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The Indian Ocean in 2015

Big Powers & New Structures in the Indian Ocean | Maritime Competition | Search and Rescue Operations | New Threats in 2015 | Maritime Terrorism | China's Ingress | Maritime Silk Road | A Strategy for India

Vijay Sakhuja

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About the Author

Vijay Sakhuja

Dr Vijay Sakhuja is currently the Director of National Maritime Foundation (NMF), New Delhi. He writes a column for the IPCS titled Maritime Matters. See <http://www.ipcs.org/columnist/vijay-sakhuja/>

This report is an updated and compiled version of his earlier commentaries for his column.

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B 7/3 Lower Ground Floor
Safdarjung Enclave
New Delhi 110029
Tel: 91-11-4100 1900, 4165 2556, 4165 2557, 4165 2558, 4165 2559
Fax: (91-11) 41652560

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CONTENTS

Indian Ocean in 2015: A Forecast

BRICS, EU and the Big Powers: Will the Indian Ocean get further crowded in 2015?

Increasing Maritime Competition: IORA, IONS, Milan and the Indian Ocean Networks

Indian Ocean and the IORA: Search and Rescue Operations

New Threats in 2015: Challenge of Maritime Terrorism in Indian Ocean

China in the Indian Ocean: Will the Ingress further expand?

India and the Indian Ocean: A Strategy in 2015

Can India Leverage China's Maritime Silk Road Strategy?

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The Indian Ocean in 2015

Vijay Sakhujia

Director, National Maritime Foundation (NMF)

Indian Ocean in 2015: A Forecast

What could be the trend lines for 2015 in the Indian Ocean? A quick survey of events, incidents and trends in the Indian Ocean during 2014 suggests that the region witnessed cooperation, competition and inclusiveness among the littoral states.

Three baskets could be identified: geopolitical, geostrategic and geo-economic, to help forecast trends in 2015. However, a caveat is in order i.e. these baskets can spring a number of surprises, given that 'prediction is a risky business'.

IORA: Moving from Australia to Indonesia

In the geopolitical domain, the region remained peaceful and pan-Indian Ocean multilateral organizations such as the Indian Ocean Rim Association (IORA) and Indian Ocean Naval Symposium (IONS) were proactive and provided the platform and leadership to address issues of common interest among the partner states. The Perth Communiqué released in September 2014 reinforced the Association's commitment to 'building a more stable, secure and prosperous Indian Ocean region' and promote the IORA's six priority areas of cooperation. The regional navies met under the IONS banner and addressed a number of common security issues confronting the region.

Later in 2015, the IORA baton will pass from Australia to Indonesia who would continue to carry the great work done by the earlier Chair - India. The new government in Jakarta led by President Joko Widodo has endorsed the importance of maritime matters through the establishment of a new Coordinating Ministry for Maritime Affairs and announced the doctrine of 'global *maritime axis*' (*poros maritim dunia*). In addition, South Africa, the next Vice Chair of IORA, will prepare to take the leadership role in 2017. These provide 'continuity and purpose' to the IORA.

China and the Maritime Silk Road: Increasing footprints in the Indian Ocean

China would continue to make attractive offers to Indian Ocean states and seek support for the MSR. Its forays in the Indian Ocean can potentially sharpen difference between China and India and may even lead to these powers becoming more assertive.

During 2014, the Indian Ocean geostrategic environment, though peaceful, was a bit tenuous. The presence of Chinese submarines in the Indian Ocean created unease in New Delhi. Though predicted, it surprised the Indian strategic community and the Indian Navy is beefing up capabilities to respond to the Chinese forays in

China would continue to make attractive offers to Indian Ocean states and seek support for its Maritime Silk Road. Its forays in the Indian Ocean can potentially sharpen difference between China and India and may even lead to these two becoming more assertive



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One of the important positive developments in the Indian Ocean was the near total suppression of piracy in the Gulf of Aden / Somali coast. It took eight years for the naval forces from nearly two dozen countries including a number of UN Security Council resolutions, to send pirates back home

the Indian Ocean.

India was also ruffled by the Chinese Maritime Silk Road (MSR) initiative and its growing popularity among a number of Indian Ocean states particularly Bangladesh, Sri Lanka and Maldives. New Delhi believes that the MSR can potentially help China consolidate its naval / maritime strategy of access and basing in the Indian Ocean in support of PLA Navy's future operations.

Continuing US Anchor

The US will continue to be the strategic anchor and security provider in the Indian Ocean and its role welcomed by the regional

countries to 'correct security imbalances, challenge the hegemony of any dominant power and ensure regional stability'.

Likewise, the UK decision to permanently position a number of power projection platforms in the Persian Gulf prompted New Delhi to recall the idea of Indian Ocean 'Zone of Peace' and withdrawal of extra regional naval powers from the Indian Ocean.

2015: End of Piracy, Attractiveness of Drug smuggling and Re-emergence of Maritime Terrorism in the Indian Ocean

One of the important positive developments in the Indian Ocean was the near total suppression of piracy in the Gulf of Aden / Somali coast. It took eight years for the naval forces from nearly two dozen countries including a number of UN Security Council resolutions, to send pirates back home.

However, another ugly face of illegal activities at sea i.e. drug smuggling appears to have caught the attention of the Indian Ocean countries. During 2014, the multinational forces operating in the Indian Ocean intercepted a number of dhows/boats carrying narcotics from South Asia bound for destinations in East Africa. Perhaps what is more disturbing is that east coast of Africa emerged popular among drug smugglers from Colombia. Kenyan President Kenyatta's initiative to oversee the destruction of a vessel carrying about 370 Kilograms of heroin worth US \$ 11.4 million in international market exhibited Indian Ocean countries resolve to counter global trade in narcotics.

The rise of the Al Qaeda in the Indian Subcontinent (AQIS), the new wing of the Al Qaeda, has already raised a new threat whether Pakistan will become a haven for maritime terrorism.

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Will 2015 see the idea of "Blue Economy" leaping forward?

