Israeli Naval Power: An Essential Factor in the Operational Battlefield

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Although the State of Israel has always been threatened from the sea, preparing for the threat was not an important priority for the state's leaders, as reflected by the resources that were allocated to the navy. However, once long range missiles appeared in the naval arena (in the 1960s), it became clear that the navy's vessels and the air force's planes were not capable of coping with this challenge.

Another change occurred following the Yom Kippur War and in no small measure as a product of the war, when the threat to Israel from the sea developed and assumed unprecedented proportions. As a result of their defeat in the naval theater in the Yom Kippur War, Arab fleets (with Western support) significantly increased their strength, mainly by acquiring high quality missile boats, submarines, and naval helicopters, and by fortifying their coasts and turning them into independent command centers. At the same time, technologies and naval arms were upgraded. The result was a changed naval theater, and an increased threat to Israel from the sea. Salvos of long range missiles (300 miles and more) with warheads with great explosive strength and pinpoint precision strike capability could henceforth be launched from surface vessels and submarines deep into Israeli territory.

Ninety-eight percent of Israel's cargo passes through the state's maritime space, which adds a level of vulnerability from this theater. In addition, in the 1970s maritime terror attacks began to increase. They occurred at sea[1] and/or on Israel's coasts (some of these attacks to the country's soft underbelly were among the worst that the State of Israel has experienced to this day), particularly because most of the state's

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population and a major portion of its infrastructure are spread along the coasts. Following the coastal road massacre (March 11, 1978), the Israel Defense Forces operated in Lebanon and continued to do so for the next eighteen years.

The peace treaty signed with Egypt in 1979 removed Egypt from the cycle of war and violence against Israel (for the first time in its history, Israel was able to navigate from the Mediterranean to the Red Sea through the Suez Canal). At the same time, Israel's territorial depth was reduced, and given the political upheavals common in the Middle East, there was no guarantee that the signed crossing agreements would exist in every future situation. Indeed, in light of the current upheaval in the Arab world, these fears are far from illusory. Even countries belonging to the "third circle" such as Tunisia, Algeria, Libya, Iran, and Yemen could attack Israeli shipping, since they have the capability to reach the maritime area off of Israel's coasts[2] without great difficulty and to fire weapons from afar. Under the cover of large distances from Israel, they can support maritime terrorist cells operating against Israel and send weapons shipments, as some, including Syria, Lebanon, Libya, Tunisia, Algeria, and Iran, have indeed done. It was not possible, and this is still true today, to act effectively against this entire range of threats through the IDF's ground and air forces, and therefore, the navy, which underwent a major buildup beginning in the late 1970s, was required to provide a suitable professional and operational answer to these significant new threats.

The Strategic Nature of the Naval Arena

The maritime space is Israel's only strategic depth under or over the surface (other than depth in space). The military moves and the technological innovations in the 1991 Gulf War, as well as the political and strategic changes that came in its wake and that are now taking place, have emphasized anew the maritime arena's decisive influential capability, different from that known in the past, both in terms of coping with the threat from the sea and the potential contribution to the naval and land operational battlefields. This has made it necessary to update the priorities and the scope of the defense allocations for the navy in the IDF's multi-year plan.

In early 1979, in the wake of the lessons of the Yom Kippur War and the changes underway in the geopolitical arena, and in light of an analysis of technological developments and the balance of power in the naval theater, the Israeli Navy began to formulate an appropriate response to the new threats in the naval realm that were capable of striking both Israel proper and its essential shipping lanes, a response that would pave the way for the navy to enter the gates of the future battlefield. Following the analysis, a plan to provide the desired operational response was drafted, composed of Sa'ar 5 missile boats and Dolphin submarines, which both match and complement each other.

In September 1979, in the wake of the signing of the peace agreement with Egypt, the General Staff recognized the IDF's naval requirements and decided to build twenty-four missile boats and six submarines. Thus in the same year, there was a paradigm shift in the navy's concept of warfare, and subsequently in that of the chief of staff and the minister of defense.[3] However, the new procurement plans that were approved were not implemented on the proper scale and at the proper pace, and with respect to the building and operation of the force in the framework of the independent naval battle and/or a system-wide battle, the concept was only partly translated into practice. The hesitations and foot dragging among the decision makers in Israel's defense leadership, which stemmed mainly from bureaucratic procedures and from resistance by former naval officers who did not understand the substance of the change, coincided with a rise in prices of the vessels and the systems, and as a result, the order of battle that the leadership itself had approved was reduced in scope.

