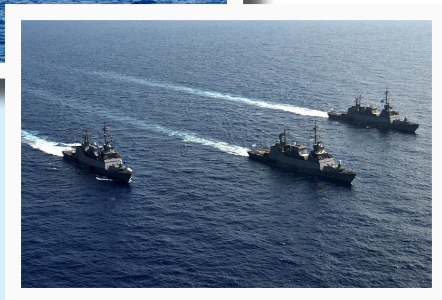
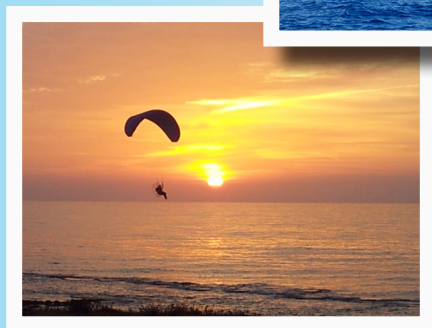
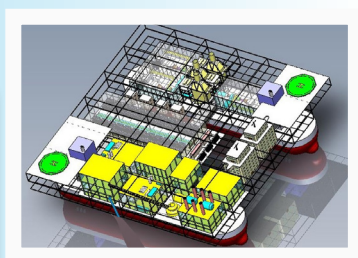


MARITIME STRATEGIC EVALUATION FOR ISRAEL 2016

Chief editor: **Prof. Shaul Chorev**

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Chapter 1: Global Maritime Developments

Shaul Chorev

General

Although this report focuses on the **Eastern Mediterranean and the Red Sea**, one cannot analyze the developments in this region without relating to recent global events in the maritime domain, in view of the close connection between them and what is happening in close proximity to Israel.

The first development that is worthy of mention from a global perspective is **the gradual shift in the center of gravity** in the geopolitical, economic and geostrategic domains – **from the West in the direction of East and Far East Asia**. This is the result of the growing importance of this region in global economic development. In this context, it is worth mentioning that China is the most influential nation that is part of this trend, although India is not far behind. On the assumption that this trend indeed continues, then in coming decades this region will be making the largest contribution to global Gross Domestic Product (GDP).¹ Moreover, the region is expected to account for one half of the world's population in about 20 years from now. Therefore, any major development in the region is likely to have implications for security and defense throughout the world.

Aside from short-term economic cycles, it is expected that the **economies of the US, China and India** will become the leading members in the G-3. Each of these countries will have to deal with a spectrum of challenges in the future, in the areas of defense, climate and maintaining the rate of economic and industrial growth, among others.

The economic, social and political changes that the US is experiencing have led to the **decline of US global hegemony** and its status as the only superpower since the end of the Cold War. Its position has been weakened both politically and economically by the rise of China and India. The signs of US weakness as a global superpower led to the increasing influence of China in Africa and Asia, of Russia in Eastern Europe, the Caucasus and the Middle East and of India in Asia. The hesitancy of the US to act decisively has led to moral and propaganda victories for Iran, Syria and Russia, despite American military and technological superiority. It is still too early to assess the effect of Donald Trump's election and his declared intention of restoring America's former status.

1 UN Population Prospects, 2010.

Militarily, the **US** is expected to maintain its status **as a superpower** in coming decades, but **China and India**—which are arming themselves with advanced weapons systems that have diverse capabilities—are also expected to achieve recognition as **regional superpowers**. If China can maintain its current level of defense expenditure and its economy continues to grow, then within a decade its defense expenditures will be triple those of the US.

Although **Europe** will continue to be a significant economic power, and apparently also the **fourth largest economy** in the world, it does not appear that its international status will be sufficient for it to join the G3 superpowers, due to its lack of ability to project power. Europe will continue to maintain its position as a center for world trade, although China has ambitions to replace it, which is manifested in the “Maritime Silk Route Initiative”.²

The Russian Federation is seeking to restore its status as a global and regional power despite its **political, economic, social and demographic problems**. The attainment of this status will be by means of an opportunistic policy and the application of military power. These aspirations make Russia into a complicated security challenge for Europe as a whole and as a result also for the US. The new Russian military doctrine approved by Putin in 2014 reflects the influence of the crisis with the Ukraine and the Russian response to the positions of the US and NATO in that conflict. In this situation, it is reasonable to assume that Russia will try to create alliances with several of the European countries when that aligns with its national interests. From time to time, Russia will try to drive a wedge between members of the EU with the goal of undermining European unity. Russia will continue to have an influence on the former Soviet states, by means of both “soft power” and “hard power”.³ Russia will continue with its intervention in Ukraine, the Caucasus and Central Asia and will oppose any attempt by NATO to expand its influence in the former Soviet states. Russia will seek to **control the Arctic region**, based on the understanding that it is essential to its economic and security future. Europe will remain the focus of Russian economic activity, with emphasis on the EU in the export of its energy resources. The drop in the prices of energy, which accounts for 80% of Russian exports, and the sanctions imposed by the West following the invasion of Crimea, have contributed to the economic crisis in Russia. Russia will

2 Selier Elodie, China's Mediterranean Odyssey, China has bought Greece's Piraeus port, but how realistic is Beijing's Mediterranean dream? **The Diplomat**, April 19, 2016 <http://thediplomat.com/2016/04/chinas-mediterranean-odyssey>.

3 Soft power: a strategy in international relations that makes use of economic or social influence on a rival nation in order to achieve goals, in contrast to hard power which involves, among other things, the use of military power to achieve goals.

continue to be **one of the largest arms exporters in the world** and will be prepared to offer weapons with state-of-the-art technology, some of which are even more advanced than those of the US.

Defense and security will continue to be essential issues both in the virtual and physical realms, including space and the cybernetic domain. The necessity to protect the citizens of the various countries will become even more important in view of the growing global population, climate change, the shortage of resources and the lack of stability in the international arena. These needs are expected to motivate governments to expand their defense program in order to provide for their physical needs. Many of these needs are international in nature and relate to the globalization phenomenon.⁴

Piracy and terror in the maritime domain are posing a major threat to trade and global shipping, and are having an effect on bilateral relations between nations (such as in the case of India and Pakistan). Currently, there is still a clear distinction that can be made between **maritime piracy** and **maritime terror** with respect to their strategies, methods of attack and the means they employ, in addition to the different regions in which piracy and maritime terror occur. Nonetheless, since there are **certain characteristics common to both**, such as their targets, the theft of cargo and the taking of hostages, connections between them may develop. In recent years, various countries have upgraded their ability to deal with the threat of piracy, particularly in the Indian Ocean. This is being accomplished by both international forces that were established specifically for this task and independent national forces (such as those of China and Russia). This activity has led to a sharp drop in reported incidents of piracy although the economic cost of this effort is significant (Figure 1.10 and 1.11).

Main trends in global maritime trade

More than 80% of global trade is by way of the sea and maritime shipping is the most important means of transporting goods. The three largest shipping companies (MSC of Switzerland; Maersk Line of Denmark and the CMA-CGM Group of France) account for about 30% of the container movement (TEU).⁵

4 The Development, Concepts and Doctrine Centre (DCDC) Global Strategic Trends, Programme analyses the future strategic context. Global Strategic Trends out to 2040, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/49954/20121129_dcdc_gst_regions_sasia.pdf

5 The Global Facilitation Partnership for Transportation and Trade (GFP), <http://www.gfptt.org/node/2785>

The decrease in maritime trade in 2009 as a result of the economic crisis came to an end with the global economic recovery. During the period 2010-13, trade returned to a path of growth and increased by 4.9% per year. This increase reflected the growing demand for imports in a number of key nations. The rate of growth in trade even exceeded that in GDP. Nonetheless, recent changes in demand trends have **slowed the rate of increase in maritime trade** from 3.2% in 2014 to only 2% in 2015. The increase in the construction of new container ships stood at 2.6%, as compared to an increase in demand of only 1.3%, which created excess supply and led to problems for the various shipbuilding companies. Figure 1.1 presents the increase in global trade and the breakdown according to type of cargo.

The drop in trade of goods and services in 2015, in financial terms to its lowest level in five years, is presented in the table below. The rate of decrease also includes the rate of depreciation in the value of the various currencies in 2015 relative to the US dollar.⁶ Nonetheless, countries in the Far East and the Pacific countries are still increasing their maritime trade and they account for 85% of the increase.

