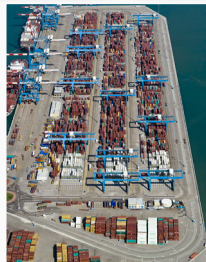


MARITIME STRATEGIC EVALUATION FOR ISRAEL 2019/20

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7. The Egyptian Navy – Its Origins and its Future

(Is it on its way to becoming a “green water” navy?)¹

Shlomo Gueta

Introduction

In recent years, and particularly during the last five years under the rule of el-Sisi, there have been many articles written on the acquisition programs and growth in power of the Egyptian navy and the development of its maritime infrastructure. Summing up those analyses paints an impressive picture of ambitious acquisition, which includes state-of-the-art naval platforms, rather than the second-hand platforms acquired in the past. The list of acquisitions during the current decade includes new submarines from Germany, frigates and multipurpose surface warships from France, Germany and the US, and the process is continuing, including possibilities of acquisition from Russia and from Asian countries. In addition to the acquisition of platforms, Egypt is equipping itself with a variety of advanced naval weapons systems, including aircraft for naval missions.

Some of the researchers and analysts are concerned about Egypt's growing naval power and view it as part of a desire to confront Israel in the future. In other words, this growth in naval power will in their view be used by Egypt in a future scenario of escalation, erosion of the peace treaty or actual war against Israel. This approach is based on past experience (the surprise attack during the Yom Kippur War in 1973, including the intelligence failure and the erosion of indicators prior to the war) and on the following advice in the Book of Proverbs (28:14): “Happy is the man that feareth alway; but he that hardeneth his heart shall fall into evil.”

Other researchers and analysts that are following the process view the growing strength of the Egyptian navy as a natural and structured extension of the process that began at the beginning of the 19th century. This was a process initiated by the founders of modern Egypt, starting from Muhammad Ali in the first half of the 19th century, continuing with Gamal Abdel Nasser who ruled Egypt from 1952 to 1970 and ending with Abdel Fattah el-Sisi, the de facto leader of Egypt since 2013 and the de jure leader from 2014. Each had his own motives and style in realizing the vision of making Egypt a regional naval power.

1 This article is a condensed version of the draft of a broad historical survey of the Egyptian navy from 1800-2020. The survey is written by the author of this article and is in the final stages of writing and editing.

This article does not claim to decide between these two approaches. Nonetheless, it is worth mentioning that the peace treaty between Israel and Egypt is an important strategic interest that is shared by both countries. It has been in effect for four decades, including during the brief rule of President Morsi, who was supported by the Moslem Brotherhood, an organization that is hostile towards Israel.² Furthermore, Egypt currently faces a large number of challenges and threats in the regional maritime domain which forces it to provide a response on two fronts: in the Mediterranean and in the Red Sea up to the Gulf of Aden. This is against the background of the important role of the Suez Canal in the Egyptian economy and the discovery of natural gas in the Mediterranean (and indications of similar resources in Egypt's economic waters in the Red Sea).

In terms of maritime strategy, there are those who view the intensive efforts to strengthen the Egyptian navy as motivated by the vision to achieve a "green-water" navy.³ Such an analysis appears for example in an article published in July 2017 by a Greek researcher by the name of Theodore Bass-Yannis.

This chapter reviews the process to strengthen the Egyptian navy and the view of the author that at the conclusion of this ambitious process the Egyptian navy will likely achieve the status of a green-water navy. In order to be precise, following is a relevant quote from the article:⁴

Assessing the Future Egyptian Navy – After the completion of this ambitious modernization program, it can be assumed that the Egyptian navy will be either a "Green Water Navy" or what G. Till refers to as a "medium level naval power capable of projecting power offshore in a regional range."

- 2 The Moslem Brotherhood movement was founded in Egypt by Hassan al-Bana in 1929. Sheikh Ahmed Yassin, the founder of the Hamas movement in Gaza, was a member of the movement and the Hamas has a similar ideology to that of the Moslem Brotherhood.
- 3 "Green water" is a relatively new term which relates to naval power with the ability to operate outside a country's sovereign waters, including in a nearby ocean. This is essentially a classification that bridges between a "brown-water" navy/coast guard, which is a force that can guard the coast or can operate within a limited range in the maritime domain, including the country's territorial waters, and a "blue-water" navy that is a superpower's navy, which is able to operate around the world and in the open seas, and is able to maintain a presence and to project power at great distances, including the presence of battle groups, and in particular aircraft carriers.
- 4 Egyptian Navy upgraded - Seeking for security or an indication of strategic aspiration?, Theodore Bazini, 29 July 2017 Naval Analyses, <https://www.navalanalyses.com/2017/07/egyptian-navy-upgraded-seeking-for.html>

The Egyptian navy – historical background

The 19th century⁵

In 1805, an energetic officer of Albanian origin named Muhammad Ali became ruler of Egypt. In order to realize his political aspirations, Muhammad Ali understood that he would need naval power. Together with his sons, and in particular his son Ibrahim Pasha (who in his youth was a cadet of the admiral of the Ottoman navy), began to develop a naval fleet. At first, the ships were primitive and based on large fishing vessels that were built in Cairo and were then brought to Suez and Alexandria. At a later stage, and with the help of the French navy, more advanced vessels were built.



