (small).

### Extra-Regional Naval Forces

The deployment of naval forces and expeditionary maritime forces (including strike and amphibious groups) by countries from outside of the IOR has a long history. For the most part, the country with the biggest and most permanent presence has been the US. (In 1995, the US Fifth Fleet was reactivated as a dedicated naval formation responsible for the Persian Gulf, the Arabian Sea, and the Red Sea. The US Fifth Fleet is based in Bahrain, which is also used by the British Royal Navy.) To a lesser extent, the larger European navies—principally the British Royal Navy and the French Navy—have maintained a relatively robust presence in the IOR as well. The largest deployments of European navies occurred during the Iran-Iraq War (with peak deployment in 1987), the First and Second Gulf Wars, and during the US-led War on Terrorism. In May 2009, France formally announced the opening of a naval basing facility at Port Zayed in Abu Dhabi in the United Arab Emirates.

The very substantial US naval presence in the region has been necessitated for several key reasons, including: ensuring the freedom of navigation for vital crude exports from the region; conducting military operations during the wars in the Persian Gulf; monitoring Iranian military deployments and deterring Iranian aggression; and undertaking maritime

security operations (MSO), which include counter-terrorist, counter-trafficking, and counter-piracy missions. Force levels and composition fluctuate in accordance with mission requirements and demands in other theaters. However, in general, all of the various primary components that comprise the US Fifth Fleet—such as the Battle Force, the Amphibious Force, and Maritime Patrol Forces and Logistics—provide a sustained weight of US naval capability that dominates the region. Indeed, it could be argued that over the years the US Fifth Fleet has been the vital underpinning of all allied MSO since the mid-1990s.

This means that as MSO became a principal US mission in the wake of 9/11 and Operation Iraqi Freedom, other maritime security concerns in the IOR could be more potently addressed using the coalition-building-and-deployment formula. In this way, those MSO missions to address anti-trafficking, anti-terrorism, and anti-piracy were implemented and became highly effective, particularly Combined Task Forces 150, 158 (now CTF-IF), 151, and 152. These forces have become truly international in composition and spirit, and are emblematic of the international approach of using naval forces to tackle the various maritime security challenges in vital parts of the Indian Ocean.

Aside from those countries mentioned above, the following states have had (or still have) warships and other maritime assets in the IOR: Canada, China, EU/Europe (Denmark, Germany, Greece, Italy, the Netherlands, Norway, Portugal, Spain, and Sweden), Japan, New Zealand, Russia, South Korea, and Turkey.

Additionally, the European Union initiated its own dedicated counter-piracy force—the EU’s Naval Force Somalia (EU NAVFOR), Operation Atalanta—in December 2008. Its mandate is to contribute to:

- › The protection of World Food Programme (WFP) vessels delivering food aid to Somalia.
- › The protection of vulnerable vessels off the Somali coast, and the deterrence, prevention, and repression of acts of piracy and armed robbery off the Somali coast.
- › The monitoring of fishing activities off the coast of Somalia.<sup>6</sup>

Since its inaugural operation in 2008, EU navies contributing warships to Operation Atalanta have provided a sustained contribution to the international effort to protect ships against attack from piracy in the Gulf of Aden and Horn of Africa. However, in light of deep spending cuts being made by some major EU states, there was growing concern in the closing months of 2011 that large-scale multilateral naval operations may not be sustainable into 2012 and beyond.

## **Regional Naval Forces (Large)**

Ten states within the IOR have what can be viewed as large standing naval forces. These navies tend to have submarines, various numbers of major surface combatants (frigates and destroyers), and high numbers of coastal patrol vessels (see Figure 3.1). These states include Australia, Egypt, India, Indonesia, Iran, Israel, Malaysia, Pakistan, Singapore, and Thailand. All of these countries have discernable strategic interests in the IOR—some common and others more specific to their geographical location. Some key countries are worthy of specific examination.

**Australia.** The Royal Australian Navy (RAN) has been a routine and active supporter of the Combined Task Force-Iraqi Maritime (CTF-IM) since its inception, and also a supporter of CTF-150. The RAN's force structure enables it to deploy frigates with replenishment support throughout the IOR. The RAN is currently undergoing a period of modernization, centered on the *Hobart class* air warfare destroyer, new amphibious ships, and major upgrades to its *Collins class* submarines. The technologies and weapons going into these projects will be some of the finest in the world. The RAN has also made considerable upgrades to its patrol vessel fleet with the addition of the *Armidale class*—a vessel that is arguably an ideal ship for inclusion into some of the smaller regional naval forces.