The geo-economic environment in the Indian Ocean witnessed the emergence of a new concept 'Blue Economy' led by Seychelles and Mauritius. The idea

is resonating among a number of Indian Ocean littorals including Australia, Indonesia, Bangladesh, South Africa to name a few. The leaders are committed to the sustainable development of living and non-living marine resources to enhance food and energy security.

Will 2015 ensure better Search and Rescue Coordination?

Perhaps the most traumatic and heartrending events in 2014 were the tragic loss of Malaysian Airlines flight MH 370 in the southern Indian Ocean, which still remains a mystery, and the more recent loss of Air Asia flight QZ 8501 in the Java Sea. These were stark reminders of the need to develop robust search and rescue (SAR) mechanism in the Indian Ocean. Yet, these incidents exhibited the Indian Ocean countries' commitment to provide 'public goods at sea' and a number of navies deployed their navies for SAR.

The tragic loss of Malaysian Airlines flight MH 370 in the southern Indian Ocean, which still remains a mystery, and the more recent loss of Air Asia flight QZ 8501 in the Java Sea are the stark reminders of the need to develop robust search and rescue (SAR) mechanism in the Indian Ocean

I
BRICS, EU and the Big Powers:
Will the Indian Ocean get further crowded in 2015?¹

BRICS and the Indian Ocean

At the 6th summit at Fortaleza in Brazil, the BRICS (Brazil, Russia, India, China and South Africa) countries announced a seed capital of US\$50 billion and US\$100 billion Contingent Reserve Arrangement (CRA) for the New Development Bank which would support infrastructure and development projects of the developing world. This has attracted international attention and has been labelled as an attempt by the 'emerging economies' to challenge the well-established global financial institutions such as the World Bank and International Monetary Fund (IMF) which are 'controlled' by the developed world.

These emerging economies are coastal states and the constants of geography endow them with enormous economic muscle. The Exclusive Economic Zones provide them with enormous quantities of living and non-living resources and the long coastlines are dotted with major ports. They have invested enormous capital to build maritime infrastructure and some of them are keen to support global projects such as the Maritime Silk Route mooted by China and the development of the Northern Sea Route (NSR) through the Arctic by Russia. In essence, the BRICS countries are highly dependent on the seas and are connected with each other through the Atlantic, Pacific, Indian and the Arctic Oceans over which more than 90 per cent of global trade by volume is transported.

¹ Originally published as two commentaries. See Vijay Sakhuja, "BRICS: The Oceanic Connections," IPCS Commentary #4594, 4 August 2014 & "India-EU: Exploring Maritime Convergences" IPCS Commentary #4549, 7 July 2014.

Maritime security has been high on the agenda of the BRICS nations and the respective leaders have supported cooperative security structures based on the belief that the benefits of cooperation must be enjoyed by the whole maritime community. Significantly, four of the five BRICS countries have been actively engaged in counter-piracy operations in the Gulf of Aden. They have worked closely to support UN resolutions and cooperated with other nations at bilateral and multilateral levels to fight piracy. However, they have not explored the possibility of operating under the BRICS banner. This does not preclude them from conceptualising programmes and exercises to respond to myriad maritime asymmetric threats and challenges faced by the international community. It will be useful to mention that India, Brazil and South Africa (IBSA) are already engaged in trilateral maritime cooperation and have held exercises to address issues relating to maritime security. Such an arrangement can also be explored for the BRICS nations.

Geographically, the BRICS countries are located in different continents, yet have common interests in the Polar Regions i.e. the Arctic and the Antarctic. Till very recently, these nations had focused on scientific studies and established research stations in the Polar Regions. They have now expanded their interests to include resources and trade through the NSR. Among these, Russia is an Arctic country and climate-induced changes in the region directly affect it. Its other interests include routes through the Arctic which are navigable during summer months and offshore living and non-living resources particularly oil and gas which can now be exploited. China and India too have interests in the Arctic and have recently been inducted into the Arctic Council. Both countries have set up research stations to study climate, weather, geology and atmospheric sciences and are looking for opportunities to exploit the resources in the region. Brazil and South Africa have interests in Antarctica and send scientific expeditions to the region. Given the transnational and transoceanic nature of the impact of changes in the Polar Regions, BRICS countries are important stakeholders in any discourse, development and policy formulation for the Arctic and Antarctica. The BRICS countries are parties to the Antarctic Treaty Consultative Meeting (ATCM) and could develop common research programmes for the Polar Regions, undertake joint scientific expeditions, and share data.

One of the significant maritime projects currently under development by the BRICS countries involves the fiber optic cable from the Pacific to the Atlantic through the Indian Ocean. This 34,000 km long and 12.8 terabit capacity network, the third longest underwater cable in the world, connects Vladivostok in Russia, Shantou in China, Chennai in India, Cape Town in South Africa and Fortaleza in Brazil. This will help the BRICS to develop an exclusive and secure intranet and transact critical financial and security data. Apparently, the cable is meant to circumvent attempts to eavesdrop on the digital data sent through networks owned by IT companies which are alleged to have supplied information/records to the National Security Agency (NSA) of the US. It is important to mention that underwater cables are not free from the dangers of data interception and theft and the US possesses capabilities to undertake such covert operations.

In essence, the maritime domain offers the BRICS countries opportunities to develop common understanding on a host of issues that range from sustainable resource development, trade, safety and security of sea lanes, and ocean governance. These issues can potentially foster mutual trust and cooperation among the BRICS partners and contribute to global security.

EU, India and the Indian Ocean

The much awaited European Union Maritime Security Strategy (EUMSS) was approved in June 2014 by the General Affairs Council of the European Union (EU). The document builds on the European Commission's Joint Communication, titled 'for an open and secure global maritime domain: elements for a European Union maritime security strategy', and is a link between the Integrated Maritime Policy (IMP) and the European Security Strategy (ESS). This paves the way

for the 28 nations of the EU to identify and undertake concrete actions and projects to enhance the EU's maritime security.

To implement the strategy, a rolling action plan is expected to be in place by the end of 2014 – that will focus on pan-Europe maritime domain awareness, exchange of information among the EU member states, navies, civil and marine authorities; addresses issues of technology development, common training; and multinational research programmes.