Figure 1: Muhammad Ali personally supervising the building of ships for the navy

At the request of the Ottomans, the Egyptian navy under the command of Ibrahim Pasha was used to help put down the revolt of the Greeks against the Ottoman empire. The Egyptian naval adventure in the Greek Archipelago ended in October 1827 with the battle at Navarino, between the Ottoman-Egyptian navy and a joint naval fleet of Britain, France and Russia. It is worth mentioning that this was the last great naval battle between sailing warships. The joint Ottoman-Egyptian fleet was defeated and a

5 For further details on the history of naval forces in Egypt during the 19th century, see: Shimon Shamir, *History of the Arabs in the Middle East in the Modern Era*, Reshafim, Tel Aviv, 1987. [Hebrew]

year later Ibrahim was forced to surrender and to leave Greece. The defeat in this battle motivated Muhammad Ali to work to establish a modern navy with the assistance of a French expert. The building of the new ships began in 1828 and in 1831 the first ship, which was outfitted with 100 guns (!) and was named after Pasha Muhammad Ali, was launched.⁶

The naval adventures of Muhammad Ali and his son Ibrahim continued during the 1830s, this time against the Ottoman empire, as part of a naval and land campaign to capture the Land of Israel, Lebanon and Syria, during which the Ottoman fleet surrendered to Egypt. However, under pressure from the superpowers, Muhammad Ali and his son were forced to return the Ottoman fleet in the early 1840s and to sign a peace treaty with the empire.

After the deaths of Muhammad Ali and his son Ibrahim in the mid-1800s, the Egyptian navy became involved in the Crimean War. At the request of the Ottomans, Egypt sent a military force consisting of about 12 warships to the Black Sea in order to assist the Ottoman empire in its war against Russia. During the battle of Sinop in the Black Sea in November 1853, the Russian navy destroyed and sank the Ottoman and Egyptian fleet that was anchored in Sinop. The commander of the Ottoman navy was captured and this Russian victory was among the reasons that France and England entered the war.

Almost until the middle of the 20th century (a period of almost 100 years), Egypt's naval forces were in a process of decline. Most of the ships in Egypt's once great navy became outdated wrecks. Even the small core of the merchant fleet, which was built during the period of the ruler Ismail, was sold for a pittance to British buyers at the end of the 19th century as a result of Egypt's accumulated debts. This deal led to the disappearance of the Egyptian merchant fleet until it was reestablished during the first quarter of the 20th century.⁷

At the same time, the hold of the Ottoman empire on Egypt slowly weakened during the second half of the 19th century. During this period, during which the Suez Canal was dug and then inaugurated in 1869, France's influence over Egypt grew and later that of Britain as well. Towards the end of the 19th century, Britain achieved almost complete control over Egypt, including its maritime assets (its ports and the Suez Canal), during and between the two world wars.

6 Ibid., Dodwell, p. 223.

7 Ibid., Shamir, p. 176.

The 20th century

During the first three decades of the century, the civilian shipping industry recovered to some extent in Egypt with the beginning of operations by two Egyptian-owned shipping companies; however, the naval forces remained negligible and neglected and included primarily postal ships and coast guard vessels, which were meant to prevent smuggling.

In 1946, after a period of stagnation that had lasted 100 years, the Egyptian navy was reestablished on the order of King Farouk. From 1948 until 1974, the Egyptian navy took an active part in all the conflicts with Israel (the War of Independence in 1948, during which the ship el-Amir Farouk, the flagship of the Egyptian fleet, was sunk by Israeli commandos commanded by Yohai Ben Nun; the Sinai Campaign in 1956, during which the destroyer Ibrahim el-Awal was captured off the shore of Haifa; the Six Day War in 1967; the War of Attrition in 1969-1970; and the Yom Kippur War in 1973).

During this period, it is particularly worth mentioning the period of President Gamal Abdel Nasser from 1952-1970 in the context of the buildup of naval power. President Nasser invested major efforts in building up the Egyptian navy, which reached a peak during the Six Day War (June 1967). This buildup (starting with the Czech deal⁸ in 1955) was made possible by aid from the Soviets, who sought to achieve a permanent naval presence in Egypt's ports in return and particularly after their naval presence in Albania came to an end in 1961. There was a major buildup of the Egyptian navy during this period and it included first-line warships,⁹ such as destroyers, submarines and missile boats (which were first introduced into the Middle East by Egypt), torpedo boats, submarine hunters and minesweepers. In addition, the navy also acquired second-line vessels and coastal defense systems including coastal missiles, coastal artillery and detection and fire control systems.¹⁰

8 The Czech deal was a large weapons deal signed between Egypt and the Soviet bloc in September 1955. From a naval perspective, the deal included major vessels, such as destroyers and submarines from Poland's military surplus, as well as torpedo boats and other vessels. The first of the ships to be included in this deal were delivered during the first half of 1956 while the delivery of the rest was delayed by the Sinai Campaign and only arrived in 1957.

9 First-line vessels include as missile boats, frigates, destroyers and submarines and are defined as having offensive capabilities. Second-line vessels are intended for defensive missions, transportation and logistics, etc.

10 The description of the buildup of the Egyptian navy during the period 1955-1967 is based on a variety of sources: the annual publication of Jane's Fighting Ships; the book by el-Hussini (the former head of the Egyptian navy's history department): Mohrez Mahmoud El-Hussini, *Soviet & Egyptian relations, 1945-86*; Pesah Malveni, *Red Flag over the Middle East*, Effy Meltzer Ltd., first edition, 2017 [Hebrew]; Alexander Rozin, *Naval Cooperation between the USSR and the Egyptian Navy*, part 1 and 2 of the collection of articles at <http://alerozin.narod.ru>

It is worth mentioning the nationalization of the Suez Canal in July 1956 by Nasser and the transfer of its control to Egypt. This provided Egypt with a major maritime asset that became an important source of revenue for the Egyptian government (which was used to finance the building of the Aswan Dam by the Soviets), as well as providing an international political tool (in this context, it is worth mentioning the confiscation of Israeli cargo that was passing through the Canal).¹¹ From this point onward, the Egyptian navy also became responsible for securing the canal.

Nasser's vision to achieve for Egypt the status of a regional superpower was based on the doctrine of "three circles" that he developed: the Arab circle, the Muslim circle and the African circle. Apart from the ideological component, Nasser, as well as Admiral Suleiman Ezzat, the well-known commander of the Egyptian navy at that time, viewed the role of the navy as providing a response to Israel and also to the possible threat from the navies of the Western superpowers. This was particularly the case in view of the trauma Egypt had experienced in 1956 during the Sinai Campaign and the confrontation with France and Britain over the nationalization of the Suez Canal.