**Egypt.** Egypt has one of the larger navies in the IOR with four submarines, nine major surface combatants, and more than 50 patrol craft. However, despite its size, the force rarely deploys far from its EEZs in the Mediterranean and Red Sea, partially due to its limited replenishment fleet. Interestingly, Egypt views all of the Red Sea as part of its sphere of interest, including the Red Sea's southern reaches, and Egypt remains very uncomfortable with foreign navies operating there. In theory at least, a greater Egyptian naval presence in the southern Red Sea could be beneficial to deterring piracy in these waters, which the country is certainly concerned about. Since the piracy threat deepened in 2008, there has been a noticeable drop in the numbers of very large crude carriers (VLCCs) using the Suez Canal, as such vessels have favored going around the Cape of Good Hope instead.

**India.** The Indian navy is by far the largest of the regional forces in the IOR. Aspects of this force, which is fundamental to long-term maritime security in the IOR, will be examined in greater detail in a subsequent section.

**Iran.** The Islamic Republic of Iran Navy has generally been configured mostly for coastal defense and littoral operations in the Persian Gulf and Gulf of Oman. In comparison to other larger navies in the IOR, it does not have a substantial traditional surface warfare capability, possessing only a handful of very dated deployable frigates. Nevertheless, five crucial facets to the Iranian navy remain key to its effectiveness as a disruptive, if not dominating, force in the region. Firstly, the navy has a long experience of using its small craft forces very effectively in an asymmetric capacity, as demonstrated initially during the 1984-1988 Tanker War (Iran-Iraq War). Secondly, Iran has good naval bases both inside and outside the Persian Gulf (Bandar Abbas and Char Bahar, respectively). Furthermore, it has military facilities on key, strategically-located islands in the Gulf (such as Jask, Abu Musa, Khark, Larak, and Sirri) which are ideal for defilade anti-shipping missile firing points that can potentially threaten the main shipping lanes in the Persian Gulf and Straits of Hormuz in times of crisis. Thirdly, the navy has three *Kilo class* submarines, which are widely regarded as amongst the most effective conventional submarines in service. Fourthly, the deployment of six warships to the Gulf of Aden in May 2009 and the deployment of a frigate and a replenishment vessel to the Mediterranean Sea in February 2011 via the Suez Canal signalled a clear intent by Iran's leadership to demonstrate an out-of-area naval capability.<sup>7</sup> Iranian surface ships also entered the Red Sea in July 2011, ostensibly on anti-piracy operations.<sup>8</sup> Lastly, despite its modest size in comparison to the other branches of the Iranian military, the navy is undergoing a modernization program, highlighted by the building of a new class of guided missile frigate and domestically-built fast missile boats.

**Singapore.** The Republic of Singapore Navy (RSN) is considered one of the best and most modern in the IOR, and its importance to the security of the vital waters of the Singapore Straits and the Malacca Straits cannot be overstated. The force is centered on six re-conditioned *Challenger class* submarines and six modern multi-role *Formidable class* guided missile frigates, commissioned between 2007 and 2009. Routine patrolling and MSO in the Straits and the piracy-prone waters around Singapore are conducted by the service's 17 corvettes and patrol boats. Maritime security is pivotal to Singapore's national and economic security, and for this reason the navy is given substantial resources. In light of the potential maritime terrorist threat to the Singapore Straits, the RSN also has very capable maritime CT capabilities. This modern maritime force operates regularly with navies from the Five Power Defense Agreement (FPDA)—Australia, Malaysia, New Zealand, Singapore, and the UK—and has also operated as part of Operation Enduring Freedom and CTF-151.