Table 1.1 International trade for selected countries in billions of dollars

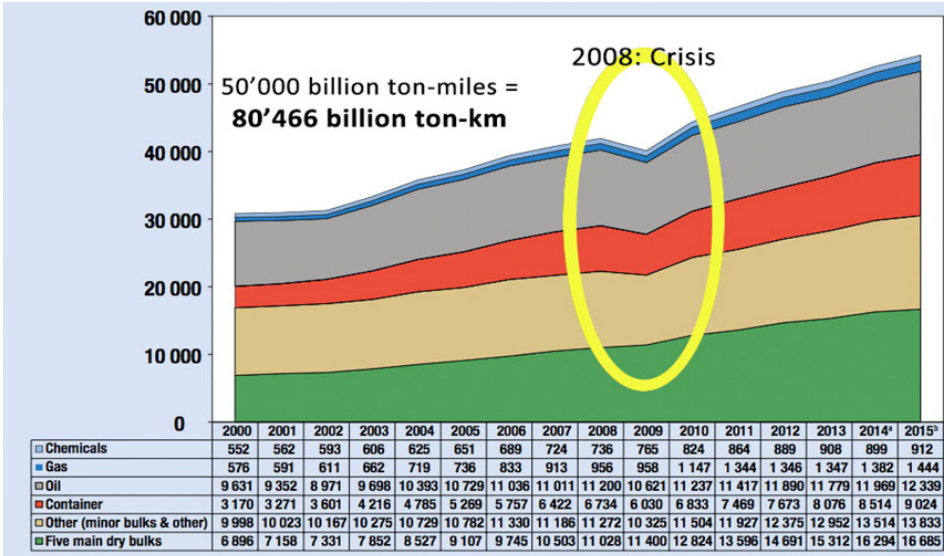
		Trade in goods				Services			
		2010	2014	2015	Increase in 2015	2010	2014	2015	Increase in 2015
Exports	Global	15,302	18,997	16,484	-13%	3,953	5,068	4,747	-6%
	Developing economies	7,439	8,478	7,345	-13%	1,125	1,472	1,435	-2%
	Transition economies	609	764	526	-31%	98	126	103	-18%
	Developed economies	8,255	9,755	8,614	-12%	2,730	3,470	3,208	-8%
	Non-developed economies	162	206	154	-25%	24	39	41	-4%
Imports	Global	15,421	19,007	16,671	-12%	3,847	4,954	4,678	-6%
	Developing economies	6,020	7,988	7,033	-12%	3,847	4,954	4,678	-6%
	Transition economies	453	553	384	-30%	122	184	140	-24%
	Developed economies	8,947	10,467	9,254	-12%	2,391	2,919	2,703	-7%
	Non-developed economies	169	266	242	-9%	60	25	83	-3%

Source: UNCTAD⁷ and WTO.

The increase in global demand for ocean shipping in 2011 and 2016 and the main contributors to it (i.e. China and India) are presented in Figure 1.2. The value of annual global trade through the South China Sea is \$5.3 trillion, of which \$1.2 trillion

6 UNCTAD – United Nation Conference on Trade and Development, Statistics, <http://unctad.org/en/Pages/statistics.aspx>

7 Global trade slows down to a five-year low in 2015 <http://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=1230>



Source: UNCTAD secretariat, based on data from Clarksons Research (2015b).
 * Estimated
 > Forecast

Figure 1.1 Global maritime trade and its breakdown according to type of cargo

Global Seaborne Demand: 450 – 550 MTPA Growth Expected by 2016; 8% CAGR



Pacific Demand Growth 85+% of Total Demand Increase

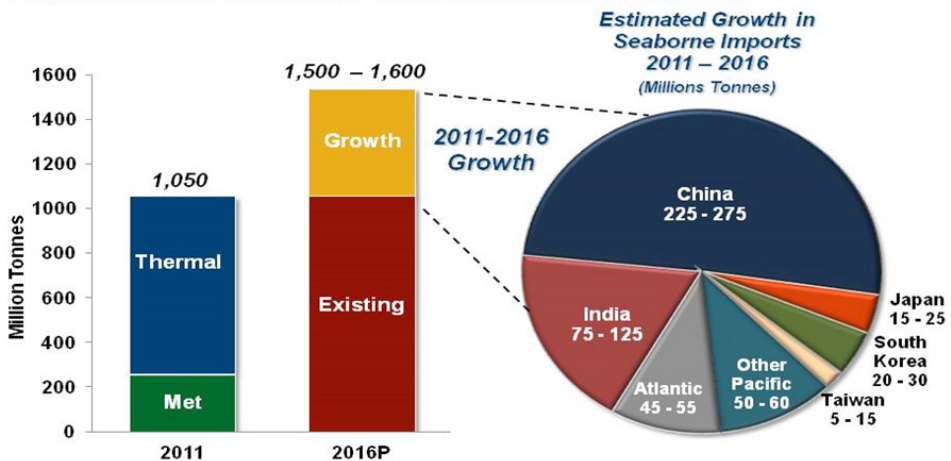


Figure 1.2 The global demand for ocean shipping by country/region (MTPA –Millions of Tons Per Annum)

is due to trade between China and the US. Eighty percent of the fuel imported by China travels through the choke points of the Malacca and Lombok Straits.

New Shipping Lanes

The addition of a 52-kilometer lane to the **Suez Canal** in order to make it two-directional was completed in August 2015. In addition, work was completed on the expanded **Panama Canal** in 2016. These projects included a third system of passage that allows longer ships, with a capacity of up to 13 thousand TEU, to pass through and will facilitate the growth in China's trade. As a result of the opening of the canal, the shipping of crude oil from Venezuela to China has been shortened from 45 sailing days to 30 and operating costs have been reduced. The desire to alleviate the existing choke points is also reflected in the ambitious plans to dig the Nicaragua Canal with Chinese financing, which will compete with the Panama Canal, as well as the agreement signed in 2016 between China and Thailand for a long-term project to build the Kra Canal, which is also known as the Thai Canal. The canal is meant to cut through the Kra Isthmus in Southern Thailand and to provide a new shipping route that will shorten sailing time from the East to Europe by about 1,200 kilometers, by detouring around the Malacca Straits.

There is an interesting development in this context taking place in the Northwest Passage of the Arctic Ocean, which until now was closed to commercial shipping due to the thick ice covering it all year round (Figure 1.3 below). It now appears that climate change in recent years has reduced the thickness of the ice. It is predicted that if this trend continues, then **it will be possible to use this route during most of the year** in about two decades. Sailing this route from Europe to East Asia will save about 2,500 miles. In addition, the shipping of oil from Alaska to the East Coast of the US by tanker will be much quicker.

It is believed that billions can be saved in shipping costs. At the same time, it will be necessary to resolve the current disagreement between Canada and other countries (including the US), whereby the Canadians view the route as within its territorial waters. It will also be necessary to deal with the challenges of protecting the environment in this unique region.

Exclusive Economic Zones – a contribution and issues of contention

Since the coining of the term Exclusive Economic Zone (EEZ) in 1982 and the signing of the UN Convention on the Law of the Sea, **underwater technology has**



Figure 1.3 Possible routes of the Northwest Passage

progressed dramatically with respect to the discovery, development and extraction of offshore natural resources. Many countries have started the process of Marine Spatial Planning which is intended to resolve the conflicts between the various players active in this domain. Nonetheless, there still remain a large number of **international conflicts** with respect to the delimitation of EEZs, as well as fishing rights in these regions. Some of these disagreements will be resolved in the future through various types of agreements, but others will remain unresolved and will involve the danger of friction and regional conflict, which in some scenarios may even lead to armed conflict.

In the Eastern Mediterranean, there remain four issues of contention that remain unresolved:

1. **The claim of Northern Cyprus** (under Turkish rule) to part of the EEZ around Cyprus.
2. **The claim of Turkey** to part of Cyprus' EEZ and the disagreements with Greece that remain unresolved.

3. **The claim of Lebanon** that the agreement reached between Israel and Cyprus includes part of the territory that belongs to Lebanon (definition of the maritime border between Israel and Lebanon).
4. The claim by the Palestinian Authority with regard to the territorial waters along the coast of the Gaza strip and its claim that Israel has violated the maritime appendix of the Oslo Agreement.

The main naval fleets – trends and changes

This section surveys the changes and trends occurring in the major naval fleets, with focus on theaters of activity, **operational** strategy and the planned **buildup of strength** in each of the fleets.