From a regional point of view, two events in the Arab world that Egypt was involved in are worthy of mention. The first was the Egyptian-Syrian union during 1958-1961 which constituted a major potential threat to Israel in the maritime domain in view of the two countries' joint naval force. This union was dissolved in 1961 at the initiative of Syria and to the disappointment of Nasser.

The second event was the Yemen War during 1962-1967, a war that Egypt was deeply involved in. It appears that the main adverse effect of this war was on Egypt's land and air forces. The Egyptian navy on the other hand was only marginally involved. Its units were not involved in actual combat and their missions were limited to the transport of land forces, weapons and logistical supplies, an effort to which merchant vessels were also recruited. Overall, the military involvement in Yemen does not appear to have had a major adverse effect on the Egyptian navy (as it did on the other arms of the Egyptian military).

Prior to the Six Day War (1967), the Egyptian navy reached the peak of its power following a massive buildup based on acquisitions from the Soviet Union. During the war itself, the navy was a major disappointment for President Nasser since it did not carry out the offensive maneuvers against Israel that had been expected of it. It is reasonable to assume that this was due to the fear of the Israeli air force, which during

11 See, for example, "A third shipment is confiscated. Nicholas Kahiris is a sacrifice to the Egyptian blockade of Suez", http://jpress.org.il/olive/apa/nli_heb/SharedView.Article.aspx?href=MAR/1959/03/26&id=Ar00201 [Hebrew]

the first hours of the war had destroyed much of the Egyptian air force, and the fear of the commander of the navy to operate without air cover outside its home ports. Due to the underperformance of the Egyptian navy during the war, Admiral Ezzat was relieved of his position by President Nasser, even though he was an admired commander. (The new Ambassador-class frigate built in the US was later named after him.)

The outcome of the Six Day War (1967) was a major blow to Egypt's prestige. In the maritime domain, this was an unprecedented low point. The Suez Canal was blocked to traffic, which represented a major loss of revenue for Egypt, and as a result the Egyptian navy was divided between two fronts, without any possibility of connecting between them, apart from transporting small vessels, parts and ammunition over a long and poorly maintained land route (such as the Wadi Kinah route in the western desert).

The dominance of the Israeli navy and its presence opposite the shores of the Sinai Peninsula (the Gulf of Eilat and the Gulf of Suez) was also a blow to Egyptian prestige, due both to the production of crude oil from oil fields in the Gulf of Suez and the ability of Israel to carry out offensive naval maneuvers in the Gulf of Suez, such as, for example, the raid on Green Island (Bulmus 6) and the Island of Shaduan (Operation Rhodes) or the amphibious landing of an armored force in the Gulf of Suez (Operation Raviv) in September 1969, which was a shock to Egypt, and led to the immediate firing of the commander of the navy by President Nasser (about one year before the Yom Kippur War, he was restored as commander of the navy by President Sadat).

In comparison to its lack of activity in the Six Day War, it is worth mentioning that during the years 1967-1970, the period of the War of Attrition, the Egyptian navy recovered somewhat and carried out a number of missions that raised morale in Egypt and in the navy in particular. An example is the sinking of the INS Eilat, an Israeli destroyer in October 1967, northeast of Port Said, by for the first time a Soviet-produced sea-to-sea missile. Since then, the day of the sinking of the Eilat is marked as the annual Egyptian Navy day.

In addition, it is worth mentioning the success (from the Egyptian point of view) of the sabotaging of Israeli ships in the port of Eilat, which was carried out by commando of the Egyptian navy (1969-1970) following Operation Raviv¹² (apparently in order to deter Israel from additional operations), as well as the sabotage in western Africa of

12 Operation Raviv was a raid by an armored IDF force on September 9, 1969, during the War of Attrition. An Israeli armored force that was disguised as Egyptians was landed amphibiously on the western shore of the Gulf of Suez, where it attacked military targets along a 70-km strip. This was the largest single land operation during the War of Attrition.

an offshore drilling rig that was on its way to Israel and was intended for use in the production of oil in the Gulf of Suez. It is also worth mentioning the shelling of the northern shore of Sinai in November 1969 by a pair of Skori destroyers (which have an improved anti-aircraft capability) that were guarded by Osa missile boats and a number of patrols by submarines of Israel's Mediterranean coast in order to gather intelligence.

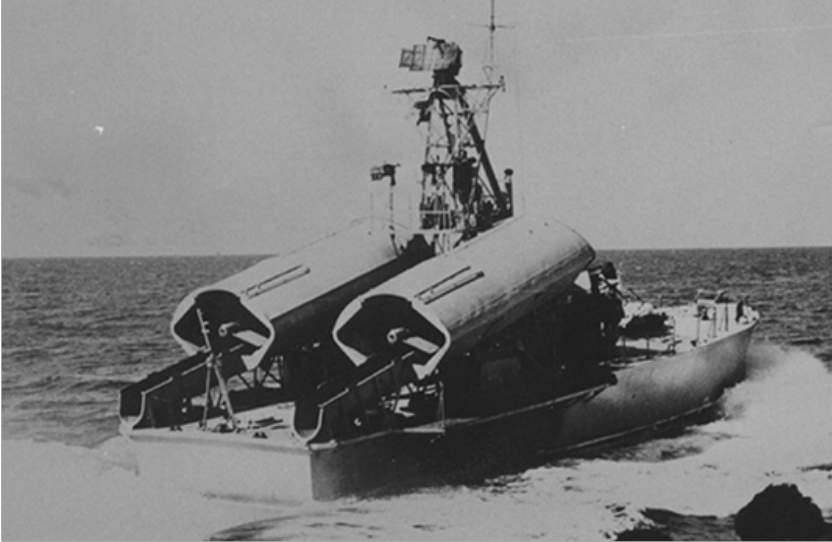


Figure 2: A Komar missile boat. Two of these vessels launched four missiles that sank the Eilat destroyer. (Photo from the northern Gulf of Suez provided by Azran Kochavi.)