The new naval order of battle (the modern surface ships and submarines) that was planned and began buildup in 1979 was suited to several aspects, including:

a. To be located outside of the port, which is necessarily a vulnerable location.

b. To allow rapid movement and a stay of a number of weeks in the tactical, operational, and strategic maritime space.

c. To work flexibly and at short to immediate time constants, and to strike targets in all circles of the space that directly threatens Israel.

d. To procure stealth technologies, such as a geometric structure and special building materials for the body of the ship, which provide the

ship with low images in all parameters (radar, acoustic, and thermal), and with protection and warning methods that are among the most advanced, which increase the ships' survivability and their ability to locate and strike targets.

e. To take advantage of the multiplicity of neutral targets in their operational arena that are difficult to identify (especially from the air) and exploit the conditions for concealment, darkness/fog, time spent underwater, and bad weather.

f. To create an arms infrastructure that makes it possible to carry a significant quantity and large variety of weapons and ammunition that are capable of attacking all types of targets at sea, in the air, and deep inland with massive precise force, and capable of being used as firepower that aids in the effort to maneuver and destroy at sea and on land.

g. To destroy enemy submarines, which can launch missiles at Israel proper from the depths of the sea and from a great distance, and which are capable of mining the entrances to the only two ports located in Israel's existential supply route (on the Mediterranean) and neutralizing them for a significant period of time.

h. To assist Israel's ground forces by destroying the enemy's expeditionary forces on their way to aid and reinforce the theater of battle or the other forces on the ground.[4]

i. These advanced tools − provided that their number grows to form an appropriate quantity − can aim massive fire at essential strategic enemy targets deep inland as well. It will also be in their power to protect landing and invasion forces in places and in ranges where the air force is limited.

j. To cope with various attack scenarios, including: missile salvos fired from the sea to strike at infrastructures or the civilian home front and disrupt troop mobilization; an attack by submarines to mine entrances to ports and attack (by means of missiles and bands of commandos) infrastructures; and a landing by commando forces from the sea that is intended to disrupt the movement of Israel's mobilized troops to the fronts and demoralize the civilian home front.

The weight and volume of the combat systems planned as a function of these properties dictated the optimal size of the ships. This would

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allow them to operate even beyond the second and third circles (up to and beyond one thousand kilometers) with munitions that are no less small and accurate than what Israel's planes are capable of carrying, but without anti-aircraft and weather interference.

There have been four wars since the 1991 Gulf War in which the mobile naval fire base (surface ships and submarines) was one of the main factors in the modern operational battlefield. This protected firepower base fired long range missiles for pinpoint strikes on land with large warheads, and was also a base for launching attack planes, helicopters, and ground forces. In the circumstances in which Israel operates, the Israeli Navy has repeatedly proven in four of its last wars – the War of Attrition, the Yom Kippur War, the war to eradicate terrorist infiltrations from the sea (which continues until this day), and Operation Peace for the Galilee – that it is able to carry out its missions with great success with little force, almost without losses, and while being integrated into and contributing to the ground war.

In light of the threats to the State of Israel from the sea and in the wake of the experience from Israel's wars and the wars of other navies, it has become clear that in most instances, the aerial assistance given at sea in tactical (near) and strategic (far) fighting circles is not possible or effective or necessary. The operational naval/coastal fighting circle is the space in which the aerial force maintains regional aerial superiority and prevents the enemy aerial force from striking or from denying the naval force freedom of action. In this space, it is appropriate to plan receipt of aerial assistance that is intended to achieve regional aerial superiority, but not direct pinpoint tactical aid, which is also liable to endanger the forces.