The US Navy

The budget allocated by the US to its military forces is the largest in the world and accordingly the US fleet still remains the most powerful navy (the US Navy's budget in 2016 totaled about \$167 billion). The US Navy is in the process of enlarging its fleet of warships and in 2016 it possessed 282 vessels, including 10 Nimitz-series aircraft carriers. During 2016, the US will put a new aircraft carrier into service – the USS Gerald R. Ford. The Navy claims that it needs to grow to 355 vessels.⁸

Figure 1.4 below presents the **deployment of the US fleet** in its various theaters of activity in 2016. The map reflects the shift of the American center of gravity toward the Western Pacific Ocean and the South China Sea, where about 50 vessels are deployed. This shift has meant that the number of warships present in the Mediterranean (the Sixth Fleet) has reached an unprecedented low, and includes only one command vessel and a number of destroyers.⁹

The US Navy is deployed according to the new American maritime strategy, which was formulated together with the Coast Guard and the Marine Corps and announced in May 2015. The strategy sets out for the three aforementioned branches of the navy the principles of planning, organization and use of force that will support US national security and homeland security objectives and US interests. The three new objectives in this strategy are reflected in the slogan: Forward, Engaged, Ready.

8 LaGrone Sam and Eckstein Megan, Navy wants to grow fleet to 355 ships; 47 hull Increase adds destroyers, attacks subs, USNI News, December 16, 2016, <https://news.usni.org/2016/12/16/navy-wants-grow-fleet-355-ships-47-hull-increase-previous-goal>

9 Highlights of the Department of the Navy FY 2016 Budget, Introduction, P. 1-3.

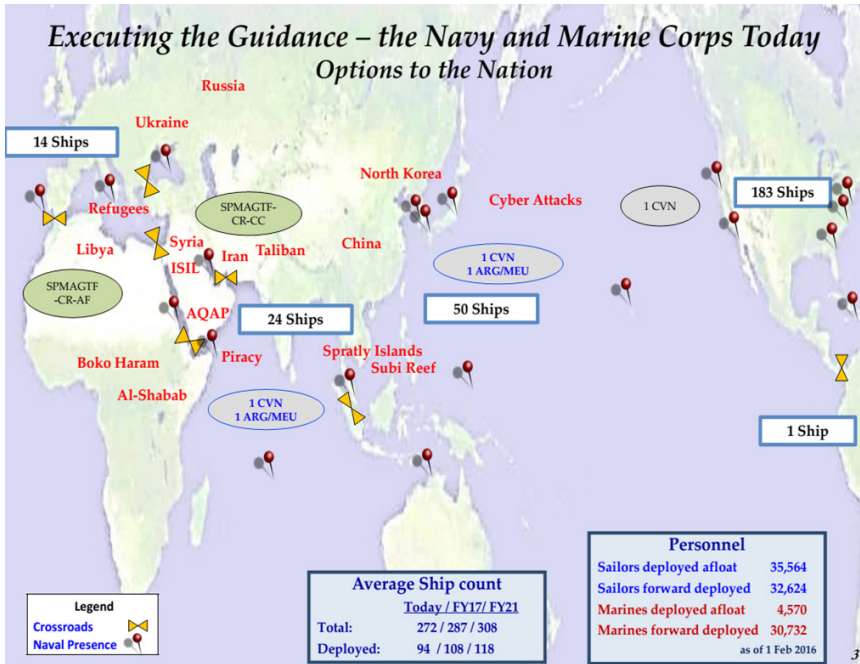


Figure 1.4 Deployment of the US Navy and the alternatives for its operations¹⁰

The main tasks of the US Navy for 2016-20 are as follows:

- **Protection of the homeland** (maintaining nuclear deterrence, fighting terror, protection of the homeland and providing support to civilian authorities).
- **Build security globally** – (a stabilizing presence across the globe, carrying out missions to maintain this stability, carrying out humanitarian and lifesaving rescue missions in the event of natural disasters).
- **Project power and win decisively** – (delay aggression and defeat it, projecting power despite attempts to limit access to the region, effective action in the cyber domain).

The priority given by the US to the deployment of the Seventh Fleet in the South China Sea and its operations include two main components:

1. The creation of a regional coalition with the participation of countries that are parties to the conflict with China over economic waters.

¹⁰ DEPARTMENT OF THE NAVY FY 2017 PRESIDENT'S BUDGET

2. Carrying out air and naval activity that challenges the Chinese claimed delimitation of its economic waters from a row of seven artificial islands being built by the Chinese.

The activity of the American ships and aircraft in the South China Sea, which come under the title "US Freedom of Navigation Operations" creates a risk of conflict with the Chinese. During 2015 and 2016, a number of "close calls" occurred between American aircraft and ships and Chinese aircraft, which almost ended in collision.

The change in the policy of the Philippines (which in 2013 submitted a complaint to the International Court in Hague regarding violation of its EEZ), the desire to withdraw from its special relationship with the US and the agreement of the Philippine leader to resolve the conflict with China by peaceful means, is making it difficult for the US to recruit the support of its allies in the region.¹¹

Another region of strategic importance for the US Navy is the **Korean Peninsula**, where North Korea continues to behave as a rogue state and represents a threat to the countries of the region and in particular its neighbor South Korea. North Korea has continued in recent years to carry out nuclear testing and the launch of ballistic missiles, despite the heavy sanctions imposed on it by the UN. The US Navy has deployed its forces in order to project power in this region, including port visits.¹² US Secretary of the Navy Roy Mabus has in recent years made several visits to the region in order to discuss step to tighten bilateral relations to meet developing threats (nuclear and missiles) from North Korea.¹³ Even if the region is not defined as the principal arena of the Seventh Fleet, the periodic provocations by North Korea will force it to maintain a presence in the region, even if the new administration of President Trump demands that Japan and South Korea bear the financial burden of this activity, as he declared during his election campaign.¹⁴

11 The Associated Press, Philippine President Announces Separation from US, AP Asia News, October 20, 2016, <http://wtop.com/asia/2016/10/philippine-leader-meets-chinas-president-in-charm-offensive>

12 Gamel Kim, "North Korea Calls Arrival of US Submarine a 'Direct Threat'", Stars and Stripes, Jun 18, 2016

13 The Korean Time, U.S. Navy secretary to meet S. Korea's defense chief over N. Korean issues, World Affairs, August 19, 2016.

14 Sanger David, Haberman Maggie, In Do http://www.nytimes.com/2016/03/27/us/politics/donald-trump-foreign-policy.html?_r=0 nald Trump's Worldview, America Comes First, and Everybody Else Pays, The New York Times, March 26, 2016.

The activity of the Sixth Fleet in the Mediterranean: The deployment of the Fleet in the **Mediterranean** and its size have in the past been influenced by two main factors:

1. The Cold War.
2. A major source of energy (oil).

The end of the Cold War and the drop in the price of oil and gas, as well as increased domestic sources of energy, have enabled the US to reduce its presence in the Mediterranean and the Sixth Fleet has reduced its deployment to only one command ship that relies on a land base in Italy and four Ticonderoga-class missile cruisers, although **the US did send two aircraft carriers** (the USS Harry S. Truman and the USS Eisenhower) **for a short period** in the summer of 2016 in response to Russian activity in the Eastern Mediterranean. In recent years, there has been domestic criticism in the US of the removal of the Sixth Fleet from the Mediterranean and in particular in view of the growing presence of the Russian fleet and its activity in the Mediterranean. This criticism was reflected in the report of the joint committee of the University of Haifa and the Hudson Institute on Security and Energy in the Eastern Mediterranean. The members of the committee, which included Admiral Gary Roughead, a former US Secretary of the Navy, came to the following conclusion: "The desire to disengage from the Middle East and the Eastern Mediterranean is an especially strong element of the general American isolationist impulse...Isolation is not an option. The region's wealth will necessarily influence interests around the world. The questions then are what should be America's strategic vision of the region and what are the organizing principles to increase security, stability and prosperity in the Eastern Mediterranean."¹⁵

In conclusion, the US fleet is still the largest and strongest navy in the world and has the most diverse capabilities. Nonetheless, **the budget constraints and new challenges in various arenas**, have forced it to set priorities in the use of force, to promote new alliances in regions such as the South China Sea and to encourage NATO to modify its strategy according to the developments in the Atlantic and the Mediterranean. The inauguration of a new US Administration in early 2017 will require it to formulate a stand on the aforementioned issues, including the event of an asymmetric war that is liable to occur in the South China Sea or in the Persian Gulf (against the Iranian Revolutionary Guard), and to decide on the appropriate response to the growing presence of the Russian fleet in the Eastern Mediterranean.