Between 1970 and 1973, the Egyptian navy, like the other arms of the Egyptian military, prepared for the Yom Kippur War. It acquired almost no new vessels during this period based on the understanding of the Egyptian leadership that the navy is weak in any case due to the inferiority of the Egyptian air force and its inability to provide air cover to the navy.¹³

It appears that during the years of preparation for the Yom Kippur War, the main theater for the Egyptian navy was the Red Sea, where there was only a limited threat from the Israeli air force. It was given two important strategic/operational tasks:

1. The blocking of ships to and from Israel in the central and southern Red Sea by means of submarines and destroyers that prevented traffic to and from the port of Eilat.

¹³ Saad el-Shazali, *Crossing the Canal*, IDF Publishing, 1987, p. 16-17 (memoir of the Egyptian Chief of Staff during the Yom Kippur War). [Hebrew]

2. The mining of the southern Gulf of Suez, primarily the Jubal Straits, in order to disrupt the flow of tankers carrying crude oil produced in the Gulf of Suez to the oil pipeline in Eilat (the mines caused the sinking of the tanker *Sirus* which was in service for Israel while it was on its way from Eilat to the Gulf of Suez).



Figure 3: The Jubal Straits – southern entrance to the Gulf of Suez.

From the viewpoint of the Egyptian navy, these two tasks were carried out successfully. Moreover, the mission of blocking Israeli shipping in the Red Sea was even more successful, since it served as major leverage for Egypt in the negotiations to lift the Israeli blockade of the Third Army on the shore of the canal. However, the task of laying about 70 sea mines was only partially successful since the Israeli navy managed within a short time to create an alternative route to the Jubal Straits (through the Milan Straits) and as a result the traffic of naval vessels and tankers was restored.

Along with the two main tasks assigned in the Red Sea, which the Egyptian navy successfully carried out, a number of other missions were assigned to it on the tactical/operational level which it failed to carry out. These included the attempt to block shipping to Israel in the central Mediterranean by strengthening a previously existing presence

in Libyan ports; and the total defeat in sea-to-sea battles against Israeli missile boats in the Mediterranean, which led to the confinement of the Egyptian navy to its ports in the Mediterranean. There was also a disruption of activities of the Egyptian naval commandoes in the Gulf of Suez, which were meant to be part of an Egyptian effort to capture the eastern shore of the Gulf of Suez from Ras Masala in the north to the vicinity of Sharm el Sheikh in the south and which was unsuccessful.

Peace with Israel

If the first half of the 1970s was characterized by the war and the preparations for it, then the second half was characterized by harbingers of peace. Following the Yom Kippur War, ceasefire agreements were signed, and the Suez Canal was opened to shipping in June 1975 after having been blocked for eight years. Finally, a peace agreement was signed between Egypt and Israel in 1979.

The peace between the two countries also included a maritime element. In September 1979, President Sadat and his entourage arrived for a presidential visit in the port of Haifa on the presidential yacht (called el-Houria and which in the past was called Mahrusa and which was built for the ruler Ismail to mark the opening of the Suez Canal in 1869). The yacht was accompanied by a flotilla that included a destroyer and pair of missile boats. A few months later (in May 1980), a flotilla of Israeli missile boats visited the port of Alexandria.



Figure 4: An OSA-class missile boat accompanied by an Israeli missile boat at the entrance to the port of Haifa in September 1979

Since the Yom Kippur War, the Egyptian navy has not taken part in any combat activity except for dealing with maritime terror activity during the last two decades, as will be described below. Its main efforts in the years following the Yom Kippur War were

invested in acquisition. This was a result of the decision to eliminate its dependence on Soviet naval arms and to diversify acquisitions by also purchasing from Western Europe (Britain, France, Italy and Spain) and at a later stage also from China. This process began during the final years of Sadat's rule and continued during the period of Hosni Mubarak, his successor. Since the early 1990s, and following the First Gulf War, the Egyptian navy began receiving naval arms from the US, including US navy surplus surface vessels.



Figure 5: An Israeli missile boat entering the port of Alexandria in May 1980 against the background of the Ras el Tin Palace

Since the peace treaty with Israel at the end of the 1970s, the Egyptian navy has been opened to the Western world not only with respect to acquisition and buildup, but also with respect to large-scale cooperation, such as joint exercises, training, instruction, adoption of fighting doctrines and maintenance. In the context of joint training and exercises, it is worth mentioning the Shining Star exercises with the US, which began in the early 1980s and included the navies of both countries, exercises with the navies of Britain, France and Greece and in at least one instance (in 2012) with the Turkish navy in the Mediterranean, as well as with the Saudi navy in the Red Sea.

The 21st century

The flow of naval acquisition during the rule of President Mubarak (1981-2011) continues, although during the last decade of his rule there was no major buildup of first-line vessels. During this decade, the Egyptian army primarily assimilated used second-line vessels. However, towards the end of President Mubarak's rule, at least

two important acquisition contracts were signed for the building of major new vessels. The first was for the building of four Ambassador-class missile corvettes in the US; and the second, which was signed towards the end of Mubarak's rule, was for the building of the first pair of 209-class submarines in Germany.

The main momentum in the acquisition for the Egyptian navy, which has been widely reported on and discussed in recent years, was particularly evident during the past five years, since the coming to power of President Abdel Fattah el-Sisi in Egypt.

