The Growing Power of the Indian Navy: Westward Bound

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Introduction

India is a rapidly developing nation enjoying impressive economic growth.[1] Its influence in the international arena has increased over the years and is expected to continue to rise.[2] Alongside this expanding influence, the country is experiencing a burgeoning sense of identity as an international power, and there is a growing perception in India that its national interests extend far beyond its sovereign borders. Hence the country's efforts to protect those interests through maritime diplomacy and, in the same context, project its maritime power in relevant regions. In other words, India is interested in expanding its capabilities to protect its vital interests, by expanding its presence and gaining sustained sea control and maritime awareness beyond its territorial boundaries.

This article reviews India's gradual rise to the status of international power and its growing interest in the "expanded neighborhood,"[3] with a focus on the western section of that "neighborhood." This comprises, first and foremost, the maritime region west of India through the Strait of Hormuz in the north and the Gulf of Aden and Horn of Africa in the south, and also includes the Persian Gulf, the Red Sea, and the East African coast. The terms "power projection," "sea power," and "blue-water navy" will be explained through a review of the Indian Navy's development and its

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potential deployment west of India. Lastly, and in view of these trends, the article examines the implications of that developing potential for Israel.

India as a Rising Power

Since gaining independence, India has seen itself as a key player in the international arena and has acted independently, even provocatively, toward the US and the Soviet Union. However, its economic and military strength have not been commensurate with its global aspirations. The end of the Cold War brought about a substantial change in India's geopolitical and strategic environment: the Soviet Union, India's biggest supporter, collapsed; its great regional adversary, China, had already laid the groundwork for its own growing power; the road to improved relations with the US opened up; and the Indian economy underwent extensive domestic reform and began to grow at an impressive rate. India's scope of possibilities broadened in light of its expanding economic power. Further potential for developing spheres of influence emerged in the wake of the Soviet Union's collapse and limited American ability to establish its presence in different areas of conflict across the globe.

Moreover, India's economic development necessitated an increased supply of raw materials and finished goods. Accordingly, India, poor in natural resources and possessing a limited industrial infrastructure, began to take an interest in international sea lines of communication (SLOC)[4] so as to ensure a supply of those resources. Finally, the ascent of China, India's "natural adversary," led to revised strategic thinking that emphasized the need for enhanced Indian power. In other words, India felt it was important (and not unrealistic) to challenge China in regions that are deemed vital for its national security.

It is worth noting that China places great importance on the "String of Pearls," key SLOCs extending from the Chinese mainland to East Africa, and invests great effort in securing its influence in those regions. The "String of Pearls" routes surround India and constitute part of China's strategy for securing its eminence in the Indian Ocean. Not surprisingly, this strategy increases Indian fears of exclusion from this region.

The changes underway in India are slow and long term. Gross domestic product (GDP) is still significantly lower (when adjusted for exchange rate) than those of Germany, the UK, and France (all considerably smaller countries). India's industrial base remains limited, infrastructures are inadequate, and the country faces internal challenges of Herculean proportions. To a large extent India's national security objectives and their

derivate strategies in the post-Cold War era are still evolving. Nevertheless, there is a consistent and ongoing process of developing an identity of an important regional power, with interests and influence in regions that are not necessarily adjacent to its borders. This process continues under varying ruling coalitions, with no apparent dispute over this general direction among the Indian public and its decision makers.

India's Sphere of Influence Defined

In a 2007 speech, former Secretary of the Indian Ministry of Defense[5] Shekhar Dutt defined the sphere of influence that India aspires to:

> Given the size of the country and its role in the comity of nations, our security concerns are not limited to our immediate neighborhood...India's area of security interest extends beyond the confines of the conventional geographical definition of South Asia...India's security environment extends from the Persian Gulf to the Straits of Malacca across the Indian Ocean, including the Central Asian region in the North West, China in the North East and South East Asia.[6]