15 Report of the Commission on the East Mediterranean sponsored by the University of Haifa and Hudson Institute P. 41.

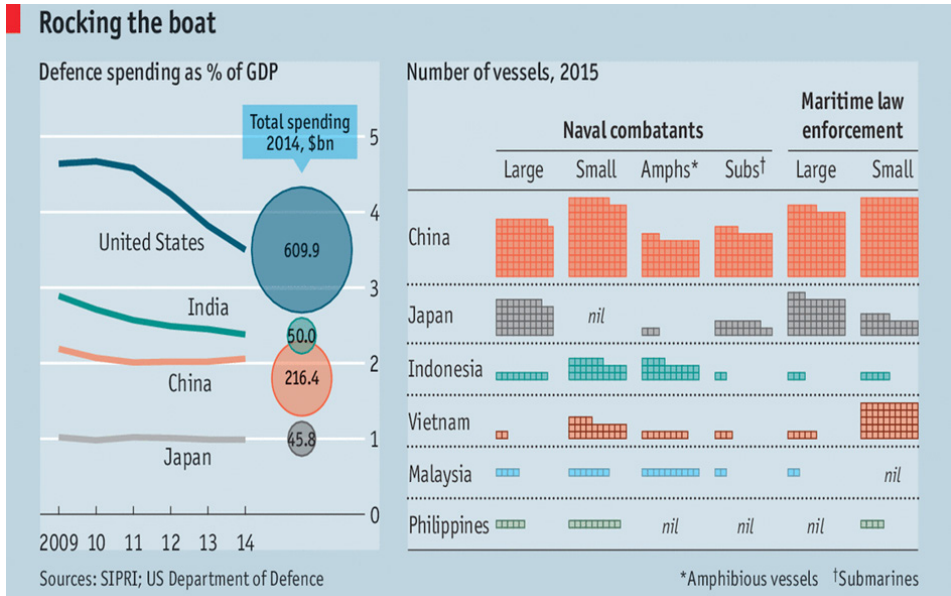


Figure 1.5 Defense expenditure as a proportion of GNP in the US, India, China and Japan and number of vessels in the navies of South China Sea countries

The Chinese Fleet – The People's Liberation Army Navy (PLAN)

The growing importance of Chinese maritime interests and the growth of the **Chinese merchant fleet** (which is the third largest in the world and numbers about 3,600 ships) has led the **Chinese navy** to increase the frequency of its patrols, their duration and their distance from the Chinese mainland. China operates an independent fighting force against maritime pirates in the Indian Ocean. As the operations of the Chinese fleet in distant waters became more technically demanding, China published a **White Paper** entitled "**Defense in Open Seas**".¹⁶ Such a drastic change in Chinese strategy, which until now had sought control of only local waters, reflects China's growing global economic and diplomatic influence. Thus, the priority given by China to its land forces has shifted and it has essentially abandoned its traditional mentality that the land is more important than the sea. The new strategy reflects the growing importance of its ocean activity and the

16 Blasko j. Dennis, "The 2015 Chinese Defense, White Paper on Strategy in Perspective: Maritime Missions Require a Change in the PLA Mindset. The Jamestown Foundation, May 29, 2015. http://www.jamestown.org/programs/chinabrief/single/?tx_ttnews%5Btt_news%5D=43974&cHash=d67db88687507367b668f71cd4199603#.VjH0IPkrLIW

effective protection of its maritime rights and interests. Accordingly, China has had to develop a modern naval force that is necessary for its national security. In order to operate far from its shores, China has completed the construction of an aircraft carrier, the Liaoning, and a second is scheduled to come into service in 2018. Table 1.2 presents the impressive growth in the Chinese battle fleet since the early 2000s and its expected growth until 2020.

The activity of the Chinese navy in the Western Pacific is an important part of China's new maritime strategy and also includes defense components far from its shores. These deployments will continue at the strategic points along the main shipping routes in the **Pacific Ocean** (including the Arctic Ocean where China is showing growing interest) and choke points in the Indian Ocean and the South China Sea.

Friction points that are appearing between the "traditional West" and the "New East" may appear at one or more of the following commons:

- The South China Sea
- The Indian Ocean
- Space
- Cyber space
- The energy resources in the Middle East

In recent years, the disagreement over **China's right to define its economic waters** has received growing attention, on both the operative maritime level and the international level. On July 12th, 2016, the International Court in The Hague handed down a verdict in the ongoing conflict in the South China Sea between the Philippines and China. The verdict rejected China's demand to recognize its sovereignty over most of the territorial waters, the islands and the shoals in the South China Sea. China did not accept the verdict and again announced that it does not recognize the authority of the Court. In October 2016, President Rodrigo Duterte of the Philippines decided to change his country's position on the issue: on the one hand, he is seeking a diplomatic solution with the Chinese and on the other hand is demanding that the Americans evacuate their bases in the Philippines.¹⁷ China knows how to exploit a **creative strategy** in its war over the sovereignty that it is claiming and it is doubtful that China is prepared to give up its control over any territory where it has established military facilities. Also its claim to sovereignty according to the Nine-Dash map will apparently remain relevant at this stage.

17 Bodeen Christopher and Wong Gillian, Philippine President announces separation from US, Associated Press, October 21, 2016 <https://www.yahoo.com/news/philippine-leader-meets-chinas-president-charm-offensive-030041553.html?ref=gs>

Table 1.2 The Chinese navy – number of vessels including planned¹⁸

Ship type	2000	2005	2010	2015	2020
Numbers					
Diesel attack submarines (SSs)	60	51	54	57 to 62	59 to 64
Nuclear-powered attack submarines (SSNs)	5	6	6	6 to 8	6 to 9
Ballistic missile submarines	1	2	3	3 to 5	4 to 5
Aircraft carriers	0	0	0	1	1 to 2
Destroyers	21	21	25	28 to 32	30 to 34
Frigates	37	43	49	52 to 56	54 to 58
Corvettes	0	0	0	20 to 25	24 to 30
Amphibious ships	60	43	55	53 to 55	50 to 55
Missile-armed coastal patrol craft	100	51	85	85	85
Approximate percent of modern design					
Diesel attack submarines	7	40	50	70	75
Nuclear-powered attack submarines	0	33	33	70	100
Destroyers	20	40	50	70	85
Frigates	25	35	45	70	85

Source: Craig Murray, Andrew Berglund, and Kimberly Hsu, *China's Naval Modernization and Implications for the United States*, U.S.-China Economic and Security Review Commission (USCC), August 26, 2013, Figures 1 through 4 on pp. 6-7. The source notes to Figures 1 through 4 state that the numbers and percentages "were provided by the U.S. Office of Naval Intelligence. U.S. Office of Naval Intelligence, *PLA Navy Orders of Battle 2000-2020*, written response to request for information provided to the U.S.-China Economic and Security Review Commission, Suitland, MD, June 24, 2013." Citing this same ONI document, the USCC publication states in footnotes on pages 6 and 7 that "Modern submarines are those able to employ submarine-launched

The Indian Navy

India is seeking hegemony in the Indian Ocean and the strategic discourse surrounding its ambitions is occurring at the highest levels of the Indian establishment. **India's** main concern is the territorial aspirations of **its strategic rival in the Indian Ocean – China**. India is concerned about China's intention of transforming the Indian Ocean into a "Chinese Lake", by establishing civilian infrastructures in the ports of other countries in the region (Seychelles and Sri Lanka) and thus increasing the Chinese navy's ability to operate from these ports.¹⁹ In addition, China from time to time sends nuclear submarines to patrol the Indian Ocean, which has led the Indians to increase the number of their maritime surveillance aircraft which have

18 Report submitted to the US Congress in June 2016 by Ronald O'Rourke.

19 Visham Mohamed, China's Xi touts 'maritime silk road' on South Asia tour, Yahoo News, September 15, 2014 <https://www.yahoo.com/news/chinas-xi-begins-south-asia-tour-maldives-215155367.html?ref=gs>

anti-submarine capability.²⁰ In October 2015, the Indian navy announced its new maritime strategy, which replaced the strategy from 2007.