As in the case of two previous leaders, namely Muhammad Ali in the 19th century and Gamal Abdel Nasser in the 20th, who had a vision of Egypt as a regional naval power, it is reasonable to assume that President el-Sisi also maintains such a vision, both in the case of the Red Sea theater and the Mediterranean theater. This is in view of the maritime assets that need to be protected and the map of threats and challenges that currently face Egypt – from both state players (such as Iran, Yemen, Turkey and Libya) and terror organizations operating in the maritime domain (Al Qaida, ISIS in the Sinai Peninsula and Libyan territory, the Houthis in Yemen and to some extent the maritime pirates in the Gulf of Aden and the Arabian Sea).

The buildup of the Egyptian navy during the last decade

Following are the characteristics and trends of the buildup of the Egyptian navy in recent years:

- **Submarines:** The Egyptian navy has acquired four 209/1400-class submarines from Germany. Three of them have already been built and delivered and the fourth is under construction. Apparently, the deal with the German shipyard will include another two submarines. This German model is added to the Romeo-class submarines made in China, which were delivered to the Egyptian navy in the 1980s and which have undergone upgrading in recent years, including the installation of American weapons system, such as the Harpoon missile.
- **Multi-purpose surface ships:** There is a huge selection for category of ships, both with respect to sources and types and models. This category generally includes ships that are custom-built for the Egyptian navy rather than second-hand ships, as in the past. Included in the list of ships that have been supplied in recent years and which will be supplied in coming years are helicopter and troop carriers, destroyers, frigates and corvettes:
 - Two Mistral-class helicopter and troop carriers that were built in France, originally for delivery to Russia, but which in the end were delivered to the Egyptian navy in 2015. One of the carriers is named after Gamal Abdel Nasser and the other after Anwar Sadat. When the "Southern Navy" was officially

created in January 2017, with its headquarters at Safaga, one of the new carriers was stationed there and at the same ceremony the flag of the Egyptian navy was raised on it.

- Four Ambassador-class missile corvettes made in the US were delivered to the Egyptian navy during the years 2013-2015 and they are referred to as Ezzat-class in Egypt (after the previously mentioned commander of the Egyptian navy from 1952-1967). The other three corvettes are also named after former navy commanders.
 - A Fremm-class multi-purpose destroyer/frigate made in France and originally intended for the French navy, but later purchased by Egypt in the second half of 2015.
 - Four Gowind-class multi-purpose corvettes made in France. The first was built at a shipyard in France while the other three were built or will be built in the Alexandria shipyard according to the agreement.
 - A pair of Pohag-class frigates (in this case, second hand) made in South Korea were delivered as a gift to the Egyptian navy in 2017.
 - A Moniya-class corvette (project 1242) made in Russia was delivered to the Egyptian navy in 2015, apparently without missiles.
 - It recently became known that the German government has approved the sale of four Mako-200-class frigates, which will be built at the ThyssenKrupp shipyard in Germany.
 - Apart from the buildup in new platforms, it is worth mentioning that from time to time the Egyptian navy upgrades and improves the vessels it received in previous decades, such as the OHP-class frigates that were delivered in the 90s from American army surplus.
- **Aircraft for naval missions:** A variety of aircraft for various missions, such as early warning and command, and fighter aircraft for attacking maritime targets, should be included in a description of Egypt's naval power. Recently, the acquisition of the naval version of French-made Dassault Rafale aircraft, equipped with air-to-sea missiles and/or Mig-29 M aircraft that will be armed with kh-31 missiles, has been considered or even decided upon. The Egyptians already have a large quantity of naval helicopters which are intended for either submarine hunting or assault and troop carrying. In addition, dozens of KA-52K helicopters have been delivered from Russia for stationing on the Mistral helicopter carriers.
 - **Special forces:** Under the command and control of the Egyptian navy are two divisions of commandos for land missions and frogmen trained for underwater operations to sabotage ships. One division is meant to operate as part of the "Southern Navy" which is headquartered at Safaga and the other is meant to operate in the Mediterranean.

In summary, the buildup in recent years has been characterized by the acquisition of large multi-purposes ships that will have the ability to operate independently and far from their home port. In addition, there is clearly a desire and a large measure of determination on the part of Egypt to demand concessions from the foreign shipyard to build or assemble some of the vessels in Egypt.

Characteristics of the maritime theater

The Egyptian maritime theater has unique characteristics due to, among other things, the fact that Egypt is situated at an important geopolitical junction in the Middle East. Egypt has long borders and a large portion of them are maritime borders. Egypt's Mediterranean coast and its Red Sea coast are together about 2500 km long. The coastal areas along the Nile are densely populated, in contrast to other parts of Egypt. Many of Egypt's strategic assets and resources are located in its coastal strip.

The Suez Canal which connects the Mediterranean to the Red Sea between Port Said in the North to Port Ibrahim in the South is about 162 km long. The canal is an important strategic asset both for Egypt and the world, which emphasizes and reinforces Egypt's regional importance as a junction that connects between the Atlantic and the Mediterranean on the one hand and the Indian Ocean on the other. With his coming to power and election as President in 2014, Abdel Fattah el-Sisi initiated a large-scale and ambitious project to widen the Suez Canal, with the goal of making it into a two-way channel. The project was completed at an exceptionally rapid pace and the "New Suez Canal" was inaugurated in August 2015. There is no doubt as to its strategic and economic importance for Egypt and its protection is one of the most important tasks of the navy and the defense forces in Egypt.

During the last two decades, important assets have been added to the maritime domain in the form of energy resources and in particular reservoirs of natural gas found in Egypt's economic waters.

Both the Suez Canal and the natural gas reserves (proven in the Mediterranean and forecasted in the Red Sea) have led the Egyptians to invest heavily in the development of ports for military use at three locations: the first at Gargoub near the border with Libya; the second located east of Port Said in the northeastern Suez Canal; and the third at Ras Banas in the Red Sea near the border with Sudan.¹⁴

14 Mahmoud Gamal, February 1, 2019, Egypt's navy modernization, The growth of new power in the Middle East.
<https://navalnews.net/egypts-navy-modernization-the-growth-of-new-power-in-the-middle-east>

The deployment of three bases that the Egyptian navy is intending to upgrade is an indication that it wishes to have a presence in both the Red Sea (apparently even south of the Bab el Mandeb Strait) and the Mediterranean, including of course the Suez Canal, which is an essential channel connecting the two theaters.