In addition to this agreed definition, there are Indian leaders who extend this region further to the west and south. For instance, according to former Foreign Minister Yashwant Sinha, "extended neighborhood" for India "stretches from the Suez Canal to the South China Sea and includes within it West Asia, the Gulf, Central Asia, South East Asia, East Asia, the Asia Pacific and the Indian Ocean Region."[7]

India's primary interests in these regions are to defend its exclusive economic zone (EEZ), to secure India's access to SLOCs across the Arabian Sea, and to solidify its status in these regions vis-à-vis China. In this context it is important to note that the Arabian Sea serves as a junction for maritime routes that run through the Suez Canal and the Red Sea, as well as the Persian Gulf. Former Chief of the Indian Navy, Admiral Sureesh Mehta, said:

> Within the overall national and defense framework, our primary maritime military interest is to ensure national security, provide insulation from external interference, so that the vital tasks of fostering economic growth and undertaking developmental activities can take place in a secure environment. Consequently, India's maritime military strategy is

> underpinned on "the freedom to use the seas" for our national purposes, under all circumstances.[8]

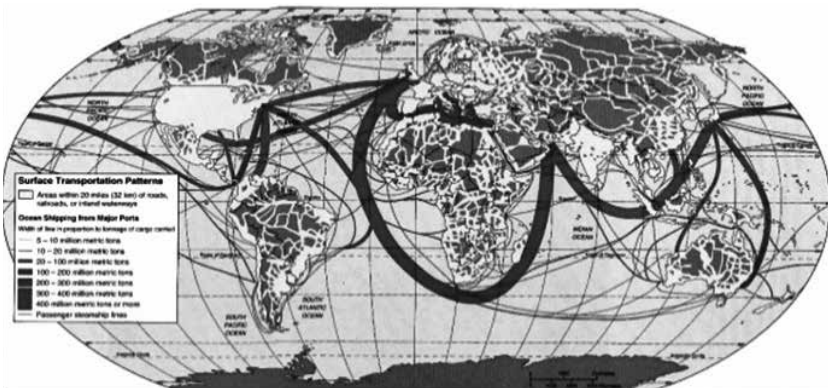
Other interests can also be noted, including the conspicuous example of the "special" relationship between India and the Persian Gulf region. In fact, India's commercial and cultural ties with the Gulf region date back to ancient times. Those relations deviated somewhat from their path following India's independence, but the basic underlying structure of mutual interests appears to have contributed to their recent flourishing. India also enjoys the constant flow of high revenues from Indian foreign workers in the Gulf. Moreover, a sort of "natural" reciprocal linkage seems to be evolving, with the Gulf states needing Indian technology, know-how, and skills, and India needing energy and investments from the Gulf. From India's point of view, this is a "natural" alliance that is stable and convenient for all concerned.

To a large extent, the Gulf region serves as a natural hinterland for India in terms of commerce and the supply of resources. The region's importance has grown as a result of India's growing thirst for natural resources. The need to expand and diversify energy sources (different types of energy sources and different countries of origin) is vital for India. To be sure, India is not alone in its craving for the Gulf's energy resources. Other powers, including India's arch-rival China, are equally thirsty for resources. The US withdrawal from Iraq and anticipated withdrawal from Afghanistan are fueling apprehensions over a possible power vacuum, due to weakened American influence in the region. The growing potential for oil production in East African countries, as well as active oil fields in Sudan and Egypt, further underlines the need to secure access and trade routes to energy sources in the region.

The map below illustrates the course of Indian SLOCs that run adjacent to the Horn of Africa and the Arabian Peninsula, as well as the southern coasts of Iran and the Strait of Hormuz; clearly, India has an interest in defending these routes. Moreover, the various dangers lurking along these lanes are not merely theoretical. Even today, pirates operating close to the Somali coast and in the Gulf of Oman attack Indian merchant vessels. Such piracy and international maritime terrorism are especially worrisome in light of East Africa's rapidly increasing capacity for oil production.

In many respects, the United States Navy currently supplies a "public good" that ensures the free flow of trade and resources from the region.