### Regional Naval Forces (Small)

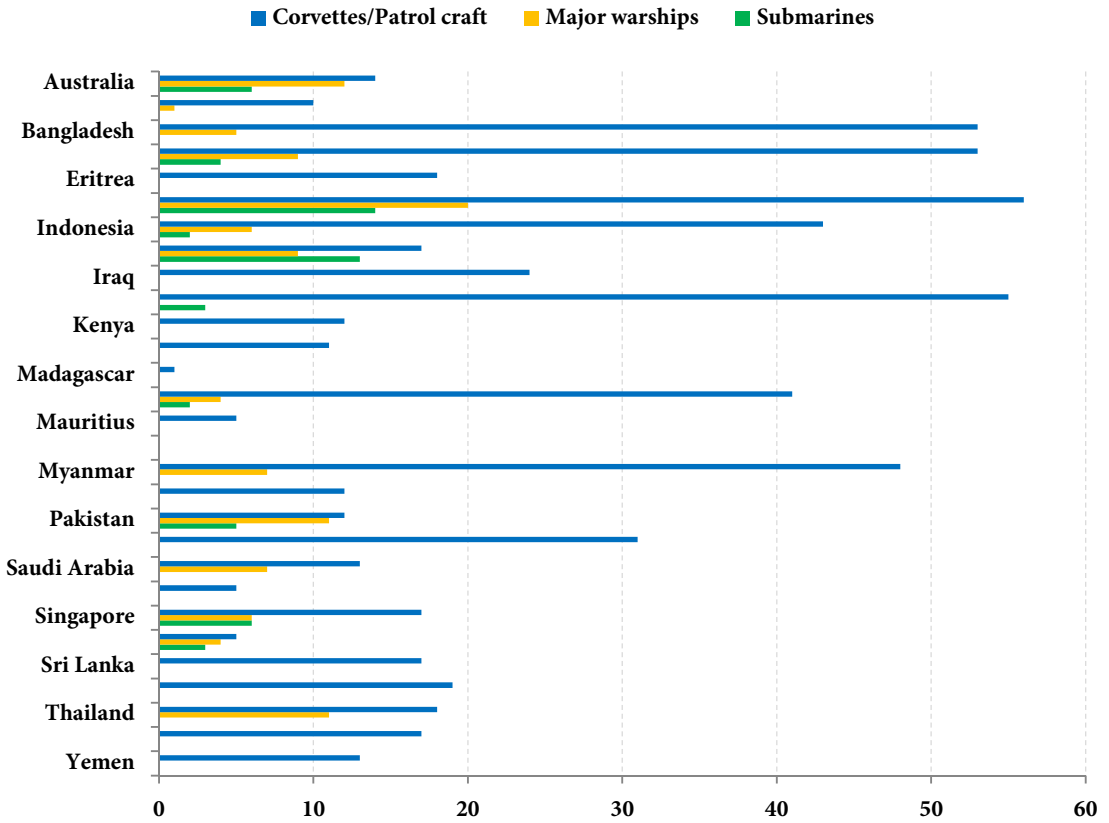
Maritime security in the IOR in the short-to-medium term is going to be founded upon the robust and sustained naval presence of the larger extra-regional navies and the large regional powers. However, in looking to the longer-term future maritime security of this vital maritime space, the increased naval and/or coastguard capabilities of the smaller regional forces will be crucial.

Currently, some of those countries that do have reasonable-sized forces are arguably not deploying at their full potential to assist with MSO near their territories. This group includes the Gulf Cooperation Council (GCC) states, which are highly reliant upon the maritime security of the IOR for the security of their exports and imports. In light of the substantial current and future MSO challenges in the Arabian Sea, some GCC states should consider altering their naval procurement planning to include more corvette-sized and larger blue-water patrol vessels. These more capable craft are far more effective in counter-piracy and counter-trafficking operations throughout the Gulf of Oman and northern sectors of the Arabian Sea due to their increased endurance and operational flexibility. In addition to the gradual expansion of their longer-range blue water capabilities with the addition of larger warships, Qatar, Saudi Arabia, and the UAE could further boost the MSO contribution of the GCC by evolving a joint at-sea replenishment capability to enable more continuous MSO for their own navies and provide support to extra-regional forces.