In view of the characteristics of the theater and the variety of challenges and threats currently faced by the Egyptian navy, a strategic decision was made to reorganize the Egyptian maritime domain and to divide the navy into two parts: the “Southern Navy” in the Red Sea and the “Northern Navy” in the Mediterranean. This division was made in order to improve the efficiency of the navy and its operations. The idea is that each navy should be suited to its theater and should have an independent ability for operation, with the goal of minimizing the dependence between the two theaters that existed in the past, and in particular during the eight-year period in which the Suez Canal was blocked.¹⁵

Egypt's economic waters

Egypt began to produce offshore crude oil during the first half of the 20th century, primarily from oil fields in the Gulf of Suez. Later on, starting from the end of the 1990s and in particular during the current decade, there was a dramatic discovery of natural gas fields between Alexandria in the west and the northern shore of Sinai in the east, within Egypt's economic waters.

Egypt's vision is that by 2030 it will be producing natural gas to provide for all its domestic needs (which are increasing as the population grows) on the one hand and that there will also be a surplus for export on the other hand.

Moreover, Egypt's offshore wealth will grow in the future as the natural gas fields in the Red Sea (in addition to those in the Mediterranean) are developed and begin producing. There are expectations in Egypt that the Red Sea will be the next major area for exploration. In February 2019, Neptune Energy, a Norwegian company, won the concession to develop the natural gas fields in Block 4 in the Red Sea, which stretches from south of Ras Gharb in the southern part of the Gulf of Suez to about 100 km north of the port of Ghardaqah. In September 2019, an additional tender was closed for gas exploration in ten blocks in the Red Sea.

As things appear now, Egypt's maritime domain in the Mediterranean and in the future probably also in the Red Sea contains valuable natural resource that are essential

15 For further details on the “Southern Navy” in the Red Sea and the “Northern Navy”, see Shai Shaul, “The Egyptian navy in the Red Sea”, January 2017. https://www.idc.ac.il/he/research/ips/Documents/publication/5/ShaulShay16_1_17.pdf

to Egypt's economic resilience. There is no doubt among its decision makers, the designers of its national strategy, its political leadership and its military and naval commanders as to the need to protect Egypt's assets in its economic waters.

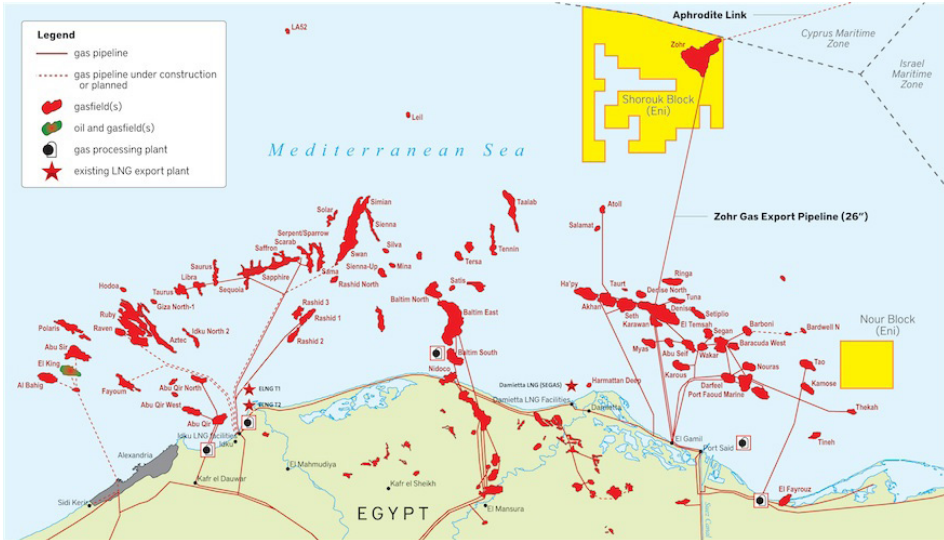


Figure 6: Map of Egypt's natural gas fields in the Mediterranean.¹⁶

The challenges and threats in the maritime domain and Egypt's response to them

During the 2000s, the Western world, including Egypt and the other Sunni countries, faced the threat of international terror (from the el Quaida movement and its affiliates) including maritime terror. The first maritime terror attack occurred at the beginning of the decade (October 2000) against the American destroyer, the USS Cole, in the Gulf of Aden. This attack and the September 11 one which followed it, provided an indication of the potential of international terror, including that against maritime targets.

Against this background, and following in the footsteps of the US, many countries adopted the doctrine of Maritime Domain Awareness, which included the security and defense of the maritime domain. A not insignificant number of countries have adopted the doctrine, although there is no indication that Egypt has done so even though it

¹⁶ Energy Global News, ENI reports new gas discovery in Nour, North Sinai offshore Egypt. <http://www.energyglobalnews.com/eni-reports-new-gas-discovery-in-nour-north-sinai-offshore-egypt>

fulfills all the conditions, i.e. capital-intensive targets, a long maritime border and more than a few players who are hostile to its interests.¹⁷

The threat of terror did not diminish during the 2010s. On the contrary, added to the terror equation in 2014 was the murderous terrorist organization known as ISIS, which emerged from the Fertile Crescent region, though it also sent out shoots to the Sinai Peninsula and Libya, Egypt's western neighbor, which has been torn apart since the civil war there and the deposing of Qaddafi.