Figure 1.6 Activity of the fleets in the Indian Ocean

The **main differences** between the new strategy and the old can be summarized in the following points:²¹

1. The relation between **India and the Indo-Pacific Ocean** and its influence on India's maritime security.
2. The expansion of the **Indian navy's Areas of interest** (both primary and secondary) which reflects India's desire to become a player with more roles in the region. For example, the Red Sea, which was only of secondary interest in the 2007 strategy, has become an area of primary interest. Also the Gulf of Oman, the Southern Indian Ocean and East Africa have become primary

20 David Rider, More P-81s for India, Maritime surveillance aircraft join Indian Navy, Maritime Security Review, August 1, 2016, <http://www.marsecreview.com/2016/08/more-p-81s-for-india/>

21 Darshana M. Baruah, India's Evolving Maritime Strategy, India shifts its focus from 'using' to 'securing' maritime security in the Indo-Pacific, the Diplomat, December 03, 2015 <http://thediplomat.com/2015/12/indias-evolving-maritime-strategy/>

areas of interest from the Indian navy's perspective. Figure 1.6 describes the impressive growth of the Indian commercial fleet which at the beginning of 2015 numbered over 1,000 vessels. India also understands the importance of participating in a regional maritime coalition and in 2015 took part in the Malabar exercise, which included vessels from Australia, Singapore and for the first time also Japan, in addition to the vessels of the Seventh Fleet.

3. **The Indian navy as a net security provider:** The term "net security provider" reflects the ability to monitor, contain and counter. The new strategy focuses on its battle fleet, which is reflected in the expansion of the Indian navy's budget. India is adopting pro-active marine diplomacy in the Indian Ocean and is working to preserve the free passage of trade to and from India, and in particular at choke points of the Indian Ocean (Figure 1.7). By means of this strategy and **closer relations with the US** (without neglecting its special relationship with Russia in the context of the buildup of India's naval power), India hopes to block the threat from China, which is perceived by its leaders as the main threat in the Indian Ocean. In order to guarantee its continued economic growth, India needs to import growing amounts of energy (fuel and natural gas), which has led the Indians to take part in the war against maritime piracy. India is worried by the possibility that **terrorists who originate from Pakistan will make use of the sea lanes**, as happened in Mumbai in 2014. India is also concerned that the stability in the Maldives and/or the Seychelles Islands will be undermined by Jihadist organizations.

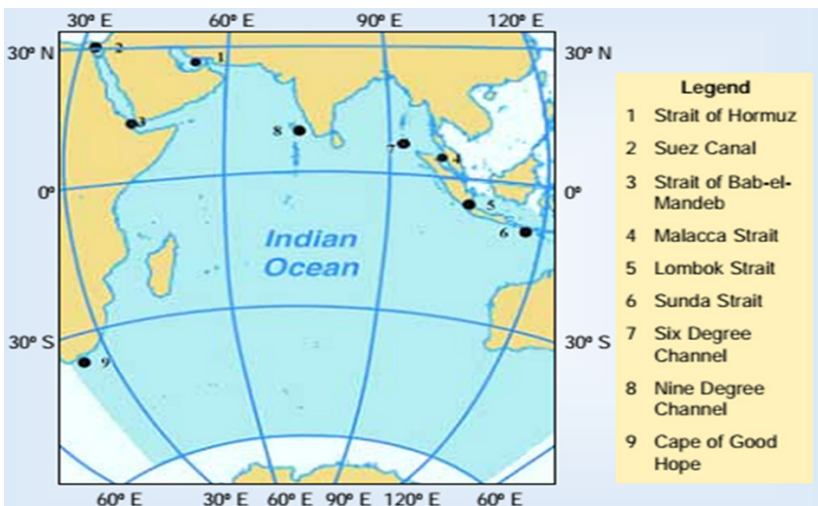


Figure 1.7 Choke points to and from the Indian Ocean

The buildup of power – The Indian military in general and the navy in particular is the largest importer of weapons in the world and they are also making progress in the creation of a defense industry in India itself. The government of Narendra Modi increased the share of foreign defense manufacturers that collaborate with local industry from 25% to 49% in 2014.²² New vessels are coming into service in the Indian navy at an increasing rate. Almost all of them meet specifications written by the navy itself. Nonetheless, the **management of projects within the various programs is deficient**: The project to build a second aircraft carrier, which began in 2001, was meant to be completed in 2010 but has been delayed and the project launch date is uncertain. In addition, a number of newly built vessels are waiting for the installation of weapons systems whose development is not yet complete.²³ The aircraft carriers that operate as part of the Associate Battle Group are the most important asset of the Indian navy in its activity in the Indian Ocean with regard to the possibility of projecting power in the region. Table 1.3 presents the quantity and types of vessels in the Indian navy.

Table 1.3 Number and types of vessels in the Indian navy

Types of vessels	Number
Aircraft Carriers	2
Amphibious Transport Dock	1
Landing Ship Tanks	9
Destroyers	10
Frigates	14
Nuclear-Powered Attack Submarine	1
Conventionally-Powered Attack Submarines	14
Corvettes	24
Mine Countermeasure Vessels	7
Large Offshore Patrol Vessels	10
Fleet Tankers	4

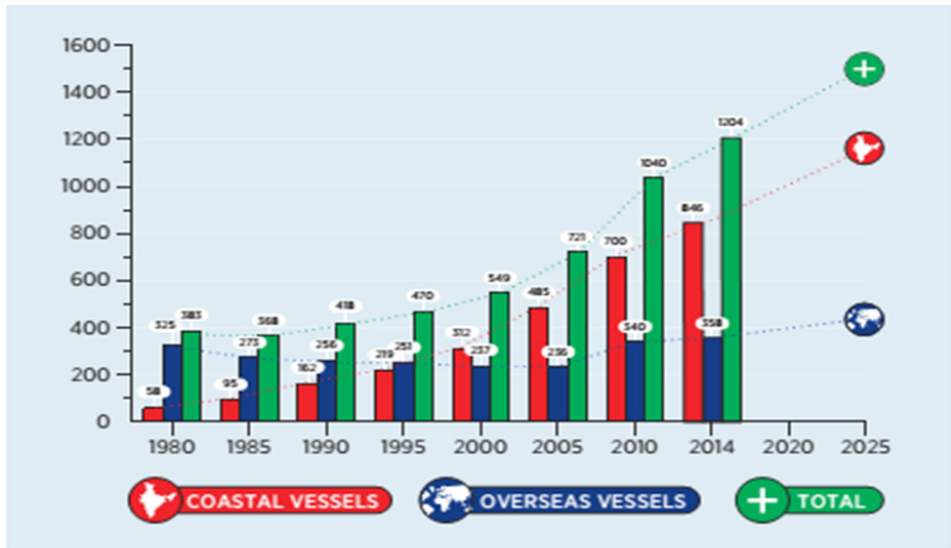
Nuclear Deterrence – India is soon to complete the construction of the third leg of the nuclear triad, which is based on Aridhant nuclear subs, developed by the Indians about two decades ago. During the year, the submarine completed its sea trial and is meant to complete the testing of its weapons systems during the

22 Gady Franz-Stephen, Is India's Defense Budget Adequate? New Delhi's defense spending will rise modestly in the new fiscal year, *The Diplomat*, March 03, 2015. <http://thediplomat.com/2015/03/is-indias-defense-budget-adequate/>

23 Rahul Singh, That Sinking Feeling: Navy struggles to bridge its capability gaps, *Hindustan Times*, New Delhi, September 29, 2016. <http://www.hindustantimes.com/india-news/that-sinking-feeling-navy-struggles-to-bridge-its-capability-gaps/story-p0atXgjXpeGF3fUva4NofM.html>

coming year. India has begun the construction of a second sub and will eventually complete the building of four subs, giving it second strike capability.²⁴

Plan to build up the power of the Indian navy (achieving a level of 200 vessels) has been the target of criticism, both domestic and foreign. The main claim is that it is sufficient to build a navy that will deny the ambitions of China and for this purpose to rely on nuclear deterrence that will help maintain order in the region.



As on 01 January 2013, India was ranked 17th in the world in terms of Dead Weight Tonnage (DWT) with a global share of only one percent.

As on 31 December 2014, India had a fleet strength of 1,204 ships with Gross Registered Tonnage (GRT) of 10.31 million. Of this, 358 ships with 9.09 million GRT were deployed for overseas trade and 846 ships with 1.22 million GRT for coastal trade.

Source: MoS/Gol Annual Report 2014 – 2015 and Ministry of Road Transport and Highways Transport Research Wing/Gol Indian Shipping Statistics 2014 (data extrapolated to 2025).