As Figure 3.1 demonstrates, other smaller forces could be considered for additional international assistance to boost capacity to more effectively patrol their coastlines and offshore spaces. In looking at the now-considerable reach of Somali PAGs (particularly those using captured merchant vessels as motherships), a number of key countries could be assisted in this regard to provide more endemic maritime patrolling and greater counter-piracy capabilities in Indian Ocean high risk areas (HRA). Built around leadership already being shown by Kenya and Tanzania, six countries could provide far greater contributions to MSO if they received sufficient financial and training support: the Comoros, Madagascar, the Maldives, Mauritius, Mozambique, and Seychelles.

These countries have very little or no naval and/or coastguard forces, as Figure 3.1 shows. Several of these states have received support from extra regional powers such as the US,

**Figure 3.1: Naval Capability in the Indian Ocean Region**



Source: Rupert Herbert-Burns

the UK, France, and, increasingly, India. However, with more support going forward, the combined activity of these IOR countries could help significantly in the fight to counter piracy and armed robbery, illicit fishing, and trafficking by sea in the HRA. Resources and exact requirements will of course vary, but essentially small navies and coastguards engaged in policing littoral areas, EEZs, and territorial waters require medium-sized patrol vessels. These craft can be armed and equipped in the following way:

- › A light gun (20-30 mm) and heavy machine guns (.50 cal/12.7 mm), GPMGs, and/or Miniguns (7.62 mm)
- › High-specification surface search radar and a stabilized, electro-optical surveillance system
- › A high-speed RIB (RHIB) for vessel boarding, search and seizure operations (VBSS)

The vessel should have a high engagement speed (25+ knots) and sufficient range of over 2,000 nautical miles. There are several modern designs that fit this description, including the Australian *Armidale class*, the BAE Systems Offshore Patrol Vessel, and the Damen Stan Patrol 4207 design.

## China, India, and the Indian Ocean Region

This section addresses the rise and development of Indian and Chinese naval power and deployment in the Indian Ocean, arguably one of the most important aspects of 21st-century maritime security. Indeed, the individual ambitions and counter-moves by the two dominant Asian powers are arguably more reflective of 19th-century Mahanian naval geopolitics than 21st-century maritime security concerns. In government and senior military circles in both countries, the philosophy of the founding father of naval geopolitics and power projection is readily embraced.

For China, the primary concern is securing the extensive sea lines of communication (SLOCs) that traverse the Indian Ocean and western Pacific, linking Persian Gulf crude exporters to China's main oil terminals and coastal refineries. In fundamental terms, Beijing is not willing to take the risk of leaving the security of critical eastward petroleum streams and westbound containerized exports to others in the IOR and South China Sea. For India—also increasingly reliant on imported oil and natural gas to fuel its economic expansion—the Indian Ocean is considered New Delhi's backyard, and thus is for the Indian navy to dominate and police.<sup>9</sup>

### India's Naval Expansion and Objectives

As stated earlier, India has by far the largest navy of all the countries in the IOR. Indeed, India now has one of the largest navies in the world with organic air power, an expanding fleet of modern major surface combatants, and conventional and nuclear-powered submarines, including an indigenously designed and built ballistic missile submarine, the *INS Arihant*.

As India's navy has evolved, it has demonstrated its ambition to project influence and power across the IOR and beyond. In 2004, it participated significantly in relief operations in the wake of the tsunami disaster, deploying more than 27 ships. In 2006, naval vessels evacuated more than 2000 Indian, Sri Lankan, and Nepali expatriate nationals from Lebanon during its war with Israel. Further, Indian naval ships have assisted in the aftermaths of most major cyclones in the IOR. The navy has also been involved in counter-piracy operations since 2008, with substantial deployments to the IRTC in the Gulf of Aden and the Somali Basin. As an extension of its counter-piracy mission, in 2011, the navy initiated *Operation Island Watch* to deter and disrupt Somali PAGs hunting off the Lakshadweep archipelago.