The activities of ISIS in Sinai have surprised observers and have included attacks on targets in Sinai and in Egypt proper. In the maritime context, two terror attacks are noteworthy. The first, in November 2014, involved the attempted takeover of a Tiger-class missile boat which was on a routine patrol from Port Said. In the exchange of fire with the hijackers the Egyptians were forced to destroy the ship.¹⁸ The second occurred in July 2015 when a group of terrorists launched an antitank missile at an Egyptian coast guard ship that was anchored off Sheikh Zuweid in northern Sinai.¹⁹

Other terror threats in the maritime domain during this period primarily included plans to attack merchant ships sailing in the Suez Canal, with the goal of disrupting the movement of ships in it. One prominent example of such an attack, which was unsuccessful, was the launch of RPGs at the Cosco Asia container ship in July 2013.²⁰

Apart from the intensification of maritime terror, it is also worth mentioning the phenomenon of maritime pirate activity in the Gulf of Aden, which originates from Somalia, and which is certainly not in Egypt's interests since it is liable to reduce traffic through the Suez Canal and in turn Egypt's revenues. Despite the potential risk to Egypt, it does not appear that the Egyptian navy has taken any specific actions in order to become part of the international community's effort to end this phenomenon.

17 For further details on the doctrine of "Maritime Domain Awareness", see Ram Erez, *The Maritime Strategic Evaluation for Israel 2018/19*, Maritime Policy and Strategy Research center, University of Haifa, p. 142 http://hms.haifa.ac.il/images/reports/HE_Report_2018_19/Ram-Erez-2.pdf.

18 Many of the details about the incident remain confidential.

19 Egypt navy ship 'hit by Sinai militants' missile, BBC, 16 July 2015
<https://www.bbc.com/news/world-middle-east-33557180>

20 The terror attack on the Cosco Asia in the Suez Canal, the Cosco company, September 1, 2013
<http://www.coscoshipping.co.il/article/%D7%97%D7%93%D7%A9%D7%95%D7%AA/%D7%94%D7%AA%D7%A7%D7%A4%D7%AA-%D7%98%D7%A8%D7%95%D7%A8-%D7%A2%D7%9C-%D7%94-Cosco-Asia-%D7%91%D7%AA%D7%A2%D7%9C%D7%AA-%D7%A1%D7%95%D7%90%D7%A5>



Figure 7: The Cosco container ship that was the target of an attempted terror attack in the Suez Canal (source: see footnote 16).

With respect to maritime threats from state players, the unrest in the Arab world during the current decade was also manifested among countries that have maritime borders with Egypt, whether in the Mediterranean or the Red Sea, such as Libya in the west, Syrian in the north (including the renewed Russian naval presence in the Mediterranean) and Yemen in the south. Added to this are the threats from countries that are not traditional rivals of Egypt in the Middle East. On the one hand, there is Turkey, a Sunni country, whose regime currently supports the Moslem Brotherhood which is hostile to el-Sisi's regime; on the other hand, there is Shiite Iran whose maritime aspirations (based on the Iranian Navy and the Maritime Revolutionary Guard) have been to expand beyond the Persian Gulf to the Indian Ocean and the Red Sea (by means of, among others, their allies, the Houthis) and with a potential presence in the Mediterranean based on a possible future foothold on the Syrian coast and the establishment of a naval presence there.

Egypt also faces long-existing threats in the Red Sea from Sudan and Ethiopia, through which flow Egypt's lifeline – the Nile River.

It is true that the maritime challenges and threats facing Egypt and its economic assets (particularly the Suez Canal and the offshore oil and gas fields) change from one period to the next; however, the current scale of these threats is forcing Egypt to provide an appropriate maritime response, both in the theater of the Red Sea and apparently also in the Gulf of Aden south of the Bab el Mandeb Strait and in the Mediterranean domain, at least up to the central Mediterranean in the west.

There is no doubt that Egypt's maritime domain, which includes the Mediterranean, the Suez Canal and the Red Sea, and its assets and resources, constitute a cornerstone of Egypt's national security policy.

In the context of Egypt's response to its maritime threats and challenges, it is fitting to quote Farik Ahmed Khaled Hassan Said, the commander of the Egyptian navy, from a speech he gave last October on Egypt's Navy Day:²¹

- Egypt's well-trained navy, with its advanced naval weaponry, is aggressively fulfilling its mission to protect the shores of Egypt and its territorial waters, to protect economic targets, to enforce Egypt's law at sea and to preserve Egypt's sovereignty in its territorial and economic waters, in addition to fighting terror.
- The naval forces are protecting Egypt's coasts in the Mediterranean and in the Red Sea 24 hours a day and with the participation of all of its sections, in order to protect Egypt's ports, its shipping lanes and passage through the Suez Canal.
- The naval forces are responsible for protecting Egypt's borders, its interests and its resources in years to come and they are ready to deal with the challenges facing the Egyptian people in current and future theaters.

It would appear that the navy commander's words reflect the vision and strategic perspective of the current Egyptian leadership, which are inspired by President el-Sisi.²²

Egypt's maritime domain, which includes the Mediterranean, the Suez Canal and the Red Sea, and its assets and resources, constitute a cornerstone of Egypt's national security policy. Therefore, it is not surprising that the Egyptian navy has in recent years received a large budget share in order to carry out its buildup and development program.

The following question then arises: Is Israel included in the list of threats in the maritime domain? As long as the current regime is in place in Egypt, it is fairly safe to say that

21 This is a quote from a film clip published on YouTube to mark Egyptian Navy Day in October 2019 and which included a speech by the commander of the navy. Highlights of the speech were translated by Pesach Malveni.

https://www.youtube.com/watch?v=8DNMJIX_o78&feature=youtu.be

22 With regard to el-Sisi's view of naval power, it may be that he views the goal of the future buildup of the Egyptian navy as, among other things, a way to transform Egypt into a regional superpower that can intervene on behalf of its allies and can protect its economic assets in the Mediterranean and the Red Sea (protection of the huge EEZ, as well as the Suez Canal and the freedom of passage to and from it, and outside of Egypt's territorial waters, including the Bab el Mandeb Strait in the southern Red Sea). See Eran Lerman, "The Keystone: Sisi, Egyptian Stability and the Future of the Eastern Mediterranean".