World Transportation Patterns



However, even the US Navy has limited capability. Furthermore, American interests are not always compatible with those of other countries, and any cooperation with other navies is subject to American limitations. India is concerned that it will not be able to continue relying wholly and exclusively on the US Navy in this regard. Friction between India and the US was already apparent in 2003, against the backdrop of an American initiative for joint maritime cooperation within the framework of the Proliferation Security Initiative.[9]

Iran's unique role as India's provider of an overland route to Central Asia is important in this context,[10] due to India's inability to access this region via its adversaries China and Pakistan (who are themselves allies). India attributes significant importance to developing ties with central Asian countries. Those countries are perceived inter alia as an important source of natural resources, but also as potential threats for national security (through terrorism). The ambitious project of developing the Iranian port of Chah Bahar is a case in point. India contributed substantially to the construction of this port, which is meant to serve as an Indian passageway to central Asia, and is currently involved in laying a railway between Chah Bahar and Afghanistan. Concurrently, the generous financial assistance extended[11] to Afghanistan, second in scope only to US assistance, is only one of many examples attesting to India's desire to keep a watchful eye on central Asian countries. Iranian ties with extremist Sunni groups in Afghanistan and Pakistan can also assist India in restraining those groups. In fact, India needs Iran to serve as a kind of counterbalance against its

adversary, Pakistan. India also has an interest in using its connections with Gulf states to prevent overly close relations between the two Sunni allies, Saudi Arabia and Pakistan.

Power Projection and Sea Power

The term "power projection" refers to a country's ability to exercise political, economic, strategic, and military power in order to advance its strategic objectives.[12] Among other things, the military component of power projection also relates to an ability to employ military force for a sustained period of time, far from its territorial boundaries. However, the ability to execute a pinpointed attack on distant targets does not fully constitute power projection, as it lacks the element of a sustained period.

Traditionally, power projection relied on "sea power," defined as the ability to exert influence "at sea and from the sea."[13] In addition to military components, such power includes many other elements, such as the merchant fleet, fishing fleet, maritime industries, ship building, and repair. Sea power is relative, not absolute, and is important at times of both peace and war.

A central component of military sea power is large surface vessels.[14] These vessels have the capacity to maintain their presence at sea for extended periods at longer ranges form their home ports, and possess greater firepower in comparison with smaller combat ships and military aircraft. Most power projection operations in recent decades have involved significant use of sea power (Iraq, Libya, Afghanistan, Somalia, Falklands).[15]

Naval operations at high seas are conducted in the framework of battle groups/ task forces. These groups include a number of ships with differing functions (anti-aircraft, anti-submarine, anti-missile, minesweeping, missile launching), which complement and defend each other. Historically, battle groups evolved around aircraft carriers during World War II; even today battle groups are built around large command ships such as aircraft carriers or amphibious assault ships (LPD/LDH). With a displacement of 40,000 to 60,000 tons, these ships provide the command and logistical basis of the battle group, while also capable of employing fighter aircraft (in the case of aircraft carriers). The ability to deploy aircraft at sea combines the advantages of the two different operational capabilities: the speed and flexible response of combat aircraft, together with the long range and endurance of ships. Nevertheless, while aircraft carriers and amphibious

assault ships enable performance of a variety of power projection missions, some of those missions, such as defending trade routes or fighting piracy, do not necessarily require the use of these types of vessels. Today, only 13 countries operate aircraft carriers, with India being one of them.[16]

The Development of the Indian Navy

In its first decades the Indian Navy was composed mainly of small ships (under 3,000 tons), and for the most part carried out missions aimed at defending Indian littoral waters. However, as early as 1957 the Navy purchased a "light" aircraft carrier, the *Vikrant,* from Britain. This model, which was built during World War II, was smaller than standard aircraft carriers (20,000 as compared to 40,000 tons), and enabled the deployment of sort-range combat aircraft. The *Vikrant* led a battle group of three ships, based in the Andaman Islands. This group participated in the India-Pakistan war of 1971, when its combat aircraft attacked remote ports in Bangladesh. The war led to a recognition of the Indian Navy's operational shortcomings, as well as an understanding of the need to build a "blue-water navy," which would be able to operate across open oceans.