In October 1979, six years after the Yom Kippur War, the navy staged an attack on Israel's coast (a "routine" exercise). Its offensive order of battle included twelve missile boats, two submarines, and nine squads from Shayetet 13 (the elite naval commando unit). Against it was the IDF's aerial force. Although the air force knew the time of the attack and was not busy with other tasks, and in spite of the fact that there was an expensive, cumbersome detection system along the coast that included fifty-eight permanent infantry observation posts (which were placed there in the wake of the coastal road massacre), the air force and the defensive forces that joined it did not succeed in preventing the attack from the sea, which was carried out to conclusion.

In the 1991 Gulf War Scud missiles landed in Haifa Bay, and in the Second Lebanon War (2006) rockets landed in the Haifa port, and the air force was not able to prevent this. As a result, in 2006 the navy was forced to evacuate its ships from the Haifa port, exactly as it foresaw back in 1979, when it planned for the Sa'ar 5 boats and the Dolphin submarines, which are capable of spending significant periods of time in the open sea outside the vulnerable ports. Indeed, the idea that arose among certain non-professional circles of making use of merchant ships for massive missiles attacks deep in enemy territory was examined in the past and found baseless. This is because of the vulnerability of the ships while the missiles are being loaded in the port (from this point of view, the advantage of the ships over air force bases is eliminated), and because at sea, they are not able to defend themselves. The attempt to "secure" them using other military hardware (especially in an arena saturated with missiles) will not succeed, and the techno-logistical process to maintain and operate them is complex and expensive. In the course of the Battle of the Atlantic during World War II, hundreds of "secured" merchant ships were damaged, as were dozens of Allied war ships that secured them on their way from the United States and Canada to Europe. This battle was decided by a thread, and Israel is not a superpower that can withstand this.

Israeli Naval Achievements

The Israeli Navy must be increased in size, improved, and adapted to the circumstances that have changed in the naval theater in particular and in the geopolitical arena in general, but without going to "superpower dimensions." This assertion is substantiated by a brief review of events that illustrate how the small, professional, sophisticated, and cunning navy gained its achievements in fighting, and what its contributions were to the overall battles. Without these contributions, these events would almost certainly have ended differently, and for the worse.

For nineteen years from the War of Independence until the Six Day War, the navy did not fight beyond Israel's borders. The first test given to the navy in the Six Day War, to attack five major naval targets in Egypt and Syria, ended with no results. To this failure were added three major disasters − the attack on the *Liberty*, the sinking of the *Eilat*, and the disappearance of the *Dakar* − which strengthened the disappointment with the navy and heightened doubts about its ability to integrate and

assist the general campaign of the IDF. By the end of the Six Day War, 800 kilometers of coastline were added to Israel's control, and in fact, the vast majority of the territory under its control was now bordered by water.

A sequence of three special raids by the IDF of unprecedented type and quality − the June 1969 ground raid on the Adabiya Peninsula, the July 1969 ground raid on Green Island, and the sinking of two Egyptian torpedo boats in September 1969 − placed the navy on the operational map of the IDF. The Egyptian torpedo boats were an obstacle to a raid by an armored IDF force that could operate with great success in broad daylight along fifty kilometers of the west bank of the Suez Canal, which was under Egyptian control (Operation Raviv). The sinking of the torpedo boats (Operation Escort), a sophisticated and difficult operation itself, was carried out by a handful of fighters from Shayetet 13. Shayetet 13 earned the operation at the initiative of Chief of Staff Bar-Lev, who made Raviv conditional on the successful execution of Escort. The armored force was transported and made a surprise landing by means of the navy's landing craft. For the first time in its history, the navy was used on the main front of the fighting, and its contribution was essential in reaching a ground target defined by the chief of staff. Escort and Raviv resulted in heavy losses and humiliation for Egypt. In their wake, the Egyptian chief of staff and the commander of the navy were dismissed. President Nasser suffered a heart attack, and died within a year. Following the raid on Green Island, historian Dr. Mustafa Kabha wrote in his book: "This action was a turning point in the War of Attrition. It symbolized the beginning of a new stage in the war...in which the military initiative moved from Egypt to Israel."[5]

Thus with a unit of only thirty-two fighters, Shayetet 13 brought about these results in the course of one year. As such, it paved the navy's way for the chief of staff's recognition that allowed it, during the Yom Kippur War four years later, to operate at full strength and with all its skills.