Notwithstanding the Indian navy's internationally recognized humanitarian operations and MSO activity in the IOR, it is Delhi's wider strategic objectives that are driving its naval expansion, both in terms of fleet development and modernization, and also in terms of extending maritime diplomacy and basing/logistic agreements with strategically-located countries and island states in and around the IOR. Donald Berlin, professor at the Asia-Pacific Center for Security Studies in Honolulu, and an expert in maritime strategic issues, captured the essence of India's posture with regards to the IOR:

“New Delhi regards the Indian Ocean as its back yard and deems...that India functions as, eventually, the predominant influence in this region...In the expansive view of many Indians, India's security perimeter should extend from the Strait of Malacca to the Strait of Hormuz and from the coast of Africa to the western shores of Australia.”<sup>10</sup>

**Figure 3.2: Indian Naval Capability**

Platform	No.	Class/type
Aircraft carriers	1	Viraat class (Sea Harrier)
Submarines	14	Shishumar & Sindhughosh class
Destroyers	8	Delhi and Rajput class
Frigates	13	Shivalik, Talwar, Brahmaputra, Godavari, and Giri class
Corvettes	8	Khukri and Giri class
Offshore/ASW patrol vessels	10	Kora and Sukanya class
Minesweepers	9	Pondicherry/Karwar class
Missile boats	12	Veer class
Amphibious ships	11	Magar, Kumbhir class, and LCUs
Auxiliary tankers	3	Jyoti, Aditya, and Deepak
Future ships, submarines, and aviation		Vikrant class and Vikramaditya class aircraft carriers; Kolkata class destroyers; Talwar class frigates; Scorpene class conventional submarines and Akula II nuclear attack submarines; and MiG-29 K/KUB fighters for aircraft carriers

Source: Rupert Herbert-Burns

Almost 89 percent of India’s oil requirements are imported by sea.<sup>11</sup> As Indian dependence on imported crude oil and raw materials grows, and as the demand for consumer goods increases, India’s strategic maritime objectives are being founded on ensuring the security of SLOCs from the Persian Gulf, Europe, and East Asia. The security of these vital shipping lanes is also vital for the country’s exports—most notably the increasing quantities of refined distillates, fuels, and petro-chemicals being exported throughout the IOR and beyond from facilities such as Jamnagar.

India’s dependence on the security of the Indian Ocean, combined with its need to monitor and, if necessary, check the naval activity of other regional powers, has driven the country to reach out deep into the ocean, far beyond its own littoral to enable more expansive maritime domain awareness (MDA), develop basing opportunities, and fortify naval operational and diplomatic ties. Currently, India has close naval ties with Mozambique, Mauritius, and the Seychelles, having donated patrol vessels to both of the latter countries. As part of its MDA expansion program, the Indian navy has also established a radio and radar monitoring station on Madagascar, and has long maintained monitoring capabilities in the Nicobar Islands that sit astride shipping routes leading to and from Malacca. The extension of the Indian navy’s ability to monitor the IOR has been driven in no small part by China’s steadily expanding commercial and maritime ties with Bangladesh, Iran, Kenya, Myanmar, Pakistan, Seychelles, and Sri Lanka.



Any country hoping to have a macro effect in terms of patrolling, MDA, MSO, and power projection in the IOR needs substantial assets to do so. Currently, the only navy capable of meeting these requirements is the US Navy. Nevertheless, India's naval expansion program, both quantitatively and qualitatively, is being undertaken with this purpose in mind. Key warships and systems in this regard include:

- › The acquisition of the former Russian aircraft carrier, *Admiral Gorshkov*, scheduled for delivery in 2012
- › Construction of the 40,000-ton *Vikrant class* aircraft carrier
- › Development of the 65,000-ton Indigenous Aircraft Carrier (to enable formation of up to 3 CVBGs)
- › E-2D advanced Hawkeye AEW&C aircraft
- › The commissioning of *Kolkata class* guided missile destroyers
- › Additional Talwar frigates
- › Akula-II SSNs
- › MiG-29K/KUBs
- › Additional fleet tankers for at-sea replenishment

## The Chinese People's Liberation Army Navy (PLAN) and the Indian Ocean Region

Beijing is in the midst of a well-advanced and ambitious project to expand its naval power projection capabilities well beyond its littoral, and indeed well beyond the South China Sea—large parts of which China is already claiming sovereign rights over. Aside from the alarm among India and other Asian states regarding China's expanding maritime footprint, the evolution of China's maritime power (or what Beijing has dubbed "Far Sea Defense") is also of increasing concern to the US.<sup>12</sup>

The introduction of the PLAN's "far sea defense" (or *yuanyang fangyu*) strategy (FSDS) is the primary driver behind an ongoing effort to transform the composition of Chinese naval forces. A retired PLAN rear admiral, Yin Zhuo—now a senior researcher at the navy's Equipment Research Center—has stated that the navy is tasked with two principal missions: preserving China's maritime security (including its territorial seas and EEZ); and protecting China's expanding and distant maritime economic interests, especially those in the IOR and West Africa.