In the early 1980s India began purchasing destroyers and missile-carrying frigates, along with smaller ships designated for operations in territorial waters. The ships were constructed mainly by foreign shipyards in Britain and Russia, while a local infrastructure for the construction of large ships was under development. Even today India requires significant technological assistance in incorporating various weapons systems aboard its ships.

By the late 1980s, the Indian Navy included five destroyers, three frigates, four corvettes, and six submarines equipped with cruise missiles. This was in addition to two aircraft carriers: the veteran *Vikrant*, which was decommissioned in 1997, and another light aircraft carrier (*Viraat)*, purchased in 1986 after 17 years of service in the Royal Navy. Early in the twenty-first beginning century, the Indian Navy boasted one aircraft carrier, eight destroyers (7,000 tons), nine frigates (4,000-5,000 tons), eight corvettes (2,500-3,000 tons), and ten cruise missile-carrying submarines. These ships are equipped with missile for ranges of 200-300 kilometers, including Indian-made cruise missiles.

Table 1depicts the size of the Indian fleet at the start of the 21st century, and compares the number of its platforms with those of other navies during

that period.[17] From the table we can conclude that the Indian Navy, although not in the same league as veteran powers like France and Britain, is engaged in a rapid process of developing power projection capabilities in a number of fields. Its progress during these years is significant in comparison with small regional navies, such as that of Pakistan. Other comparative studies of world navies classified the Indian Navy, together with China, one level below the European powers (Britain and France), but above regional navies such as those of South Africa and Israel.[18]

Table 1. Comparison of Navies

	India	Britain	France	China	Pakistan
Aircraft carriers	1	3	1		
LPD class ships		3	6		
Ballistic submarines		4	4	2	
Cruise missile submarines	10	12	8	9	11
Destroyers	8	11	14	21	
Frigates	9	20	24	12	6
Corvettes	8			28	

Current Projects

In the past decade the Indian Navy has overseen a series of projects of building new vessels that will increase its operational capability as a blue-water navy. These projects, mostly conducted by local shipyards, are well advanced, with some on the verge of completion. However, all of them include integration of weapon systems from foreign sources. The following section surveys these projects and their progress, divided according to aircraft carriers, combat vessels, and submarines.[19]

Aircraft Carriers

In 2004 India began building two new, larger aircraft carriers. The first contract, between India and Russia, included the sale of a "standard"[20] Kiev class Russian aircraft carrier, which was launched in 1987 but decommissioned in 1996. The deal included a full overhaul of the ship's systems and the addition of a second runway. Disputes over price held up the transaction until an agreement was concluded in March 2010 ($2.35

billion). In June 2012 the aircraft carrier *Vikramaditva* began a number of sea trials prior to delivery to the Indian Navy.[21] The ship, 283 meters in length with a displacement of 45,500 tons, will employ standard MiG-29K aircrafts as well as Ka-31 naval helicopters.

The second contract, for building a locally constructed aircraft carrier, the *Vikrant*, was signed with the Cochin shipyard in 2004. In 2006 the final structure of the carrier was determined, i.e., a standard aircraft carrier measuring 260 meters in length with a displacement of 40,000 tons. In December 2011 the completed hull of the carrier was floated out of dry dock, signifying 40 percent completion of the project, with sea trials expected at the end of 2014 and entry into active service in 2015. The carrier is designed to carry standard MiG-29Ks, Indian Tejas aircraft, and Ka-31 naval helicopters.

Additionally, in June 2007 an amphibious LPD class ship, with a displacement of 16,500 tons, the *Jalashwa,* entered service with the Indian Navy. The ship, which carries a number of landing craft and Sea King transport helicopters, was procured from US Navy surplus and enables the deployment of amphibious forces away form India's littoral waters.