In its geographic scope, the EUMSS covers the European sea basins (the Mediterranean, Baltic Sea, Black Sea, North Sea, Arctic waters, the Atlantic Ocean) and as far beyond as Asia, Africa and the Americas – thus giving it both an internal and external dimensions. The strategy aims to address a number of asymmetric threats and challenges, at home and overseas, that impact the freedom of navigation at sea. These include piracy and armed robbery, maritime terrorism, trans-national organised crimes such as drug smuggling, gun-running, human trafficking, proliferation of weapons of mass destruction, security of maritime infrastructure, cyber warfare and environmental risks.

The EUMSS action plan will also have to address the issue of material and humans resources. This is likely to pose a major challenge for the EU since some member states have scaled down their defence spending resulting in significant reduction in inventories of the respective naval and maritime forces. Although France, Germany, Italy, Norway, Spain, and the UK are major naval powers, possess significant capabilities, and are forward-deployed across the globe, there are others who can barely manage to protect their national waters.

One of the significant aspects of the EUMSS is maritime multilateralism. The strategy acknowledges that modern day maritime threats and challenges are complex and some of these may require 'international response' that would necessitate engagements with international partners and participation in regional and global forums. In that context, EU's engagement in the Indian Ocean through the EU Naval Force in Operation Atlanta in the Gulf of Aden off the coast of Somalia to counter piracy is significant. EU naval and air assets work closely with the US-led Task Force 150, NATO, and other Asian navies to fight piracy.

The EUMSS also notes that sea lanes between Asia and Europe are of critical importance to the EU. A huge proportion of EU commercial traffic passes through Asian waters and according to an assessment, the volume of trade is expected to increase by 121 per cent between 2006 and 2016. Therefore, the Indian Ocean is strategically important to the EU's economic vitality.

Among the Indian Ocean states, India is a major regional power with whom the EU signed a strategic partnership in 2004. The India-EU Strategic Partnership Joint Action Plans (2005 and 2008) offer the framework for dialogue and cooperation in maritime security domains such as counter-terrorism, organised crime, piracy, counter drug and illegal arms trafficking, cyber-terrorism, and non-proliferation of weapons of mass destruction and their delivery systems.

The level of cooperation between India and the EU in the ongoing counter-piracy operations off the coast of Somalia is noteworthy and is a good example of a broader multilateral framework. It can be a model for future India-EU maritime cooperation under the EUMSS and can be leveraged in times of crisis. At the tactical level, interoperability will be essential for developing a common doctrine and establishing standard operating procedures for conducting operations with EU navies. This would not be a major problem given that the Indian Navy conducts naval exercises with a number of EU navies at a bilateral level; for instance, the Varuna series with the French Navy and the Konkan series with the British Royal Navy. These exercises have become more sophisticated in content and both sides field a number of advanced platforms including aircraft carriers and nuclear submarines. Besides the Spanish Navy and the Italian Navy, several

other European navies have engaged in passage exercises with the Indian Navy in the Indian Ocean and Atlantic waters. Capacity building, particularly of the smaller states of the Indian Ocean Region such as Mauritius, Seychelles, the Maldives and Madagascar can be a substantive agenda for cooperation between India and the EU.

Finally, the EUMSS offers a number of opportunities for India and the EU to identify issues of cooperation and build synergies under its aegis to address complex maritime threats and challenges in the Indian Ocean.

Iran and the Indian Ocean²

Iran's suspected nuclear weapon programme, the associated economic sanctions, hardliner Iranian lawmakers' demand for uranium enrichment, and the inconclusive Geneva talks to urge Tehran to roll back its nuclear programme has attracted international attention and marked the headlines of the Middle East politico-diplomatic and security discourse in 2013. Amidst this debate, Iran also announced that it could enrich uranium to 50 per cent purity level for use in nuclear powered submarines but would limit it for now to 20 per cent purity for use in power generation.

During the last few years, Iranian naval power has grown and Tehran has unveiled new ships, submarines, UAVs, missiles etc at regular intervals aimed at deterrence and power projection. Iran's current naval order of battle is about 170 vessels and nearly 90 per cent are less than 500 tons displacement that engage in coastal/shallow water operation. These support the Iranian strategy of littoral warfare against the other Gulf navies and asymmetric strategy against the naval power of the United States and its allies that are forward deployed in the region. Interestingly, Iran has two parallel navies i.e. the regular Islamic Republic of Iran Navy (IRIN) belonging to the traditional Iranian Armed forces i.e. the "Artesh," which undertakes distant water deployments and the Islamic Revolutionary Guards Corps Navy (IRGCN) which emerged after the Islamic revolution, operate closer to shores. Although the two naval arms have different role, area of operation, equipment, and operating philosophy, they complement each other.

It is noteworthy that the Iranian naval industrial complex is able to build a variety of platforms indigenously but Russia and China are known to be the major sources of technologies. Among these, the Iranian submarine fleet merits closer examination. Between 1992 and 1996 Iran commissioned three Russian origin 877 EKM Kilo-class diesel-electric submarines. In 2007, it developed the Ghadir-class midget submarines (believed to be based on North Korea's 90-ton Yogo-class submarine) which form the bulk of the underwater force. These are most difficult to detect particularly when resting on the seabed and this could be the possible tactics that the Iranian Navy could employ during hostilities. Further, given their numbers, these could overwhelm enemy's technological superiority. Iran has often threatened to mine the Strait of Hormuz and block international shipping carrying oil and gas from the Gulf region. This had prompted the United States to deploy additional minesweeping ships.

In recent times, the IRIN has made a number of out of area deployments showcasing endurance and combat capabilities overcoming years of defensive operations in the Gulf waters. In November 2013, 'Younus', a Kilo class submarine, Alborz, Alvand class frigate and Bandar Abbas a light replenishment ship made port call to Mumbai, India and Colombo, Sri Lanka and latter's navy chief even visited the submarine.