Clearly reflecting the FSDS, Rear-Admiral Zhang Huachen, the deputy commander of the East Sea Fleet, recently stated that "with the expansion of the country's economic interests, the navy wants to protect the country's transportation routes and the safety of our major sea lanes."<sup>13</sup> In terms of the practical requirements for implementing FSDS, he added that "in order to achieve this, the Chinese Navy needs to develop along the lines of bigger vessels [and] with more comprehensive capabilities."<sup>14</sup> This requirement is being realized thanks

**Figure 3.3: Chinese Naval Capability**

Platform	No.	Class/type
Aircraft carriers	1 (sea trials)	Converted/refitted former 67,500-ton ex- <i>Varyag</i> ( <i>Admiral Kuznetsov class</i> )
Nuclear submarines (SSN)	5 (+2 bldg)	<i>Han</i> and <i>Shang class</i>
Conventional submarines (SSK)	47	<i>Romeo, Ming, Song, and Yuan class</i>
Destroyers	26	<i>Luyang, Luyang II, Luzhou, Luda, Luhu, Luhai, and Sovremenny class</i>
Frigates	51	<i>Jiangkai I &amp; II class, Jiangwei I &amp; II class, Jianghu I, II, III, IV &amp; V class</i>
Amphibious ships	84	
Auxilliary tankers	153	
Future ships, submarines, and aviation		Type 095 & 097 SSN, Type 052C Luyang II guided missiles destroyer (VLS); Type 045A guided missile frigate; 50,000–60,000-ton <i>Shi Lang class</i> aircraft carriers (based on <i>Varyag</i> design, and projected to be completed in 2015); and Sukhoi 33 & Shenyang J-15 fighters

Source: Rupert Herbert-Burns

to considerable increases in government defense spending. Officially, China's budget for military spending in 2010 was \$78 billion; however, the Pentagon estimated the true amount to be between \$105 and \$150 billion. Given the sheer scale of China's equipment-procurement and shipbuilding programs alone, the US figures are likely far more realistic. Figure 3.3 summarizes the current state of the PLAN.

The most obvious and significant manifestation of FSDS is the development of the converted former 67,500-ton ex-*Varyag* aircraft carrier (an *Admiral Kuznetsov class*) at the Dalian shipyard in northeast Liaoning Province. In August 2011, the Chinese state-run news agency Xinhua announced that the carrier had begun sea trials. It is not known when the vessel will be ready to join the fleet in a fully operational role; however, the PLAN is unlikely to waste time now that the ship is virtually completed. Full operational capacity will only be attained once a complete air group has been acquired and all of the necessary pilots trained. It is expected that the ship will initially embark Sukhoi 33 fighters (a naval variant of the Russian-designed 'Flanker'). Once the carrier is fully operational and combat-ready, it will mark the inception of China's capacity to deploy expeditionary organic airpower worldwide. Some analysts are predicting that this vessel could be followed by as many as four other carriers, two of which might be nuclear-powered. This would potentially enable the PLAN to deploy multiple CVBGs to more than one theatre simultaneously, providing China with precisely the kind of power projection that can and will be sent to the Indian Ocean to protect Chinese interests.

### **PLAN Operations and Activity in the Indian Ocean Region**

As a practical indication of Beijing's willingness to steadily extend the operational scope and geographical coverage of China's naval capabilities in the IOR, the PLAN has been engaged in several operations, exercises, and deployments in recent years:

- › In 2003, the PLAN conducted its first joint naval exercises with Pakistan and India (conducted separately) in the Arabian Sea.
- › Bilateral naval exercises have also been undertaken with French, British, Australian, Canadian, Philippine, and US navies in the IOR.
- › In December 2008, the PLAN deployed a task group consisting of the guided missile destroyers *Haikou* and *Wuhan*, and the replenishment ship *Weishanhu*, to the Gulf of Aden to participate in anti-piracy operations. This was the first time Chinese warships have deployed outside the Asia-Pacific region for a military operation since the 15th century.
- › The PLAN has maintained a continuous, rotating three-ship flotilla of two warships and one supply ship in the Gulf of Aden since the beginning of 2009, and has actively sought leadership of the 'Shared Awareness and De-Confliction' body (SHADE). However, the latter would require an increase in the number of Chinese warships routinely contributing to the international counter-piracy effort.
- › In August 2011, a suspected Chinese spy trawler was sighted in international waters off the Nicobar Islands. The vessel was suspected of monitoring Indian naval and military installations and operations in this vital part of the Bay of Bengal.<sup>15</sup>

### **The Indian Ocean Region and Current US Security Concerns**

Especially in light of the respective geopolitical rises of China and India, the IOR remains of considerable strategic importance to the US. Indeed, given the fact that the US forces operating under the umbrella of CENTCOM are engaged in several IOR theaters of varying intensities and priorities, it could be argued that the continuous and robust US military presence in the region is more vital than it has ever been. As a reflection of the reality of the situation the US now finds itself in regarding Indian Ocean, author Robert Kaplan (in *Monsoon: The Indian Ocean and the Future of American Power*) describes the US position in the region as one "where the rivalry between the United States and China interlocks with the regional rivalry between China and India, and also with America's fight against Islamic terrorism in the Middle East, which includes America's attempt to contain Iran."<sup>16</sup> As US policymakers and senior military officials continuously ponder decisions concerning the scale and composition of force structures required in the IOR to support operations in and around Afghanistan, Iraq, and Somalia, several complicating strategic and operational-level factors are evolving:

- › The naval expansion and deployment programs of India and China
- › The persistent challenge presented by Iranian intransigence, its facilitation of drugs and arms trafficking, and its increasing naval activity

- › Concerns over long-term base security in Bahrain as a result of political turbulence
- › The potential for the deepening intersection between Al Shabaab in Somalia and AQ-AP in Yemen
- › The possibility for a full-scale civil war or insurgency in Yemen
- › The decline of naval forces being deployed by both extra-regional and regional navies as a result of government spending cuts
- › The continued weakness of regional maritime forces, and the current lack of a multilateral instrument, regime, or treaty to evolve a collective maritime security capacity to address extant threats, in particular piracy and vessel hijacking

Notwithstanding the United States' own mounting budgetary pressures in coming years, this collection of security concerns in this critical region of the world evidences the continued need for a very strong, if not strengthened, US naval presence in the IOR well into the future.

## Maritime Strategic Picture and Naval Presence and Operations Out to 2030

Looking out over the next two decades through to 2030, it is clear that the IOR will become an increasingly important and complex maritime space from a geostrategic perspective in several key respects, characterized both by continued naval involvement from long-established actors and the steadily increasing naval task-group and expeditionary-force presence from rising Asian powers.

Aside from the continued strategic relevance of well-known and long-acknowledged chokepoints, vital terminals and ports, and primary sea lines of communication (SLOCs), certain maritime areas and littorals will emerge and develop into important strategic foci in the coming years. I have termed these areas "evolving strategic maritime regions" (ESMRs), which include:

- › **The east African coast.** Comprising the Mozambique Channel, Tanzania, Kenya, Somalia, and the Seychelles, this ESMR will develop commensurately with the expansion of offshore oil and gas exploration and development along much of the coast line (including the Seychelles and, eventually, Somalia). The development of the major petroleum terminal and hub port at Lamu in Kenya, and a planned LNG liquefaction and export facility in Mozambique, will further raise the geostrategic profile of this region.
- › **The mid-section of the Red Sea.** Situated between 24°N and 20°N, this area will grow in strategic importance as the refining capacity at Yanbu on Saudi Arabia's Red Sea coast is greatly increased, and as Saudi Aramco increases the transmission capacity of the East-West Crude Oil Pipeline (Petroline) from Abqaiq to Yanbu to offset risks associated with security vulnerabilities in the Strait of Hormuz.
- › **The northern Gulf of Oman and the Omani littoral between Fujairah and Mina al Fahal.** This area will increase in strategic relevance once the UAE's Habshan-Fujairah oil

export pipeline comes on stream in mid-2012. This may result in other Gulf Cooperation Council (GCC) exporters wanting to export through an eventually expanded-capacity line to reduce their dependence on the Strait of Hormuz in the coming years.

