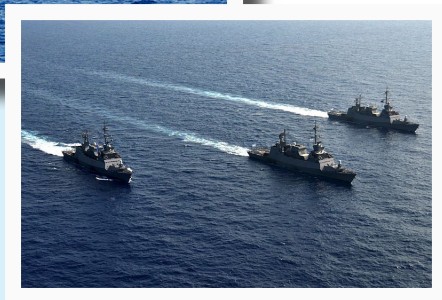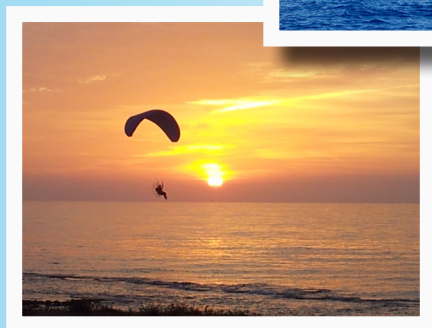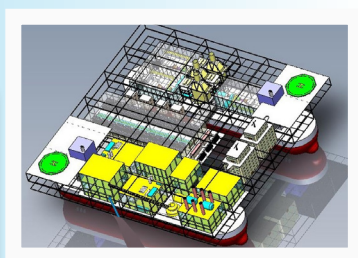# MARITIME STRATEGIC EVALUATION FOR ISRAEL 2016

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Chapter 8: Building the Israeli naval force against terrorist and other threats

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Historical overview

The maritime threats against Israel have changed in nature and form since the establishment of the State and consequently also the response given to them by the navy has changed.

Beginning in the 1960s and the early 1970s, the threat to Israel in the maritime domain proceeded to develop concurrently with the cold war between the superpowers. During those years, the most significant maritime threat to Israel was from the fleets of the Arab countries, which were equipped with weapon systems (missiles, radar and electronic systems) of the Soviet industry. The building of the Israeli maritime force during that period was devoted to technological advancement and the development of military tactics (MT) in order to deal with the Syrian army and the Egyptian army and this concurrently with the regional arms race, which was influenced and supported by the superpowers: The Soviet Union and the United States. During those years, Israel developed methods of electronic warfare against the enemy missiles and succeeded to overcome the problem of the discrepancies in the firing range of the missiles, which during that period favored the Russian missiles that were used by the Arab countries.

The threat of the Arab armies culminated in the Yom Kippur War (1973). The navy missile boats (SA'AR Boats) entered the campaign while they were equipped with 'Gabriel' missiles manufactured by Israel Aerospace Industries. Over the course of the war the first sea to sea missile battle in maritime history took place and the Israeli navy emerged from the battle with the upper hand as having gained full control of the maritime arena, maintained open sea routes to Israel and struck multiple war ships of the enemy and all this without harm to life or to ships.

In the course of the 1970s there was a strengthening of the Palestinian terrorist organizations and a terrorist threat from the sea began to develop, primarily infiltration and attack capabilities from the sea, some of which, unfortunately, even succeeded.[1] These terrorist threats occurred concurrently with the decline in the threat of the fleets of the Arab countries, primarily following signature of

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1   Nahariya 1974, Blood Bus 1978, Nahariya 1979, Nitzanim 1990

the peace agreement with Egypt. The terrorist threat required IDF as a whole and the navy in particular, to develop new capabilities, and including defense of the coasts by means of advanced detection systems and new and faster vessels for patrol and routine security measures, instead of the relatively old American made 'Daboor' class vessels on which the navy had relied until then.

In the course of the 1980s and 1990s there were signs of a continued decline in the threat of the fleets of Arab countries, but the collapse of the Soviet Union led Egypt to replace its patron superpower and to acquire new vessels and advanced western capabilities that demanded Israeli surveillance and attention. The Syrian fleet, in contrast, does not constitute a real military threat against the capabilities of the Israeli navy.

In the course of the 1990s 'Sa'ar 5' class missile boats came into operational service in the navy, with the capability of carrying a helicopter, as well as greater evasion and survivability capabilities. At the end of this period also came the 'Dolphin' submarines, which significantly strengthened the strategic capability of the maritime branch.

Following the IDF's withdrawal from the security zone in South Lebanon, a significant strengthening of Hezbollah took place on all levels and including on the maritime front. The culmination of this strengthening came in the course of the Second Lebanon War (2006), with the launching of C-802 class coast to sea missiles that struck the 'Sa'ar 5' class 'Hanit' ship of the navy and a civilian Egyptian ship. Today, Hezbollah has advanced maritime capabilities, which comprise hundreds of coast to sea missiles (more than the number of missiles that Syria had in the 1970s).