Combat Vessels

In order to increase the number of large combat vessels at its disposal, the Indian Navy has for the past decade been directing a number of projects for the construction of new destroyers and frigates, mainly in collaboration with local shipyards. These projects include:

Project 15A – for the construction of three Kolkata class destroyers, with a displacement of 7,000 tons each, in association with the Magazon shipyard in Mumbai. These destroyers are equipped with Indian-made BrahMos cruise missiles and Israeli-made Barak surface to air (SAM) missiles. The first ship of this type entered service in 2011; the remaining ships are in advanced stages of construction.

Project 17 – for the construction of three Shivalik class frigates, with a displacement of 5,300 tons each, in association with the Magazon shipyard in Mumbai. These frigates are equipped with Russian SS-N-27 Club-N cruise missiles. The project was completed with the entry of the last frigate into service in 2010.

Talawar project – for the construction of three Talawar class frigates with a displacement of 4,000 tons each, in association with the Russian

Yantar shipyard in Kaliningrad. These frigates will join the three frigates of this class already in service with the Indian Navy. The ships are equipped with BrahMos and Club-N cruise missiles. The first ship entered service in 2012 and the remainder are in advanced stages of construction.[22]

Project 28 – for the construction of up to 12 missile-carrying corvettes, with a displacement of 2,500 tons each, in association with Calcutta shipyards. These ships will be equipped with Club-N missiles and Israeli Barak-8 SAM missiles. The first four ships are in advanced stages of construction, with entry into service expected in 2012.

Most of these projects involve Israel Aerospace Industries (IAI), which supplies the Indian shipyards with radar systems and the Barak-8 missile for anti-aircraft and anti-missile defense.

Submarines

Since 2004, the Indian Navy has overseen a project for a locally built nuclear powered ballistic missile submarine (SSBN). The submarine, named the *Arihant,* has been undergoing sea trials since 2010 and should be declared operational in 2012. The development of the submarine's missile launching capability is underway alongside India's success in completing development of an intercontinental variant of the *Agni* missile.[23] Additionally, in June 2012 the navy completed the upgrade of ten kilo class cruise missile-carrying submarines, which have been in service since the 1990s. These submarines were overhauled, and equipped with modern Club-S cruise missiles.[24] The navy is also leasing a Russian nuclear-powered Akula class attack submarine, which likewise carries cruise missiles.

At the current rate of progress, therefore, the above projects are likely to be completed in 2015. By then, the Indian Navy will comprise a sufficient quantity of large combat vessels for up to three battle groups. Following completion of the *Vikramaditva* aircraft carrier, the navy will include two active aircraft carriers as well as an amphibious LPD class vessel. This quantity of flag ships will make it possible to construct two to three battle groups. Given India's need to divide its navy between an eastern command and a western command, the creation of three battle groups will enable greater freedom of action in deploying the navy in the Gulf of Aden. By contrast, the establishment of only two battle groups would reduce the navy's scope of action to the eastern Arabian Sea.

Indian Navy Power Projection Mission

Over the past decade the Indian Navy, despite its limited size, has worked persistently to project its power and capabilities to the furthest edges of its delineated "expanded neighborhood." These efforts included activities from the South China Sea to the eastern Mediterranean, and specifically within the western part of the Indian Ocean.[25]

A key example of these efforts is the protection of freedom of navigation and maritime security. As part of this mission, India is already maintaining a permanent presence in two key areas in the Arabian Sea: since 2008 there has been a permanent combat vessel stationed in the Gulf of Aden to protect against pirate attacks on Indian merchant vessels. In addition, reconnaissance planes and combat vessels are permanently stationed near the Seychelles, aimed at monitoring the islands' economic zone, as well as maritime traffic along the East African coast. A further increase in the size of Indian naval forces would likely lead to the permanent presence of an Indian battle group in the Gulf of Aden and increased Indian involvement in the struggle against piracy.[26]

Furthermore, India is demonstrating its presence by "showing the flag" in new regions. Since the beginning of the 21st century, a flotilla of three or four Indian vessels has made annual visits to the Gulf of Oman, the Persian Gulf, the Red Sea, and on occasion the Mediterranean. The flotilla enters various ports in the region and conducts joint exercises with local navies,[27] further substantiating and deepening relations with the regional nations. With the introduction into service of a second aircraft carrier and further growth in the size of the navy, such visits are likely to develop into the continuous presence of an Indian battle group in the Gulf of Oman.