- › **The Bay of Bengal.** This region's rising importance is linked to the evolution of India's offshore petroleum activity; the expansion of Myanmar's Shwe gas production; Chinese investment in pipelines and deep-water port facilities in Myanmar; and the possibility of the eventual construction of the Kra Isthmus Canal in southern Thailand.
- › **The Timor Sea.** The Timor Sea's status as an ESMR stems from the steady development of its substantial gas production capacity (much of which will be exported to China as LNG); its role as a vital Australasia SLOC inter-connector; the growth of US military capacity based in Darwin, Australia; and Indonesian efforts to settle outstanding territorial disputes.

As China's energy-importing requirements and widespread commercial investments in the IOR expand, so too will its deployment of naval and expeditionary forces to monitor and protect those interests. This will be made possible by the substantial increases in its blue-water naval power-projection capabilities over the next 10-15 years, which will likely center on organic airpower and long-range logistical support capabilities. In response, the US must continually adapt its strategic posture and military deployment priorities as the IOR's strategic ontology evolves.

## Notes

- 1 Michael Connell, "Iran's military exercises send strategic message to Israel, United States," in *The Iran Primer (US Institute of Peace)*, November 19, 2010, <http://iranprimer.usip.org/blog/2010/nov/19/iran%E2%80%99s-military-exercises-send-strategic-message-israel-united-states>.
- 2 James Reynolds, "UN nuclear energy agency IAEA: Iran studying nuclear weapons," in *BBC News*, November 8, 2011, <http://www.bbc.co.uk/news/world-middle-east-15643460>.
- 3 "Iran threatens to block Strait of Hormuz oil route," in *BBC News*, December 28, 2011, <http://www.bbc.co.uk/news/world-middle-east-16344102>.
- 4 Parisa Hafezi, "Iran threatens US Navy as sanctions hit economy," in *Reuters*, January 3, 2012, <http://uk.reuters.com/article/2012/01/03/uk-iran-usa-carrier-idUKTRE80206PZ20120103>.
- 5 Robert Johnson, "Iran is now gearing up for its 'Greatest war games ever' in the Strait of Hormuz," in *Business Insider*, January 6, 2012, [http://articles.businessinsider.com/2012-01-06/news/30596495\\_1\\_new-military-exercises-naval-presstv](http://articles.businessinsider.com/2012-01-06/news/30596495_1_new-military-exercises-naval-presstv).
- 6 Maritime Security Centre, Horn of Africa, <http://www.mschoa.org/Pages/default.aspx>.
- 7 Robin Pomeroy, "Iran warships dock in Syria, Israeli fears dismissed," in *Reuters*, February 24, 2011, <http://www.reuters.com/article/2011/02/24/us-iran-syria-navy-idUSTRE71N5CZ20110224>.
- 8 Robin Pomeroy, "Iran sends submarines to Red Sea: Report," *Reuters*, June 7, 2011, <http://www.reuters.com/article/2011/06/07/us-iran-military-submarines-idUSTRE7561BZ20110607>.
- 9 "Chasing ghosts," in *The Economist*, June 11, 2009.
- 10 Sudha Ramachandran, "India's quiet sea power," in *Asia Times Online*, [http://www.atimes.com/atimes/South\\_Asia/IH02Df01.html](http://www.atimes.com/atimes/South_Asia/IH02Df01.html).
- 11 Ibid.

- 12 Edward Wong, "Chinese military seeks to extend its naval power," in *New York Times*, April 23, 2010.
- 13 Joseph Lin, "China focuses on far sea defence," *Asia Times Online*, July 9, 2010, <http://www.atimes.com/atimes/China/LG09Ad02.html>.
- 14 Edward Wong, "Chinese military seeks to extend its naval power," in *New York Times*, April 23, 2010.
- 15 "Suspected Chinese spy ship near Andamans," in *Hindustan Times*, August 30, 2011, <http://www.hindustantimes.com/Suspected-Chinese-spy-ship-near-Andamans/Article1-739769.aspx>.
- 16 Robert Kaplan, *Monsoon: The Indian Ocean and the Future of American Power* (New York: Random House, 2010), p. 9.

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