<https://jiss.org.il/en/lerman-keystone-sisi-egyptian-stability-future-eastern-mediterranean/>

Israel is not viewed as a threat. On the contrary, if it was possible to copy Israel also on its western border (instead of Libya) or its southern border (instead of Sudan), the Egyptians would gladly do so. A strong Israel on Egypt's eastern border is an Egyptian strategic interest, at least from the current regime's point of view and in view of its bloody and determined war against ISIS in Sinai.

Does Israel constitute a challenge to the Egyptian navy? Apparently it does. The Israeli navy is viewed in Egypt as a powerful player that serves as a benchmark (in the spirit of: "tough in training, easy in combat"); on the other hand, it is viewed as a role model, as expressed by the saying: "The grass is greener on the other side."

Summary and conclusions

The naval arsenal included in the buildup of the Egyptian navy during the past decade is an impressive one. It includes advanced submarines from Germany and in the future perhaps from China as well; helicopter carriers from France; and multipurpose ships, frigates, corvettes and submarine hunters from the top shipyards in Western Europe, the US, South Korea, Russia and China. Added to this are of course a variety of aircraft for naval missions, as well as a large variety of weapons systems and electronic equipment, which are also produced by the top defense manufacturers in those countries.

There are those who claim, with some justification, that the Egyptian navy is acquiring platforms and weapons wherever they can. On the one hand, there is an advantage in a lack of dependency on a single supplier. On the other hand, there is some doubt as to whether the navy has the ability to operate and properly maintain ships and weapons systems from many different sources, from both a technological and techno-logistic standpoint in the long run.

And again, the question that was raised earlier in the chapter: Is the Egyptian navy seeking to be included within the definition of a green-water navy, as predicted by the researcher Bass-Yannis?

On the one hand, from the viewpoint of the types, quantity and quality of the platforms and the systems they carry, the completion of the buildup process will place the Egyptian navy among the most advanced and modern navies in the Middle East, in two theaters of conflict: the Mediterranean and the Red Sea.

On the other hand, the real test of a navy that is seeking to become a green-water navy is not just the buildup of power, i.e. the quantity and tonnage of its vessels. In order to be included in the definition of a green-water navy, the Egyptian navy must pass

other tests in the use of power, in addition to the buildup of its platforms and weapons, including cooperation with other players in the domain with which it has joint interests; a high level of maintenance, including the capabilities for independent development, building and production; and the training of professional manpower.

Theodore Bazini, who predicts that the Egyptian navy will in the future become a green-water navy, believes that Egypt is a historic player that is crucial to the stability and security of the region. According to him, the new naval modernization is “a holistic strategic approach in alignment with contemporary and future geopolitical demands and a response to dynamics arising from maritime environment... building a “green navy” signals a U-turn, in pursuit of an enhanced role in the area.”²³

On the other hand, more than a few commentators are pessimistic about the ability of the Egyptian navy to meet the criteria of a green-water navy and in particular on the operational and maintenance levels. In the opinion of the author of this chapter, it is too early to draw conclusions and it is certainly possible that we will be surprised in this context, since at stake is Egypt’s economic prosperity, which will lead in the future to unlimited financing capabilities.

With respect to maintenance, it is worthwhile quoting Mahmoud Gamal (an Egyptian commentator who is freely translated here): “Egypt now needs to give consideration to the solution of maintenance and logistic support problems for the vessels that recently went into service or which will go into service in the near future, since if this issue is not resolved it will be a real nightmare for the navy.”²⁴

In addition, he (justifiably) sees the necessity to improve the capabilities of the Egyptian air force and the arming of advanced aircraft produced in France and Russia, including air-to-sea missiles that can provide air cover for ships of the Egyptian navy.²⁵

In conclusion, the unprecedented and unique buildup of the Egyptian navy during the last five years needs to be monitored. It is reasonable to assume that the buildup of Egypt’s naval power is meant to provide Egypt with the status of a regional naval power, in view of the challenges and threats it currently faces and especially in view of the economic resources in its maritime domain that need to be protected. It is in Israel’s interest to cooperate with the Egyptian navy in view of the two countries’ common interests in the region. On the other hand, the potential risk implicit in this buildup of naval strength in the event of a change in regime in Egypt cannot be ignored.

23 Ibid., Theodore Bazini.

24 Ibid., Mahmoud Gamal.

25 Ibid., Mahmoud Gamal.

Egypt is one of the only countries in the Middle East (besides Turkey and perhaps also Iran) that has a naval strategy—if not de jure, then at least de facto—as a result of the following factors:

- Egypt has a navy with a long history and it has increased in strength in recent years, based on a strategic vision that is meant to achieve regional power status for Egypt.
- Egypt is a maritime junction that sits astride the shipping routes between the Atlantic and the Mediterranean on the one hand and the Red Sea and the Indian Ocean on the other.
- Egypt has developed a maritime infrastructure of ports and coastal installations, which are deployed over about 2500 km of coastline in the Mediterranean and the Red Sea.
- Egypt has a large merchant fleet, most of which is nationally owned and which operates and is developed according to a strategic plan for the period up to 2030.²⁶
- Egypt has many advanced institutions for maritime education which are training professional manpower for both the military sector and the civilian/shipyard sector.
- Above all, there have been major developments in Egypt's Exclusive Economic Zone, including the discovery and development of natural gas fields (which are proven in the Mediterranean and forecasted with a reasonable likelihood in the Red Sea).

26 A strategy for the development of maritime transport industry and logistics, <http://www.mts.gov.eg/en/content/1349-A-strategy-for-the-development-of-maritime-transport-industry>