The present threats and challenges and building the maritime force against them

Defense of the Exclusive Economic Zone of Israel (EEZ)

The discovery of the 'Noa' natural gas reservoir in 1999 and immediately thereafter the discovery of the 'Mari' reservoir in 2000 marked a new era in the Israeli energy economy, but also posed new defense challenges to the navy. Defense of the economic water domain of Israel constitutes a challenge both due to the size of the EEZ maritime domain, which is larger than the territory of the entire State of Israel, and also due to the nature of the activity involved in the exploration and production of the gas. The drilling installations are civilian installations, which by nature are

not equipped with self-defense capability. These are very expensive installations located at a fixed site over long periods, far from the coast and from the naval bases. Damage to these installations constitutes strategic damage to the State (due to damage to the energy market, which is critical to conducting normal life). Therefore these installation may be used 'as a quality target' for terrorist attacks.[2]

The State of Israel arranged to defend the gas rigs using a number of levels of defense, beginning with local defense of the rigs and up to formulation of a concept for the defense of the maritime-exclusive economic zone in part by the acquisition of corvettes[3] and additional resources for the Israeli Navy that would facilitate better defense and response capability.

It should be noted that there is a conceptual dispute with respect to the best manner of defense. Some claim that large and specialized vessels are the best way to defend the economic waters of Israel, while others claim that smaller and more flexible vessels are preferable. When examining the building of the maritime force from a long term perspective in a dynamic environment, such as the one that exists in the Eastern Mediterranean Sea, it is necessary to weigh between advancement in the response capability to a specific challenge and creation of potential for new future capabilities. It is important to note that given the scope of the general limited force of the navy, versatile tools, which could carry out more than one mission and thereby facilitate better utilization of IDF and Naval resources, are important.

In May 2015, it was reported that Israel and Germany signed an agreement for the purchase of 4 corvettes; the transaction amount is set at NIS 1.8 billion, where one third of the transaction is to be funded by the government of Germany. The first ship is supposed to arrive in Israel in the course of 2020. Proper deployment is necessary for receiving the corvettes and including training of personnel, installation of systems, construction of port infrastructure and formulation of military tactics. Moreover, it should be ensured that Israel has the ability to maintain and to repair the corvettes in order to maintain their operational capability. To this end, skilled technical personnel are required in the naval shipyards and in the relevant special staff branches.

2   For a comprehensive overview of the maritime threats to the energy economy: Nir Zarchi, *Designing Energy Policy Tools for Coping with Security Threats to Maritime Energy Installations – Studying the Case of the Maritime Gas Infrastructure of the State of Israel*.

3   Corvette: Fast vessel with high maneuverability, usually armed with medium range sea to sea missiles, canons and anti-submarine and anti-aircraft combat measures. Corvettes have transport displacement ranging between 550 to 2,800 tons and transport length ranging between 55 to 100 meters.

Coast to sea missile threat

The last decade constituted a turning point in the understanding of this threat. Hezbollah is perhaps defined as a terrorist organization, but this non-state organization holds a very large quantity of advanced weapons including more advanced capabilities than most state armies in the region in all matters pertaining to detection, radar and coast to sea missile capabilities, which include hundreds of missiles. As stated, Hezbollah today holds more missiles than the number of missiles that were held by the Syrian army in the 1970s, the eve of outbreak of the Yom Kippur War.

The building of a force against this threat is characterized by intelligence activity, electronic warfare measures and anti-ballistic missile defense systems for defending the ships and their vicinity. It should be kept in mind that the threat is not directed towards the Israeli fleet alone and it constitutes a threat to all vessels in the domain.

The Palestinian arena and terror from the sea

Hamas continues with the buildup efforts in the Gaza Strip and including attempts to acquire maritime capabilities. Encouraged by its success in infiltrating the territory of Israel in the Zikim region in the course of Operation Protective Edge (on the first day of the fighting, 8.7.14) Hamas continues in the smuggling efforts of maritime warfare equipment, diving equipment and so forth for the purpose of building naval commando warfare capabilities.

Building the force against this threat is characterized by routine security activity, intelligence and cooperation with other IDF branches, as well as introducing varied technologies that are relevant both to this arena and to the northern border region of Israel.

The navy is responsible for the naval – security blockade on the Gaza Strip and including implementation of security surveillance of vessel movement (mainly fishermen / smugglers) from the Strip. The fishing sector in the Gaza Strip has been restricted in the past to a range of 6 nautical miles. In October 2016, it was reported that the defense establishment would expand the fishing area permitted to the Palestinians in the Gaza Strip to nine nautical miles for two months (the winter months constitute the peak of the fishing season). The expansion will only be in the southern part of the Strip.

Every once in a while an issue emerges in the media of a Gaza 'aid flotilla' belonging to Palestinian organizations and international organizations. Subsequent to the flotilla incidents of 2010 (Mavi Marmara Flotilla) which indeed failed to reach the shores of Gaza, but did have enormous and negative international repercussions against Israel, there were several attempts to break the security blockade by civilian flotillas. In the beginning of October 2016, an additional flotilla was stopped on its way to Gaza, 'the Women's Flotilla' or 'Zaytuna Flotilla' (named after the flagship of the flotilla).

These flotillas pose operational challenges for IDF and the navy of gaining control of civilian ships. In contrast with the IDF ground forces that since the First Intifada (1987) are accustomed to friction with civilian populations, these flotillas are the first time that the IDF naval forces have encountered friction with a hostile civilian population (as opposed to routine searches and inspections of civilian vessels).