Another mission of the navy is to protect Indian citizens in foreign countries and evacuate foreign citizens from countries of conflict. India's ability in this area was illustrated in July 2006, when four Indian warships evacuated foreign citizens from Lebanon at the height of clashes between Israel and Hizbollah.[28] Future Indian action could even include involvement and assistance in humanitarian crises, as instanced in India's involvement in the 2004 tsunami.[29]

Additionally, in the past the Indian Navy executed amphibious operations deploying significant ground forces in distant countries to confront revolutions and rebellions against local governments.[30] Such missions, which were previously limited to countries with India's

traditional zone of influence, could signify a new stage in India's power projection capabilities – military involvement in more remote locations where India maintains vital commercial and energy interests.

In light of its interest in accessing Central Asia, India might feel the need to warn other players against attacking Chah Bahar port in Iran, a theoretical situation that could result in a confrontation with a third party.

India-Israel Naval Relations and their Potential Development

The relationship between India and Israel has developed rapidly since the establishment of diplomatic relations in 1992.[31] In commercial terms Israel is considered an "insular state," with 98 percent of its foreign trade conducted via maritime routes.[32] Currently, Israel's major trade routes pass through the Mediterranean Sea; however in the past the Red Sea was also an important route and might be reconsidered as such in the future. As an insular state, Israel needs to safeguard its SLOCs and develop economic and security ties overseas; hence there is considerable strategic logic in further developing Israeli-Indian cooperation in the maritime arena. Beyond their extensive trade relations, there are large scale Israeli arms sales to India, as well as enhanced intelligence collaboration. However, these mutual relationships have thus far been restricted, in part by India's extensive relations with Iran and Arab nations and its large Muslim minority.

These limitations have resulted in relatively minor military cooperation between the two countries, with India preferring to maintain a very low public profile on these relationships (mainly in political and security contexts). Still, there is ongoing contact between the Indian and Israeli navies, including visits of Indian ships to Israeli ports,[33] as well as reciprocal visits by senior officers of both countries.[34] These visits fulfill the role of "showing the flag" and demonstrating sustained presence, which signifies national interests and key foreign policy objectives.

However, the scope of these visits exceeds the need for securing trade routes and signifies a commonality of interests regarding the growing challenges to global security in the maritime arena. Globalization has magnified a variety of such threats, including maritime terrorism, piracy, proliferation of weapons of mass destruction, and the smuggling of weapons, drugs, or illegal immigrants. Confronting these threats necessitates "maritime domain awareness" (MDA)[35] and induces the

incentive for technological and operational collaboration between the navies.

Technological cooperation between Israel and India developed in the 1990s in response to the Israeli defense industry's need to find new markets, which coincided with India's need for advanced military technology. The crisis in the Russian defense industry, combined with American unwillingness to sell arms, led India to seek alternative sources for modern technology. The Israeli defense industry identified correctly the potential of the Indian market, particularly India's need for modern maritime technology.

This technological cooperation was based on mutual interests in both navies: the Indian Navy assured itself high quality projects, advanced technology, and system specifications suited to the modern naval arena. The Israeli Navy, through its defense industries, would spearhead development and equip itself with systems that – barring Indian collaboration – budget restrictions would otherwise not have permitted (in terms of investment in development and the scope of procurement).