Figure 1.8 The growth in the Indian commercial fleet²⁵

The Russian Navy

Since the beginning of the recent wave of reforms in the Russia military in 2009, the Russian leadership has been conveying the message that the Russian navy is emerging from a period of crisis, is returning to its former status and is capable

²⁴ Rakesh Krishnan Simha, Birth of a Boomer: How India Built its Nuclear Submarine, Swarajyamag – Read India Right, October 23, 2016, <http://swarajyamag.com/defence/birth-of-a-boomer-how-india-built-its-nuclear-submarine>.

²⁵ Indian Navy – Naval Strategic Publications (NSP 1.2) October 2015.

of carrying out the missions of a superpower's navy. This was recently manifested in two events:

1. **The annexation of Crimea** and the attainment of Russian control over the port city of Sevastopol, which is the home port of the Russian navy in the Black Sea and is near the Russian navy's shipyards, which play an important part in its maintenance operations.
2. **Expansion of naval missions** in its six theaters of operation (the Atlantic Ocean, the Arctic Ocean, Antarctica, the Indian Ocean, the Caspian Sea and the Pacific Ocean), with priority given to the permanent presence of the Russian navy in the Mediterranean and increasing its power in the Atlantic Ocean and the Arctic Ocean.

On July 26, 2015, which is also Russian Navy Day, President Putin approved the **New Maritime Doctrine of the Federation**. The document describes the strategy of the Russian navy, its missions and the plan for its buildup of power. This doctrine replaces the previous one approved in 2001. During the launching ceremony of a new nuclear submarine named after Prince Vladimir in July 2012 at the Severodvinsk shipyard on the coast of the White Sea, President Putin reiterated **his personal commitment to building up the strength of the Russian navy** and described its main missions.²⁶

In 2016, the Black Sea Fleet continued to increase its **presence in the Mediterranean**. Commentators claim that the Russians' goal is to make the Eastern Mediterranean **inaccessible to the navies of the US and its allies in times of crisis** (anti-Access/Area-Denial). If indeed this is accomplished, it is liable to restrict the access of the US and its allies to the Suez Canal, to the Black Sea and to the region of the Eastern Mediterranean. The American concern with the situation was recently expressed by Admiral John Richardson, the new Secretary of the Navy, who urged the senior commanders of NATO to update the alliance's naval strategy to meet this development,²⁷ although at the same time he called on them not to use the term "anti-access/area-denial".

The Russian attack submarine fleet which has been the largest in the world for two decades, has in recent years been patrolling and demonstrating its power

26 The Voice of Russia, Revival of Russian Naval Forces, President Vladimir Putin Announced at a Session Convened to discuss the process of fulfilling the state armament program, 31 July 2012. https://sputniknews.com/voiceofrussia/2012_07_31/New-image-of-the-Russian-Navy/

27 Barnes Juliane, Top U.S. Admiral Says NATO Should Rework Maritime Strategy, The Wall Street Journal, Oct 22, 2015.

in a number of theaters: opposite the coasts of Scandinavia and Scotland, in the Mediterranean and in the Northern Atlantic. This activity is perceived as threatening the dominance of the submarine force of the US and NATO in these regions. In the spring of 2015, Admiral Mark Ferguson, the Commander of American Forces in Europe, declared that "the intensity of Russian submarine patrols had risen by almost 50 percent over the past year."²⁸ As part of its littoral warfare, the Russian navy in the Eastern Mediterranean recently demonstrated its ability to carry out **an attack against land targets** by means of cruise missiles launched from both the Caspian Sea and the Mediterranean. American commentators pointed out that the launch of the cruise missiles from the region of the Caspian Sea or from the Black Sea, where the Russians maintain naval and air control, provides these vessels with **almost complete survivability**.²⁹

In summary, despite Russia's troubled economic situation in recent years, the Russian navy has been given priority over the other military branches in the allocation of resources. The Russian navy is used to achieve geopolitical and geostrategic goals and in a certain sense presents the US and NATO with behavior patterns that resemble those of the **Cold War**. Also **its number of navy vessels** (272 as of August 2016) is similar to that of the US Navy. During 2015 and 2016, **the Russian navy tightened its relations with the Chinese navy**, and they held joint exercises in the Mediterranean, a joint amphibious exercise on the eastern coast of Russia and also a joint exercise in September 2016 in the South China Sea. The spokesman for the Russian navy stated that they "are not directed against any third party and are not linked to any geopolitical changes in the region" but the facts prove differently.³⁰

NATO – the North Atlantic Alliance

The naval forces of NATO were occupied with two main tasks in 2016: **maritime security operations in the Mediterranean** and **anti-piracy activity** in the Indian Ocean. In addition, they carried out rescue missions during the refugee crisis in the Aegean Sea.

28 Schmitt Eric, "Russia Bolsters Its Submarine Fleet, and Tensions With U.S. Rise", The New York Times, April 20, 2016.

29 Fink Andrew, "Troubled Waters, Russia, Iran and Inland Seas – A bastion strategy for the second nuclear age", The American Interest, April 15, 2016.

30 Sputniknews, "Russian–Chinese Naval Exercise Cooperation 'Highly Effective'", Sputnik Military & Intelligence, September 12, 2016. <https://sputniknews.com/military/20160912/1045205912/russia-china-naval-cooperation-effective.html>

The composition of NATO's naval forces, including the American contingent, is presented in Figure 1.9. In February 2016, NATO sent three warships to the Aegean Sea in order to assist in stopping the flow of refugees who were traveling by boat from the coast of Turkey to Greece in search of political asylum. The force was sent on this mission without clearly explaining to its commanders what is expected of them with regard to the rescue of human lives.



Figure 1.9 The composition of the NATO naval force by type of vessel, including the contingent of the US Navy

In June 2016, NATO held a large-scale joint exercise together with the Sixth Fleet in the **Baltic Sea**, which involved 40 vessels and over 6,000 sailors. The exercise also included an amphibious landing in the Baltic Sea and surveillance by the

Russian navy that was reminiscent of the Cold War. This region is becoming one of the friction points between NATO and the Russian navy.³¹

For reasons to be discussed below, **NATO is not managing to modify its operating doctrine** to the changing circumstances of the maritime arena. At the NATO summit meeting in Warsaw in July 2016, NATO leaders decided to replace **Operation Sea Endeavor** instituted in 2001 with **Operation Sea Guardian** which is meant to facilitate the carrying out of broader and more diverse missions in the Mediterranean. It is worth noting that in June 2011 NATO published the **Alliance Maritime Strategy**. Its authors claim that this strategy "will help steer the transformation efforts of the Alliance and will need to be implemented in line with prevailing budgetary circumstances... It aims to ensure that the Alliance continues to have the effective and flexible maritime forces it needs to meet the diverse security challenges of the 21st century."³²

Maritime anti-terror and anti-piracy warfare in the Indian Ocean

Maritime piracy and terror constitute a serious threat to the safety of shipping, human life and human welfare, in addition to the fact that they harm relations between countries when they originate from the territory of one of them. Currently, it is still possible to differentiate between **maritime piracy** and **maritime terror** according to the nature of the attacks, the methods used and the means employed, as well as the regions in which maritime terror and piracy take place. Although there is similarity between the methods each uses (attacks on ships, theft of maritime cargo and taking of hostages), their goals differ: terror activity has an ideological motivation and therefore, for terrorists, publicity is important in order to create psychological pressure on governments and the public, while pirates use the property they seize and the hostages they take only for economic gain. Therefore, it can be said that there are common factors in the activity of terror and piracy, but they have different motivations.

During 2016, the Combined Maritime Force continued its activities **against maritime piracy and terror in the Western Persian Gulf**, the Indian Ocean and the Horn of

31 Nordenman Magnus, Analysis: Baltic Sea Heating Up as Friction Point Between U.S, NATO and Russia, US Naval Institute News, April 25, 2016.

32 North Atlantic Treaty Organization, "Alliance Maritime Strategy", e – Library Last updated: 17 Jun. 2011, http://www.nato.int/cps/en/natohq/official_texts_75615.htm

Africa.³³ The Combined Maritime Force has 31 member countries. Its headquarters are located in Manama in Bahrain and it is commanded by the Commander of the US Fifth Fleet and the US Central Command. It is worth mentioning that apart from this force, a number of countries, such as **China**, are involved in this activity independently.