²² Originally published as an IPCS Commentary. See Vijay Sakhujia, "Iran Navy: Developing Long Sea Legs, #4237, 6 January 2014

The Iranian leadership has defined the Indian Ocean as the primary area of operation and to focus on the triangular sea space encompassing “the golden triangle of Malacca, Bab el-Mandeb and the Strait of Hormuz’. The IRIN now sails beyond this area as far as the South China Sea in the east and the Mediterranean in the west suggesting that ‘sanctions against the Islamic Republic have neither hindered Iran’s scientific progress nor decreased the country’s military capability’. It undertakes port calls, sea training missions for cadets, and fights pirates in Southeast Asia, South Asia and the Gulf of Aden as also ‘conveying the message of peace and friendship’ and seeking navy cooperation.

There is also a belief that deployments towards South China Sea could be to secure Chinese military hardware shipments to Iran and an Iranian flotilla visited Zhangjiagang port in China in March 2013. Likewise, the Iranian Navy has undertaken deployments to the Red Sea and the Mediterranean and made calls at friendly ports in Sudan, Libya and Syria. Iranian naval leadership has plans to deploy the navy in the Atlantic (off the US coast) and the South Indian Ocean (Antarctica) in the future. These would certainly help the IRIN develop long sea legs.

The IRIN has regularly conducted naval exercises such as the annual joint services Velayat series and the IRGCN holds the Fajr and the Fath series of naval exercises. The IRIN also engages in bilateral naval exercises with the Azerbaijan Navy in the Caspian Sea and the Royal Oman Navy Rescue and Relief drills. However, it has no experience in multilateral operations other than participating as an observer in the Pakistan Navy’s multinational exercises in Aman 07. This could be the reason that the IRIN operates independently in counter piracy operations in the Gulf of Aden where it has successfully thwarted several piracy attempts. It will be useful to see if India can engage Iran and Oman navies which could operate together to address a number of threats and challenges confronting the North Arabian Sea.

II Increasing Maritime Competition: IORA, IONS, Milan and the Indian Ocean Networks³

The Indian Ocean rim countries have establishment a number of multilateral maritime mechanisms to address non-traditional security threats and challenges confronting the region. The Indian Ocean Rim-Association of Regional Cooperation (IOR-ARC), rechristened as Indian Ocean Rim Association (IORA), is the only pan Indian Ocean economic grouping and brings together countries straddling three continents i.e. Africa, Asia and Australia. In recent times it has begun to address maritime security issues.

The Indian Ocean Naval Symposium (IONS) is a 35-member Indian Ocean security apparatus which facilitates exchange of views among the naval professionals to evolve common understanding of maritime security issues in the region. Likewise, Milan (confluence) is a gathering of navies from India’s extended neighbourhood of Southeast Asia, Australia and New Zealand that aims to develop cooperative mechanisms. The 2014 Milan at Port Blair in the Andaman & Nicobar Islands in the Bay of Bengal was significant from the perspective that 17 navies participated including two from Africa (Kenya and Tanzania), three Indian Ocean island nations (Mauritius, Maldives and Seychelles) and the navies of Philippines and Cambodia made their debut.

³ Originally published as an IPCS Commentary. See Vijay Sakhuja, “Increasing Maritime Competition: IORA, IONS, Milan and the Indian Ocean Networks,” IPCS Commentary #4320, 3 March 2014

While IORA, IONS and Milan are successful models of maritime cooperation in their own right, they have shied from addressing hard security issues which appear in two forms; first, there is a gradual accretion of naval power by the Indian Ocean littorals; and second the continued presence of extra regional naval powers that are forward deployed in the Indian Ocean to support national strategic and economic interests. In essence, the Indian Ocean region emerges as an arena of cooperation and competition.

Among the Indian Ocean littorals, with over 140 vessels, the Indian Navy is the most powerful and its order of battle includes aircraft carriers, submarines, expeditionary platforms, long range maritime surveillance aircraft and these are supported by a sophisticated network centric capability including a dedicated military satellite. Like India, Australia is an important Indian Ocean power and is building its combat capabilities to include new submarines, air defence destroyers, fighter jets, and long range maritime patrol aircraft, etc. France has rejected the notion that it is an extra regional power in the Indian Ocean and its navy is forward deployed at Mayotte, Le Reunion, Djibouti and Abu Dhabi. Iran is an acknowledged regional military power in the Arabian Gulf and in recent times it has made forays deep into the Indian Ocean. Similarly, the Pakistan navy has an impressive array of air, surface and sub-surface capabilities, and has emerged into a powerful force.

Among the extra regional powers, the United States is the predominant military power in the Indian Ocean region and has several port access and basing agreements with Australia, Bahrain, India, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, Singapore, Thailand, United Arab Emirates (UAE), Yemen etc. The US Navy has been the primary component of projecting US military power in the Indian Ocean. The British Royal Navy is forward deployed in the Indian Ocean in support of the US led operations and on account of the 1971 Five Powers Defence Arrangement (FPDA). The European Union is a new entrant in the Indian Ocean security dynamics and Operation Atlanta in the Gulf of Aden off Somalia to counter piracy which is its first ever naval operation.

Among the Asian powers, China's engagements in the Indian Ocean is through its naval task force (CTF 525) and since 2008, it has deployed 25 warships in 10 groups. Japan is another major Asian power which has forward deployed its maritime and air forces in the Indian Ocean that operate out of its military facilities in Djibouti. Russia too is interested in the security dynamics of the Indian Ocean and the Russian navy's show of 'flag' and 'presence' in the Indian Ocean reflects its ambition to engage in distant water operations. Likewise, the NATO has keenly observed the security dynamics in the Indian Ocean.

Although the Indian Ocean strategic milieu offers immense opportunities for maritime cooperation, the naval buildup by regional countries and the forward presence by extra regional powers showcase competitive dynamics. The US is the strategic anchor of the region and its presence is perceived both as coercive and also as a security provider. Interestingly, some regional countries have created legitimate space for the US naval presence in the Indian Ocean to correct security imbalances, challenge the hegemony of the dominant power and ensure regional stability. The US Navy conducts joint naval exercises and shares intelligence which assures the alliance partners of its political and diplomatic commitments. However, for some, the US is perceived as hegemonic reminiscent of the colonial period and adds to insecurity. Under the circumstances, it is important for IORA, IONS and Milan to also explore confidence building measures to preclude unwarranted naval standoffs.