Within the framework of this technological cooperation India equipped its vessels with Barak air defense missiles and on-board radar systems. Additionally, India procured UAVs for maritime patrol missions, as well as Aerostat-borne radar and surveillance systems for coastal defense. Without a doubt, from Israel's point of view, its defense export policy is the key incentive for developing cooperation between the two navies. However, the potential in these relationships is far greater.

Future Directions of Israeli-Indian Maritime Cooperation

One of the challenges facing the Israeli Navy is the difficulty of sustaining operations at long distance from Israeli ports. The Indian Navy could grant Israeli vessels access to its ports, similar to the visits of Indian ships to Israeli ports. In such a way the Israeli Navy can replenish its vessels and extend its operational reach.

Sustained collaboration between the two navies could in the long term lay the foundations for Israeli participation in international maritime enforcement operations. Without taking a stand in this regard, Israeli participation in such operations may yield substantial political gains.

Moreover, higher cooperation between the navies could enable covert operational collaboration. For example, based on existing intelligence

cooperation, Israeli vessels, and in the future perhaps Indian vessels too, might be able to intercept ships that are smuggling weapons to the region. At present, there is little likelihood that India would agree to halt Iranian ships. However, it could offer behind-the-scenes assistance, in terms of intelligence and logistics, which would enable Israeli vessels to intercept suspicious ships. Indeed, it would be ill advised for Israel to rely solely on the US Navy in this regard. Despite its sheer size, even the US Navy has its limitations. Moreover, it is wiser to diversify the sources of intelligence and expand the toolbox at Israel's disposal.

Furthermore, sustained cooperation fosters personal ties between Indian and Israeli officers, which in turn tend to foster and generate new channels of communication. India maintains extensive ties with Persian Gulf states, including Iran and Afghanistan, and closely monitors threats of Islamic terrorism. These may generate a shared interest in an ongoing exchange of valuable information, with appropriate attention to precautionary measures.

It is impossible to ignore the fact that Indian political and geostrategic considerations are liable to restrict the development of such cooperation. Two aspects to bear in mind, among others, are India's preference for maintaining a relatively low profile vis-à-vis the relationship with Israel, and the importance it ascribes to preserving its connection with Iran. Nonetheless, it is not inconceivable for political changes in India and/or other developments to turn higher cooperation between the two nations into a political reality. Ultimately both need each other, and thus cooperation is natural. It is essential for Israel to take an overall view of its relations with India, rather than focusing primarily on the potential for arms export.[36] Arms exports have indeed leveraged relations favorably for Israel. However, they alone are insufficient to realize the broader potential of relations between the countries, particularly between their navies. Accordingly, such cooperation should be viewed as a prime objective that Israel should aspire to realize, in accordance with the developments and opportunities it encounters along the way.

Notes

1 For an extensive review of the rise of India, see Sumit Ganguly and Rahul Mukherji, *India since 1980* (New York: Cambridge University Press, 2011).

2 For a critical review of the rise of India, see Sumit Ganguly, "Think Again: India's Rise," *Foreign Policy*, July 5, 2012.