The results of this activity indicate that already in 2015 there was a 15% drop in pirate activity in the aforementioned region. According to International Crime Services, in 2016, there was only one incident, which occurred in April (as compared to 237 in 2011).³⁴ Nonetheless, the hijacking of local ships continues near the coast of Somalia and the number of hostages held for ransom by the pirates still remains high (see Figure 1.12 below).

The economic and human cost of anti-piracy activity, as presented in Figure 1.10 below, **still remains high**. This is due to, among other things, the payment to maritime security companies, of which there were more than 140 in 2016, which provide consulting, training and weapons for ships and their crews.

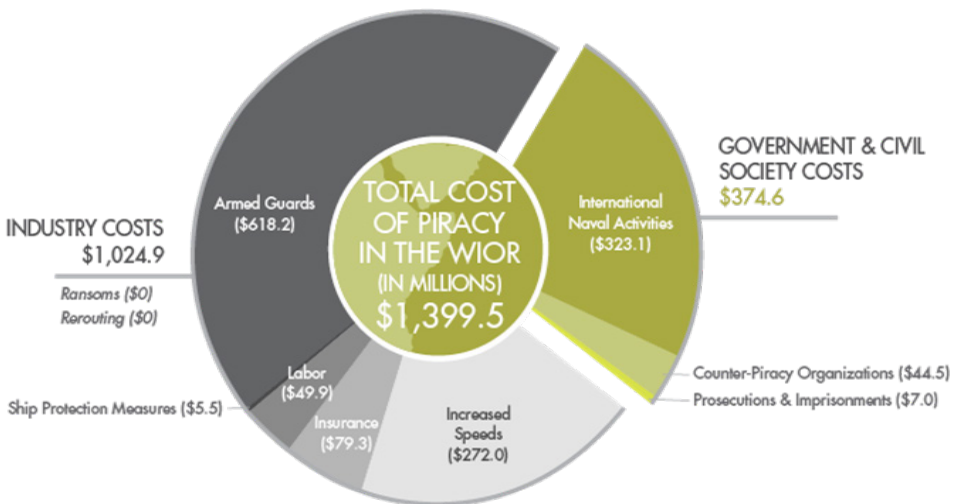


Figure 1.10 The economic cost of pirate activities by categories

33 Australia, Bahrain, Belgium, Canada, Denmark, France, Germany, Greece, Iraq, Italy, Japan, Jordan, Republic of Korea, Kuwait, Malaysia, the Netherlands, New Zealand, Norway, Pakistan, The Philippines, Portugal, Saudi Arabia, Seychelles, Singapore, Spain, Thailand, Turkey, UAE, United Kingdom, United States and Yemen.

34 Commercial Crime Service, Live Piracy & Armed Robbery Report 2016, Attack Number: 058-16 Date: Sun Apr 24 2016 Type of Vessel Product Tanker. <https://icc-ccs.org/piracy-reporting-centre/live-piracy-map/details/151/1196>

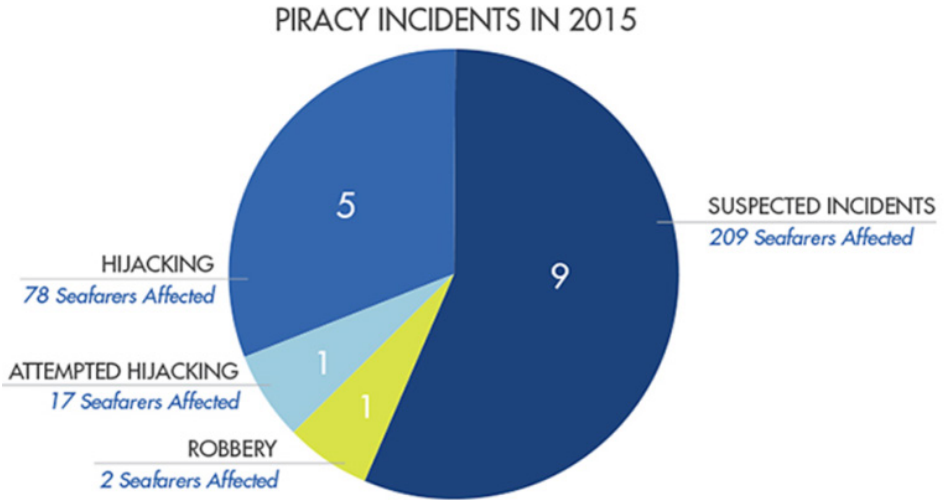


Figure 1.11 Number of piracy incident reported at east Africa on 2015

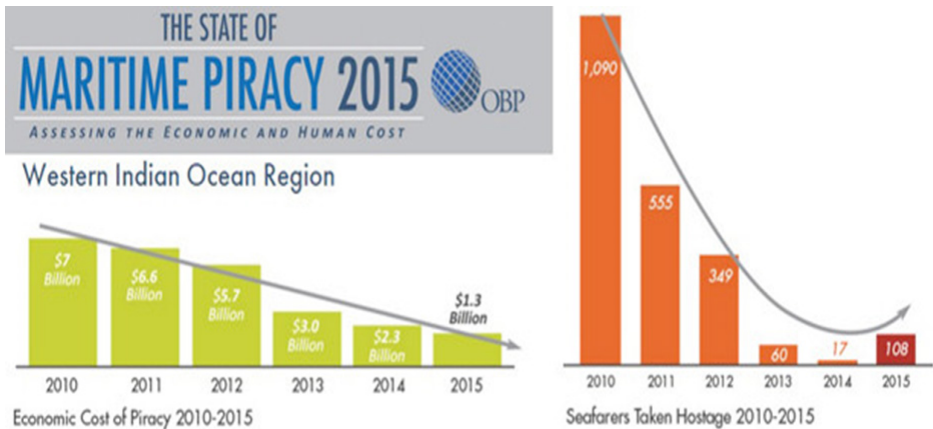


Figure 1.12 The state of maritime piracy in 2015 -2010 (west Indian ocean region)

The **likelihood of terror attacks** by organizations such as Al Qaeda and ISIS in this region are estimated to be high, in view of the declared intention of these organizations to disrupt the flow of commercial shipping in critical shipping lanes. The results of a terrorist attack of this type in the Gulf of Aden area are liable to have severe consequences for trade and the global economy. This region has three choke points that are important to global trade (Figure 1.7 above): the Suez Canal, the Bab el Mandeb Strait and the Strait of Hormuz, through which passes about 20% of global oil trade. The shipping through these choke points

can be disrupted with relative ease (by means of, for example, naval mines).³⁵ The fighting in Yemen increases the level of instability in the region. Thus, in April 2016, a local faction of Al Qaeda (Al Qaeda in the Arabian Peninsula) used **explosive boats** to attack the commercial port facilities in the city of Makalla and in October 2016 the Houthis used **coast to sea C-802 anti-ship missiles** to attack a ship of the United Arab Emirates, which was sailing near the port city of Moka and was carrying humanitarian aid.³⁶ In addition, in October 2016 an American destroyer, the USS Mason, which was patrolling in the area of the Bab el Mandeb Strait, was forced to defend itself and another ship, the USS Ponce, against a number of similar missiles that were fired at it from the Yemenite coast. It did so by using anti-missile missiles and a decoy system.³⁷

Rogue nations such as Iran and North Korea employ forces whose mode of operations is similar to that of terror organizations. Notwithstanding the nuclear agreement signed in 2015 between the West and Iran, the aggressive activity of Iran's Revolutionary Guard continued in 2016 in the Persian Gulf region. This activity was backed by a declared threat by the Iranian Assistant Chief of Staff, Ali Shadmani, made in July 2016, to close the Strait of Hormuz.³⁸ These threats are manifested in provocative activity by navy vessels belonging to the Revolutionary Guard, which on a number of occasions have come threateningly close to vessels of the US Fifth Fleet which patrols the region. In one incident, in January 2016, they even captured American sailors and humiliated them during their interrogation.³⁹

In summary, although the attacks on ships by terrorist organizations have been less frequent than maritime piracy incidents, a broader perspective indicates that both the **capability** possessed by these organizations and their **intentions** of

35 Church Chris, Naval commanders warn of terror threat against commercial shipping, Stars and Stripes April 9, 2016.

36 Charkatli Izat, UAE warship obliterated off the coast of Yemen, Al-Masdar Al-'Arabi AMN, October 1, 2016. <https://mobile.almasdarnews.com/article/uae-warship-obliterated-off-coast-yemen/>