Moreover, the flotillas constitute part of a broader political and legal campaign against Israel, within the framework of which various terrorist organizations benefit from an asymmetric situation where they (as opposed to the State of Israel) are not actually governed and do not take responsibility under international law. This situation poses a special challenge with regard to media coverage around the world. Moreover, these flotillas divert resources, and primarily command resources, from other challenges that the navy faces.

SSR and SSM[4] against naval bases and against maritime infrastructures

Already since the days of the First Gulf War (1991), missiles and rockets have been fired on strategic targets in Israel (factories, national infrastructures); this in addition to attempts to harm urban population concentrations. The terrorist organizations have marked these as targets for strategic objectives, such as the Haifa Bay Perto-industry complex, and the Hezbollah leader, Hasan Nasrullah, even declared that the ammonia tank in Haifa Bay is a legitimate target for the Hezbollah missiles.[5]

In the course of 'Operation Protective Edge' (2014), a large number of rockets were fired from Gaza towards strategic targets such as the 'Rutenberg' power station in Ashkelon and the Port of Ashdod in an attempt to disrupt regular life, commerce and the economy and to damage the energy infrastructures of Israel.

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4   SSR and SSM: surface to surface rockets, surface to surface missiles.

5   To view the threat speech at ynet: http://www.ynet.co.il/articles/0,7340,L–4767157,00.html

The naval bases that are located within the Port of Haifa and the Port of Ashdod constitute an additional target for those rockets and missiles.

The clear advantage of the navy and of the vessels is the ability to preserve the force by evacuating the ports and going out to the open sea and thereby stopping the threat from these rockets without requiring special protection. However, the coastal base of the navy, which is used for techno-logistical backup, could be damaged thereby making it difficult to re-arm the vessels and to deal with breakdown incidents.

Building the submarine forces

The State of Israel decided to build and operate a submarine force that consists of 6 submarines. This size of force enables high operational availability of 2–3 submarines.

In order to maintain this size of force operationally it is necessary to replace 'Dolphin' submarines that were manufactured in the 1990s of the previous century and are nearing the end of their lives in the mid-20s of the present century. To this end, it is necessary to commence the building of three new submarines, which will gradually replace the old submarines in about another decade. As stated, a project of such magnitude requires about a decade due to the need to precisely configure and plan the new vessel. We must also bear in mind that we cannot purchase an old model of submarines again, since their production lines no longer exist. Furthermore, the old technology is no longer in use and many modifications and alterations are needed. It is also important that the submarines that are purchased by the state will have a certain similarity and a certain compatibility with the existing submarines. Therefore, the further building in the German shipyards will presumably address these requirements (and this in addition, of course, to the special relationship that exists between Germany and Israel from the days of Ben Gurion).

The maritime flanking option

The operating concept of the IDF naval forces has adopted the motto of participation in the ground campaign and in the IDF victory. For this reason, the cooperation between the navy and other IDF forces has intensified, which is manifested in resources, exercises, planning and force building.

There is no doubt that integration between sea and ground forces (as was already done in the Shlom Hagalil War in 1982: Real time intelligence and primarily by landing the paratrooper forces in the Awali Estuary), has proven itself and created

a turnaround that impacted the ground battle. The navy made extensive use of its maritime transportation capability and provided a response for emerging difficulties in the ground campaign. Looking ahead, and with the understanding that in the future campaigns the challenges against the enemy will be more complex and more intertwined with civilian environment, tunnels and numerous land obstacles, there is no doubt that integrating the maritime flanking option to attain various objectives constitutes a major ground force multiplier.

Threat of the fleets of arab countries

The direct threat from the fleets of Arab countries is at the bottom of the present threat scale. Syria is in the midst of an internal war that has eroded its military. In many parts of the country chaos prevails. The fleet and the navy still exist, but only at the most basic level of functioning. The key threat in the Syrian arena is from capabilities of firing 'Yakhont' (P-800 Oniks) class coast to sea missiles manufactured by Russia, which the Syrian fleet possesses.

The Lebanese fleet is primarily used for guarding coasts and for defense near the shores of Lebanon.

In recent decades, the fleets of Egypt and of Saudi Arabia have undergone modernization and were upgraded to western platforms,[6] however the peace agreement with Egypt and the common interests between Israel and the Sunni-Islamic countries leads to the conclusion that a threat of these fleets to Israel and to the navy will remain very low also in the foreseeable future.

Unmanned vessels

The navy has made attempts and in recent years has even used unmanned vessels to carry out patrols and for defense of territory. The process is extremely slow and the capabilities of the unmanned vessels are still very far from the capabilities of unmanned aircraft, both in terms of the perception of employing the force and from a technological perspective.

Nonetheless, building a force and developing unmanned maritime capabilities are a necessity against the reality that we face. There is no doubt that this field will develop in the future and that the maritime force based on unmanned vessels will grow. Development of these vessels and effective use of them will save resources, produce new capabilities and offer a solution to some of the challenges listed above.

6   See details in the chapter 'The Red Sea and the Persian Gulf and Influences from the Direction of the Indian Ocean'.