3 As seen below, "the Indian neighborhood" is a term used in Indian discourse concerning its foreign policy.
4 Sea lines of communication refer to the primary maritime routes between ports, used for trade, logistics, and naval forces.
5 Equivalent to Israel's Director General of the Ministry of Defense.
6 Shekhar Dutt, "Defense, Security, Diplomacy: India's National Interests," February 24, 2007, www.associationdiplomats.org/specialevents. Identical formulation used in the Ministry of Defense, *Annual Report 2006-2007* (New Delhi: Ministry of Defense, 2007).
7 Yashwant Sinha, "12th SAARC Summit and Beyond," February 3, 2004, http://www.outlookindia.com/article.aspx?222849. It is customary in India to refer to the Asian portion of the Middle East as well as part of the Caucasus as West Asia. There is no agreed upon exact definition of this region.
8 Sureesh Mehta, "Freedom to Use the Seas: India's Maritime Military Strategy," Integrated Headquarters, Ministry of Defense (Navy), New Delhi, 2007.
9 The PSI was formulated to prevent maritime transport of weapons of mass destruction and launch weapons such as ballistic missiles.
10 For a review of India's power projection that includes expanded reference to Iran, see David Scott, "India's 'Extended Neighborhood' Concept: Power Projection for a Rising Power," *India Review* 8, no. 2 (2009): 107-43.
11 India itself benefits from assistance from other countries.
12 Dictionary of Military and Associated Terms, US Department of Defense, 2005.
13 A. Mahan, *The Interest of America in Sea-Power, Present and Future* (London: Sampson Low, Marston & Company, 1898).
14 Combat vessels above 3,000 tons DWT.
15 A more current term is "expeditionary forces."
16 The presence of aircraft carriers in any given country's fleet does not necessarily give that country significant maritime power (e.g., Thailand). Aircraft carriers must form part of an overall power projection system.
17 A comparison between fleets is distinct form comparison between navies, which also includes their training and infrastructure. Furthermore, a comparison between platforms does not take into account technological differences in weapon systems installed on them.
18 An accepted classification in this area is the study by Eric Grove, *The Future of Sea Power* (Annapolis: Naval Institute Press, 1990).
19 Information on the projects is taken for the most part from *Jane's Fighting Ships 2011*.
20 Aircraft carriers are classified into three types on the basis of size: "light"' aircraft carriers with a displacement of up to 30,000 tons; "standard" aircraft carriers with a displacement of 40,000-60,000 tons; and "super" aircraft carriers with a displacement in excess of 100,000 tons.

21 Christopher P. Cavas, "Indian Carrier Begins Sea Trials," *Defense News*, June 8, 2012.
22 "Russian-Built Frigate Arrives in India," *RIA Novosti*, June 22, 2012, http://en.rian.ru/world/20120622/174181942.html.
23 Mark Magnier, "India Ballistic Missile Test is a Success," *Los Angeles Times*, April 19, 2012, http://articles.latimes.com/2012/apr/19/world/la-fg-india-missile-test-20120419.
24 V. Radyuhin, "Russia Completes India's Submarine Modernization Program," *The Hindu*, June 23, 2012.
25 Walter C. Ladwig, "India and Military Power Projection: Will the Land of Gandhi Become a Conventional Great Power?" *Asian Survey* 50, no. 6 (2010): 1162-83.
26 Scott, "India's 'Extended Neighborhood' Concept."
27 Joint exercises with Persian Gulf states were conducted in 2002, 2004, 2007, and 2011.
28 Bjarat Rakshak, "Operation Sukoon," http://www.bharat-rakshak.com/NAVY/Galleries/News/Sukoon/.
29 "Operation Madad," *Wikipedia*, http://en.wikipedia.org/wiki/Operation_Madad_%28Indian_Navy%29.
30 Ladwig, "India and Military Power Projection."
31 For an extensive review see P. R. Kumaraswamy, *India's Israel Policy* (New York: Columbia University Press, 2010).
32 See *Ports & Shipping Statistical Yearbook*, http://spa.mot.gov.il/images/PDF/SHNATON/StatisticalYearBook11.pdf.
33 The most recent visits of Indian warships to Israel were in June 2006 and July 2012. See Aluf Benn, "Two Indian Warships Arrive in Haifa for a Friendly Visit," *Haaretz*, June 28, 2006, http://www.haaretz.co.il/misc/1.1116116; and Amir Buhbut, "Against the 'Red Fleet': See the Expanded Missile Boat Exercise," *Walla*, August 1, 2012, http://news.walla.co.il/?w=/551/2554984.
34 For a brief overview of relations between the navies, see http://www.gloria-center.org/2011/12/indo-israeli-defense-cooperation-in-the-twenty-first-century/.
35 Maritime Domain Awareness (MDA) involves an overall understanding of all matters related to the maritime domain, including the interaction of the maritime domain with security, economic, and diplomatic issues.
36 There is currently increasing involvement of numerous Israeli organs, in addition to the Ministry of Defense, in the relationship with India.