37 LaGrone Sam, USS Mason Fired 3 Missiles to Defend From Yemen Cruise Missiles Attack, The US Naval Institute, October 11, 2016. <https://news.usni.org/2016/10/11/uss-mason-fired-3-missiles-to-defend-from-yemen-cruise-missiles-attack>

38 TheTower.org Staff, Iranian General Threatens to Shut Down Straits of Hormuz if U.S. "Makes a Small Mistake", the Tower Magazine, July 29, 2016, <http://www.thetower.org/3712-iranian-general-threatens-to-shut-down-straits-of-hormuz-if-u-s-makes-a-small-mistake/>

39 Times of Israel staff and AP, US sailors divulged information during Iran capture. Faulty equipment, poor judgment, lax oversight led to shameful January incident, Navy report says, accusing Iran of violating international law, The Times of Israel, July 1, 2016, <http://www.timesofisrael.com/us-sailors-divulged-information-during-iran-capture/>

carrying out an attack of this type constitute a real threat. The existence of three maritime choke points in the Middle East (the Strait of Hormuz, Bab el Mandeb and the Suez Canal), which are close to the strongholds of ISIS and Al Qaeda, provide them with relatively easy access to shipping and raise the probability of their occurrence. Evidence of the fear among American officials of a terror attack of this type can be found in the evaluation requested from the Brookings Institute of the scenario of an attack on tankers carrying cargo such as liquefied natural gas, oil and chemicals, in order for it to recommend ways of dealing with this kind of threat.⁴⁰

Immigration along the sea routes

The migration of refugees by way of the Mediterranean to Europe is not a new phenomenon and has already in the past cost the lives of refugees trying to cross the Mediterranean to Europe. But the movement of refugees has intensified during the last decade due to the **civil war in Syria and the African refugees who are embarking primarily from the coast of Libya**. This migration is described by The International Organization for Migration as "the biggest movement of people since World War Two."⁴¹ Although the majority of refugees remain in the countries neighboring their homeland, many choose to continue on to other destinations, such as Turkey, and from there join the flow of immigrants from Southwest Asia and Afghanistan in an effort to reach the coast of Greece by boat. Alternative routes by way of Egypt, Sudan and the Sahara are used by refugees from Eritrea to get to the shores of Libya and from there to the shores of Southern Europe. The years 2014 and 2015 saw record numbers of refugees arriving in Europe by sea (see tables 1.4, 1.5).

A total of 278,201 refugees arrived in Europe up until the middle of August 2016, of which 266,042 arrived by sea. About 3,151 drowned on the way.

The EU-Turkey Refugee Deal which was signed on March 20th between the 28 EU countries and Turkey was intended to reduce the flow of refugees arriving by sea and in particular by way of Greece; however, its effectiveness is still unclear.⁴²

40 Alex Hall, Tess Hellgren. Lucia Retter, Giacomo Persi Paoli, Examining the Possible Consequences of a Deliberate Attack on Tankers, Rand Corporation Europe. <http://www.rand.org/randeuropa/research/projects/tanker-attack-consequences.html>

41 The Economist, Europe's boat people for those in peril, April 25th, 2015.

42 Kingsley Patrick, Rankin Jennifer, EU-Turkey refugee deal – Q&A, The Guardian, March 8, 2016, <https://www.theguardian.com/world/2016/mar/08/eu-turkey-refugee-deal-qa>

Table 1.4 Number of refugees arriving in Greece during 2015-16⁴³

Total between Jan. 1 2015 and Aug. 11 2016	1,020,695
Total for 2016	163,332
Total by sea in 2016	161,594
Total by land in 2016	1,738
Total in 2015	857,363
Type	First country in Europe to which the refugees arrived

Table 1.5 Number of refugees arriving in Italy during 2015-2016

Arrival of refugees in Italy starting from August 15, 2016	
Total from January 1, 2015 to August 15, 2016	255,786
Total in 2016	101,944
Total in 2015	153,842
Type	First country in Europe to which the refugees arrived

Maritime environmental protection and global trends in maritime planning

The oceans, seas and coastal areas constitute an **integral and essential component of the global ecosystem** and are essential to the continued utilization of its resources. There is a need to oversee the ongoing exploitation of the oceans, the seas and the resources they contain, even if it appears that they can be used to wipe out poverty, ensure economic growth and food security and create employment. Alongside the oversight over the usage of these resources, there is a need to protect the maritime environment in all its aspects and including **the response to the effects of climate change.**

The Regional Seas Convention and the Action Plans (triennial) are intended to achieve these goals, by deepening the involvement of the signatory countries, through appropriate national legislation and the adoption of monitoring and control mechanisms. This will require partnership between civil society and the private sector, the buildup of capabilities, the allocation of national and international funding and the creation of a mechanism and process to assess progress.

The three-year Action Plan for 2013-2016 is about to end and the **2017-2020 Action Plan** has been drawn up and approved by the 143 member countries, which represent 13 different regions around the world. The difficulties in carrying out the Plan are

⁴³ IMO and the local authorities, as of August 2016.

primarily political and financial. Since this report focuses on the Middle East, the environmental threat is primarily to do with the sea and its source is **activity that causes pollution of the maritime environment** and as a result affects both the quality of life and the fisheries in the region.

Israel has signed the **Barcelona Convention** for the protection of the Mediterranean from pollution, which includes six Regional Activity Centers (RACs). However, the civil wars in some of the Middle East countries and/or hostile relations between the countries, and in particular between Israel and its neighbors, have hindered the implementation of the plan. Israel has signed the Barcelona Convention but has not yet ratified all of its protocols and similarly has not yet declared 10 percent of the fisheries in its sovereign waters as protected maritime territory, although its signature on the Convention for Biological Diversity (CBD) commits it to do so by 2020.

Conclusion

The world is in the midst of far-reaching global changes which will have broad implications in the maritime domain. In this sense, the year 2016 has reinforced the trends that appeared at the beginning of this decade.

In addition **to the US, which remains the strongest maritime superpower, China and India have become regional superpowers**, which is reflected in the **quantity and quality of their ships**. These two superpowers are expanding the **nuclear deterrent capability** of their underwater fleet, which is evidence of their ambitions to expand and extend their naval operations to well beyond their shores. **The new US administration**, which during the election campaign did not make any specific policy declarations as to its future operational strategy in general and in the maritime domain in particular, has not yet clarified its stand on some of the issues discussed in this report.

According to the traditional strategy approaches, the question that arises with respect to both China and India (who have been adversaries since the military conflict in the Himalayas in 1962) is the following: **Are they choosing to discard their continental image and do they envisage a maritime role**, or, in spite of the huge investment of resources in building a navy that has deterrent ability and is able to project power, will they remain **faithful to the continental component which has greater geostrategic importance?**⁴⁴

44 Zorawar Daulet Singh, *India's Geostrategy and China: Mackinder versus Mahan?* Journal of Defense Studies, Vol. 7, Issue 3, pp. 137-146, 2013.

The Russian navy is rebuilding its capabilities, increasing its number of ships and adopting a new operational doctrine. It is presenting the navies of the US and NATO with operational challenges in the various theaters, such as the Black Sea and the Eastern Mediterranean, the Baltic Sea and the North Pacific. The Russians are fully exploiting geopolitical opportunities (such as in Syria and Iran) in order to deploy their navy and air force and in this way create a situation in which they are **pushing the American navy out of the region** (even if this only appears to be so). During 2015 and 2016, **relations became closer between the Russian and Chinese navies** and they carried out joint exercises in the Mediterranean and the South China Sea and off the eastern shores of Russia. Essentially, a naval axis is developing that is a counterweight to the coalition that the US is trying to create with the countries in the region.

Climate change in the Arctic Ocean region is creating opportunities for the exploitation of resources and the shortening of shipping routes. These phenomena are acting as a catalyst for countries such as Russia and China who are building up their navies for future activity in this region.

It appears that the **war against maritime piracy in the Indian Ocean** is meeting with success, although a large amount of resources is being invested. Despite the nuclear agreement between the superpowers and Iran, the **Revolutionary Guard's navy** continues to operate aggressively in the Strait of Hormuz region and is managing to embarrass the Western navies present in the region.

Maritime terror has still not made any impressive achievements like the terrorist successes in Syria, Iraq and Afghanistan, but it is expected that with the support of rogue nations and terrorist organizations such as ISIS and Al Qaeda, it is likely to overcome existing obstacles and in particular in the waters of failed states.