III

Indian Ocean and the IORA: Search and Rescue Operations⁴

The international efforts to locate the wreckage of Malaysian Airlines flight MH 370 which went missing over the southern Indian Ocean nearly seven months ago have continued unabated. Till such time the debris and the black box is located, the cause of the accident will remain a mystery; but the unfortunate incident brought to fore the challenges posed by the underwater domain and also the national, regional and global limitations of search and rescue (SAR). Post the MH 370 tragedy, a number of conferences, workshops and symposia have highlighted the gaps in SAR in the Indian Ocean and the issue has been high on the national agenda as also in multilateral organisations.

The Indian Ocean Rim Association (IORA), a pan-Indian Ocean multilateral organisation, has highlighted the need for regional efforts to build SAR capacity and capability. The Perth Communiqué in October 2014 listed a number of maritime security issues, such as sea lane security, terrorism and piracy that require the attention of the member states, and has advocated enhanced cooperation. Significantly, the Communiqué highlights the need for ‘greater coordination and cooperation among search and rescue services in the Indian Ocean region’. The document also makes reference to the IORA’s Memorandum of Understanding (MoU) on Search and Rescue to address this challenge and build capacity to respond to maritime and aviation related incidents. Australia, Comoros, Seychelles, Singapore and South Africa signed a MoU on SAR cooperation and Australia announced a \$ 2.6 million fund to support Sri Lanka, Mauritius and the Maldives – three countries bordering its SAR region – for building capacities to respond to SAR incidents.

In the Indian Ocean, each coastal state is allocated a Search and Rescue Region (SRR) and they have set up national systems and arrangements such as Rescue Co-ordination Centres (RCC) and Rescue Sub-Centres (RSC), SAR facilities and communications in the area, including detailed plans for conducting SAR operations. The Indian Ocean is also divided into a number of sea spaces called NAVAREAS (VII- South Africa; VIII S-Mauritius; VIII N- India; XI-Pakistan; and X-Australia). These are administered by the coordinator country that is responsible for providing vital navigation warnings, including weather data.

A number of international conventions on SAR such as the 1974 Convention for the Safety of Life at Sea (SOLAS), 1979 International Convention on Maritime Search and Rescue (SAR), 1982 LoS Convention, and the International Aeronautical and Maritime Search and Rescue (IAMSAR) have been adopted by member states.

Similarly, there are regional agreements that support national commitments to develop and render SAR. For instance, the ASEAN countries have adopted the 1992 ASEAN Declaration on the South China Sea which urges states to explore cooperation in the South China Sea for SAR operations. The 2002 Code of Conduct notes that “pending a comprehensive and durable settlement of the disputes, the Parties may explore or undertake cooperative activities such as search and rescue operation;” and the ADMM Plus encourages practical cooperation for maritime security and HADR.

The IORA initiative can potentially transform the Indian Ocean regional SAR response capabilities. At the core of such initiative would be capacity-building through technology and

⁴ Published originally as an IPCS Commentary, See Vijay Sakhujia, “Indian Ocean and the IORA: Search and Rescue Operations,” IPCS Commentary #4724, 3 November 2014

training. A successful SAR operation is dependent on surveillance assets such as ships, aircraft, satellites and underwater systems. It is important to mention that most Indian Ocean littorals lack surveillance assets and proper equipment to conduct SAR operations, and only a few can undertake deep sea rescue. Similarly, training and enhanced planning is critical for SAR. It involves detailed organisational structures and strategies for mobilisation of the SAR resources for a quick response.

The IORA initiative is a welcome development given that the Indian Ocean witnesses a number of natural occurrences such as cyclones and tsunamis, dense shipping and enormous fishing activity. Also, its turbid and opaque waters make underwater operations complex, resulting in immense challenges for SAR agencies.

The Indian Ocean cooperative multilateral arrangements include the Indian Ocean Naval Symposium (IONS). The 2014 Perth Communiqué encourages a dialogue between IORA and IONS. It can be argued that if IORA is a politico-diplomatic arrangement for the regional states to formulate multilateral agenda and policy, the IONS is a tool for executing national commitment to IORA. In that context, the IONS charter of business, among other issues, is on 'concept-development and associated table-top and/or real-world exercises' on SAR including submarine rescue merit attention and further development.

It would be in fitness of things that IONS goes beyond dialogues, conferences and workshops to practical exercises at regional/sub-regional levels to respond to maritime insecurities in the Indian Ocean and develop common standard operating procedures to build interoperability among the various maritime agencies to address SAR

IV

New Threats in 2015: Challenge of Maritime Terrorism in Indian Ocean⁵

The recent attempt by the Al Qaeda in the Indian Subcontinent (AQIS), the new wing of the Al Qaeda, to take control of PNS Zulfiqar, a Pakistan Navy frigate berthed in Karachi harbour and use it to attack US Navy warships has showcased the continued vulnerability of naval platforms to terrorists. The purported plan was to take control of the frigate and use other militants who would embark the ship by boat and stay onboard as 'stowaways' and sail out. When on the high seas, the ship would 'get close to the U.S. ships.....and then turn the shipboard weapon systems on the Americans.'

The unsuccessful AQIS raid left 10 terrorist dead including a former Pakistan Navy officer Awais Jakhri, who is reported to have had links with Jihadi elements. Further interrogations have led to the arrest of three other Pakistan Navy personnel in Quetta in Baluchistan who were attempting to escape to Afghanistan.

The attack exposed chinks in Pakistan's naval defences particularly strategic infrastructure which host millions of dollars worth of naval hardware such as ships, submarines and dockyards. It is important to mention that this is not the first time that terrorist groups have managed to penetrate Pakistan's naval defences. In the past there have been at least two other attacks on highly sensitive naval platforms and on foreign naval personnel. In 2002, 14 persons including 11 French naval engineers working on the submarine project were killed and 23

⁵ Published originally as an IPCS Commentary. See Vijay Sakhuja, "Maritime Terrorism: Karachi as a Staging Point," IPCS Commentary #4680, 6 October 2014.

others were injured when an unidentified man blew himself up with his car after ramming it into a 46-seater Pakistan Navy bus outside the Karachi Sheraton Hotel.

The second attack was on Pakistan's naval air base Mehran and was the handiwork of the Tehrik-i-Taliban Pakistan (TTP), a coalition of militant groups based in the tribal areas of northwestern Pakistan. As many as 15 attackers from the 'Brigade 313' of the Al Qaeda-Harakat-ul-Jihad-al-Islami group led by Ilyas Kashmiri, took part in the operation which left 18 naval personnel killed, 16 wounded and two US built P-3C Orion maritime surveillance aircraft destroyed. Significantly, the attackers had good knowledge of the naval base including security arrangements, exit and entry points, and the details of the hangers and aircraft.

These attacks showcase that Karachi is a staging point for maritime terrorism particularly for those groups who have taken a liking for naval targets. In fact, Karachi has been labeled as the 'terror capital' and is a paradise for terrorists, gunrunners, and drug smugglers. The city is rife with ethnic strife and home to crime syndicates particularly Dawood Ibrahim who is wanted in India for a number of crimes including the 1993 Mumbai blasts. The city is also known for the 'point of departure' for the 2008 Mumbai terror attacks by the Lashkar-e-Taiba (LeT) who sailed from Karachi on three boats and later hijacked the Kuber an Indian fishing off Porbandar, on the Gujarat coast and landed on unsecured waterfronts in south Mumbai.

Perhaps the most discomfiting issue of the attacks is that Jihadi groups have dared the Pakistan Navy and caused enormous damage to its reputation, morale and material. They have penetrated the rank and file of the Pakistan Navy and the attacks on PNS Mehran and PNS Zulfiqar were planned and executed with the help of naval personnel.

Referring to the PNS Zulfiqar attack, Pakistan Defence Minister Khawaja Asif made a statement in the Parliament that the attack could not have taken place "Without assistance from inside, these people could not have breached security," The entry of Jihadi elements is sure to cause suspicion among the other multinational partners with whom the Pakistan Navy works closely, particularly the United States. It is believed that some elements in the Pakistan Navy were upset with the US its raid deep into Pakistan which led to the killing of Osama bin Laden.

The above attacks also have a bearing on the safety and security of Pakistan's nuclear installations. In the absence of a nuclear submarine, the Pakistan Navy has drawn plans to build a rudimentary sea-leg of the nuclear triad with ships and conventional AIP-submarines fitted with nuclear weapons. Any attempt to attack or hijack these platforms and use them as 'bargain chip' for any Jihadi agenda would cause grave damage to global security.

However, it is fair to say that the Pakistan Navy is a responsible force and has taken part in a number of multinational operations in the Arabian Sea-Gulf of Aden fighting pirates and terrorists under the US led multinational coalition force TF-151. It has also been the force commander of the coalition forces during these operations and its professionalism has received accolades.

The Pakistan naval authorities would have to sanitize the force and rebuild its image of a highly professional fighting force free of radical elements and jihadi thought with a strong commitment to serve national interests and Pakistan's international commitments to ensure order at sea.

V

China in the Indian Ocean: Will the Ingress further expand?⁶

China's maritime ambitions are expanding and it is making forays into the deep seas beyond its waters. The State Oceanic Administration (SOA) has drawn plans to build scientific research vessels and mother ships for submersibles. Further, the scientific agenda for 2014 includes the 30th scientific expedition to Antarctica and 6th expedition to the Arctic. China will also dispatch its research vessels to the northwest Pacific to monitor radioactivity in international waters and its foray into the Indian Ocean would involve seabed resource assessment including the deployment of the 22-ton Jiaolong, China's first indigenously built manned deep-sea submersible.

China's scientific urge had driven its attention to seabed exploration. In the 1970s, it actively participated in the UN led discussions on seabed resource exploitation regime. At that time it did not possess technological capability to exploit seabed resources. In the 1980s, it dispatched ships to undertake hydrographic surveys of the seabed. On 5 March 1991, China registered with the UN as a Pioneer Investor of deep seabed exploitation and was awarded 300,000 square kilometers in the Clarion-Clipperton area in the Pacific Ocean. Soon thereafter, China Ocean Mineral Resources R & D Association (COMRA), the nodal agency for seabed exploration and exploitation of resources was established. In 2001, China obtained mining rights for poly-metallic nodule and in 2002, poly-metallic sulfide deposits in the Southwestern Indian Ocean. In 2011, COMRA signed a 15-year exploration contract with the International Seabed Authority (ISA) that entrusted it with rights to develop ore deposit in future.

Although the Jiaolong has been built indigenously, it is useful to mention that the hull, advanced lights, cameras and manipulator arms of Jiaolong were imported and aquanauts had received training overseas. In August 2010, Jiaolong successfully positioned the Chinese flag at 3,700 meters under the sea in South China Sea and displayed China's technological prowess in deep sea operations. China also possesses an unmanned deep-sea submarine Qianlong 1 (without cable) which can dive to 6,000 meters and an unmanned submersible Hailong (with cable) that can take samples from the seabed. As early as 2005, six Chinese aquanauts (five pilots and one scientist) had undergone deep sea dive training in the US. Currently, China has eight deep-sea submersible operators including six trainees (four men and two women) being trained at State Deep Sea Base in Qingdao on a 2-year course.

China's plans to deploy the manned deep-sea submersible Jiaolong in the Indian Ocean merits attention. The primary task for Jiaolong is to gather geological data, carry out assessment of seabed resources, record biodiversity for exploration and mining. However, China faces a number of technological challenges to develop undersea exploration and extraction systems and equipment. There are few external sources to obtain specialised equipment and a majority of the 'geophysical surveying instruments on the international market are not allowed to be sold to China' amidst fears that these highly sensitive sub-sea sensors could be used by the Chinese navy to develop underwater detection system particularly for the submarines.

It is not beyond the realm of imagination that Jiaolong can potentially monitor submarine cables which carry nearly 99 per cent of digital data and crisscross the Indian Ocean. It will be useful to mention that the undersea cables are prone to covert tapping and in the past, there have been a

⁶ Originally published as two IPCS Commentaries. See Vijay Sakhuja, "China in the Indian Ocean: Deep Sea Forays," IPCS Commentary #4286, 3 February 2014 & "Search and Rescue at Sea: Challenges and Chinese Capabilities," IPCS Commentary #4374, 7 April 2014

number of incidents when undersea cables were targeted. For instance in 1914, Great Britain dispatched a ship to cut Germany's five trans-Atlantic submarine telegraph cables, and in 1917 it eavesdropped on a German communication to the Mexican government. During the Cold War the US had undertaken tapping operation of the Soviet underwater cables and Operation Ivy Bell involved USS Halibut deployed in the Sea of Okhotsk to tap the Russian submarine communication cable between Petropavlovsk on the Kamchatka Peninsula to the Soviet Pacific Fleet headquarters at Vladivostok. The 'Five Eyes Alliance (United States, Canada, Britain, Australia, and New Zealand) is designed for eavesdropping on the network of cables which carry global phone calls and internet traffic.

Jiaolong can possibly monitor maritime and naval activity in the Indian Ocean. This fits well into China's Indian Ocean strategy where its shipping remains vulnerable to a number of asymmetric threats and challenges as also the regional navies that can disrupt the free flow of Chinese shipping from Africa and the Gulf region. Jiaolong can also monitor the US, UK, France and Indian nuclear submarine activity by trailing their radioactive signature. It is fair to argue that the deployment of the Jiaolong goes well beyond its scientific utility and supports the Chinese navy's maritime strategy.

Chinese Challenges and Capabilities in Search and Rescue at Sea

It was quite natural for China to dispatch its naval and maritime assets for search and rescue since majority of the 217 passengers onboard the MH 370 were Chinese. Soon after the incident, China deployed 14 ships, six marine police ships, and two aircraft in the South China Sea. This included destroyer Haikou, amphibious landing ship Jingtangshan which has a big flight deck and is capable of carrying several helicopters, and the amphibious assault ship Kunlunshan.

Seven Chinese ships were deployed west of Perth in the Southern Indian Ocean. The Jingtangshan has been on deployment for over three weeks now and has clocked over 7,500 nautical miles. The other ships of the PLA Navy include Dong Hai Jiu, China's largest patrol ship Hai Xun and Nan Hai Jiu. The PLA Navy has also redeployed its Task Force 525 from the Gulf of Aden to south of Australia's Christmas Island. Meanwhile, China has marshaled the services of its icebreaker Xue Long (Snow Dragon), which was in the Antarctica a few months ago and was in the news for the rescue of the Russian icebreaker Akademik Shokalskiy, is operating in the southern Indian Ocean.

As far as air and space assets are concerned, two Chinese IL-76 planes are deployed from Perth and they carry out regular air searches. Further, a number of Chinese satellites have supported search operations and Gaofen-1 has beamed high-resolution images that have been 'valuable and helpful in narrowing down the search area'.

Although the search and rescue operations have showcased China's maritime capability, it has also exposed several limitations. Does China lack technology to carry out deep sea underwater operations? Only a few Chinese ships possess proper equipment and can conduct deep sea rescue. There is limited 'sea-probing equipment and telecommunications' available with the PLA Navy. Likewise, the IL-76 is a transport plane and lacks necessary equipment to conduct sub-surface operations. Also, Chinese satellites did not receive any signals from MH 370 unlike the western satellites. Interestingly, it has been noted that the Chinese media relied on Western sources and shared broken news with the Chinese public and for that China 'urgently needs to boost its international soft power'.

VI India and the Indian Ocean: A Strategy in 2015⁷

Six years ago, in November 2008, a group of Pakistan-based terrorists landed at unsecured waterfronts in Mumbai, the financial capital of India, and attacked public places such as hotels, restaurants, and a railway station. Although the Indian security forces were quick to respond, the attack, popularly referred to as 26/11, exposed three significant gaps in India's maritime security apparatus: a. the porous nature of India's coastline; b. the poor surveillance of the maritime domain; and c. the lack of inter-agency coordination.

Post the 26/11 attacks, the Indian government undertook a number of proactive measures to restructure coastal security and push the defensive perimeter further away from the coast into the seas. The focus was on building national maritime domain awareness (NMDA) grid via a number of organisational, operational and technological changes. The Indian Navy has now set up the National Command Control Communication Intelligence (NC3I) network that hosts the Information Management and Analysis Centre (IMAC).

It connects 41 radar stations (20 Indian Navy and 31 Coast Guard) located along the coast and on the island territories, and helps collate, fuse and disseminate critical intelligence and information about 'unusual or suspicious movements and activities at sea'. There are plans for additional coastal radar stations to cover gap/shadow zones in the second phase; these are currently addressed through deployment of ships and aircraft of the Indian Navy and the Coast Guard.

The IMAC receives vital operational data from multiple sources such as the Automatic Identification System (AIS) and the long-range identification and tracking (LRIT), a satellite-based, real-time reporting mechanism for reporting the position of ships. This information is further supplemented by shore based electro-optical systems and high definition radars. Significantly, maritime domain awareness is also received through satellite data.

There are 74 AIS receivers along the Indian coast and these are capable of tracking 30,000 to 40,000 merchant ships transiting through the Indian Ocean. The AIS is mandatory for all merchant ships above 300 tons DWT and it helps monitoring agencies to keep track of shipping and detect suspicious ships. However the AIS is vulnerable to 'data manipulation'. According to a recent study, the international shipping manipulates AIS data for a number of reasons, and the trends are quite disturbing.

In the last two years, there has been 30 per cent increase in the number of ships reporting false identities. Nearly 40 per cent of the ships do not report their next port of call to prevent the commodity operators and to preclude speculation. Interestingly, there is growing tendency among merchant ships to shut down AIS, and 'go dark' and spoofing (generating false transmissions) is perhaps the most dangerous. It can potentially mislead the security forces who have to respond to such targets and on finding none, leads to loss and wastage of precious time and human effort which adversely affects operational efficiency of the maritime security forces.

At another level, small fishing boats can complicate maritime domain awareness; however, it is fair to say that they can also be the 'eyes and ears' of the security agencies. Indian authorities have undertaken a number of steps, including compulsory identity cards for fishermen;

⁷ Published originally as an IPCS Commentary, See Vijay Sakhuja, "India and Maritime Security: Do More" IPCS Commentary #4764, 1 December 2014.

registration of over 200,000 fishing boats and tracking them through central database; security awareness programmes, etc. Furthermore, Marine Police Training Institutes have been established. They are coordinated by the apex National Committee for Strengthening Maritime and Coastal Security (NCSMCS) that is headed by the Cabinet Secretary.

The Indian government has also drawn plans to reinforce the NMDA via multilateral cooperation. It is in talks with at least 24 countries for exchanging information on shipping to ensure that the seas are safe and secure for global commerce. India has placed maritime security high on the agenda through active participation in the Indian Ocean Rim association (IORA), the Indian Ocean Naval symposium (IONS), the East Asia Summit (EAS), the ASEAN Defence Ministers Meeting (ADMM) Plus. Additionally, it is in talks with other countries to institutionalise intelligence exchange among the respective security agencies.

The Indian Navy and the Coast Guard have been at the helm and have developed a sophisticated strategy that involves joint exercises, hot lines, exchange of intelligence and training with a number of navies. It will be useful to explore if the NC3I is suitably linked to the Singapore-based Information Fusion Centre (IFC) established at Changi Command and Control Centre (CC2C), which has received much acclaim as an effective MDA hub.

It is fair to argue that weak legislations can compromise maritime security. In this connection, it is important to point out that the Coastal Security Bill drafted in 2013 is yet to be tabled in the Indian Parliament. Unfortunately, the draft Piracy Bill placed before the law makers in 2012 lapsed due to priority given to other issues

VII

Can India Leverage China's Maritime Silk Road Strategy?⁸

It was the Maldives's turn to receive a sermon on the Maritime Silk Road (MSR) from China. Chinese President Xi Jinping invited Maldivian President Abdulla Yameen to participate in the 21st Century MSR, expand cooperation in tourism, trade and infrastructure, and enhance maritime cooperation. Apparently Yameen assured Xi that his country would "respond to the Chinese initiative." Ali Hameed, former vice foreign minister of the Maldives, too had stated that the MSR was of interest to the Maldives. Earlier, Xi had approached Sri Lanka to consider the MSR, and Colombo indicated that it would actively examine the proposal. The MSR was also raised during Indian Vice President Hamid Ansari's visit to China a few months ago.

Unlike in Sri Lanka and the Maldives, the MSR has sent the Indian strategic community into a tizzy. A number of articles, commentaries, Op Eds, discussions and sound bites have concluded that the MSR is nothing but a Chinese ploy to get a naval 'foothold' in the Indian Ocean and reflects China's creeping influence in the region. These reactions are quite natural given that China has aggressively pursued the agenda of building maritime infrastructure in friendly countries such as Pakistan (Gwadar), Sri Lanka (Hambantota) and now the Maldives – that are seen as bases/facilities to support People's Liberation Army Navy's future operations in the Indian Ocean and also the Chinese attempt to 'encircle' India.

However, it will be useful to examine the MSR through the prism of maritime infrastructure development and explore if India can leverage the MSR to its advantage. China has developed a sophisticated concept of marine economy that has been facilitated by its long coastline. Nearly 40 per cent of the Chinese population, 5 per cent of cities, 70 per cent of GDP, 84 per cent of

⁸ Published originally as an IPCS Commentary. See Vijay Sakhujia, "Maritime Silk Road: Can India Leverage It?," IPCS Commentary, #4635, 1 September 2014

direct foreign investment and export products are generated within 200 km of coast. In 1998, the Chinese government published a White Paper on marine economy which identified twenty different sectors for the development of the national economy. The China Ocean Information Center announced that the marine output in 2013 grew 7.6 per cent year on year to 5.43 trillion Yuan (\$ 876 billion) accounting for 9.5 per cent of the national economy. In essence, the coastal provinces have contributed substantially to the overall national strength in terms of economic growth and play an important role in developing an export-oriented economy.

Today, China figures among the top countries in shipbuilding, ports (particularly container cargo), shipping, development of offshore resources, inland waterways, marine leisure tourism, and not to forget it is one of the top suppliers of human resources who are employed by international shipping companies.

China's shipbuilding capacity is notable and is supported by plentiful of cheap labour and domestic ancillary industry which is endowed with exceptional engineering skills. Seven of the top ten global container ports are in China and the Chinese shipping fleet of 6,427 vessels ranks second behind Japan with 8,357 ships. Similar successes are seen in China's fisheries production which is projected to reach about 69 metric tonnes by 2022 and it will continue to be top world exporter with 10 metric tonnes by 2022. Likewise, China ranked third as a tourist destination in 2012. The coastal regions are dotted with marinas, water sport parks and beach resorts and Sanya, Qingdao and Xiamen are home to the growing yacht and luxury boating industry.

These capabilities have been built over the past few decades and has placed China among the major maritime powers of the world and top Asian maritime powers – beating both Japan and South Korea. China is leveraging these capabilities and offering to develop maritime infrastructure in friendly countries that are willing to accept the offer – which at times makes an attractive investment opportunity, and can help these exploit the seas to enhance economic growth, and ensure food and energy security.

There is a sea change in the maritime strategic thinking of China and India. While the former has harnessed the seas to build its power potential, the latter needs to undertake a strategic evaluation of its maritime potential. India needs to make major policy changes to develop maritime infrastructure, offshore resources and exploit these on a sustainable basis. Although India is pursuing the path of building a modern three-dimensional navy with nuclear submarines, a new appreciation of the multifaceted maritime economic activity needs New Delhi's attention.

India lacks maritime infrastructure and technology to exploit offshore marine organic, mineral and hydrocarbon resources that are critical to ensure sustained economic growth – which is high on the current government's agenda. It would therefore be prudent to understand the MSR through the prism of an opportunity.