During the Yom Kippur War, only one naval target was destroyed from the air, versus forty-four vessels that were destroyed and captured by the navy. The navy did not lose any vessels, and over the entire course of the war suffered three losses, even though sixty sea missiles were fired at it in the two naval battle theaters, and it was forced to infiltrate five times (once in Port Said in the Mediterranean, and the other times in Hurghada in the northern Red Sea) with small Shayetet 13 forces, which

penetrated the enemy's harbors in missile-protected areas without any aerial assistance and pulled Egyptian naval forces from the open sea for their own protection. The Israeli missile boat force in this war comprised fourteen vessels, versus the twenty-four that were operated by the Egyptians and the Syrians. It achieved an historic crushing victory, and this became the first missile battle in the history of war at sea. No Israeli submarines operated during this war, though there were twelve Egyptian submarines operating in the Mediterranean and the Red Sea. Thanks to this offensive action by the navy, freedom of shipping was established for some 200 merchant ships going to and from Israel, almost as in routine times. The Syrian and Egyptian fleets were forced to remain in their ports, although even in Port Said they were under attack. With one exception, all of the navy's attacks in this war were carried out without assistance and with minimal participation by the air force. During the war, the Israeli home front spread along the coast was not attacked, and the mobilization of forces to the decision theaters was not disturbed.

Shayetet 13 attacked the main Egyptian harbor in Hurghada four times, and destroyed two Egyptian missile boats and blew up the main docking pier. A group of some twenty commandos accomplished this in thirteen days of fighting, while the air force avoided attacking Hurghada since it was surrounded by heavy missile protected areas (six batteries of surface to air missiles). Although the navy did not receive any direct aerial assistance in this theater on a tactical or strategic level, and in spite of its small force (with no missile boat, and even though all the vessels in its possession were defensive in their nature), it destroyed and captured twenty-three vessels that were in Egyptian active service; caused the Egyptians to withdraw from their main base, Hurghada; took 1,500 Egyptian POWs from the port of Adabiya in the northern gulf (which was conquered by the IDF with the help of the navy) to Israeli territory; and tightened the siege on the Third Egyptian Army from the sea. At the end of the war, this last step became a political bargaining chip for lifting the Egyptian siege in the Red Sea, through which the Egyptians attempted to foil the transfer of oil to Israel. With the same minimal forces at its disposal in the Red Sea theater, the navy ensured the flow of oil from the Gulf of Suez to Israel throughout and after the war.

On October 15, 1973, the navy achieved control over the Gulf of Suez, and thus paved the way for a well prepared landing of an armored division in the southwest of the Gulf (Operation Green Light), which was

a planned alternative to crossing the Suez Canal. The landing, which was proposed three times in the course of the war, was canceled "at the last minute," likely (in the estimation of the author and the late Maj. Gen. Israel Tal, who devised the idea) due to a lack of understanding and strategic daring.

During the Yom Kippur War, the Egyptian naval blockade in the Red Sea extended beyond the range of the vessels and the weapons available in that theater to the navy; the first six Sa'ar 4 missile boats that were built in Israel and were intended to circle Africa and report to the Red Sea theater reached it only about half a year after the war. The air force did nothing (and apparently could not do anything) in order to prevent or foil this blockade. This will likely not change in the future. Furthermore, it is only by virtue of the navy's offensive action in the Gulf of Suez while escorting the oil tankers from the Gulf to Eilat, on the one hand, and on the other hand, the attack on Syria and Egypt in the Mediterranean theater, which caused the latter to remain in their ports, and the directing of the Israeli oil tankers that sailed from Iran to bypass the Red Sea, that freedom of movement was achieved for all merchant ships. This made the flow of oil and the transport of grain and weapons to Israel's ports possible nearly throughout the war. A survey conducted after the war proved that during the entire period, the State of Israel did not lack for one drop of oil. In fact, Israel even sold oil to third parties that were suffering from the Arab oil boycott in this period.

Terrorist attacks from the sea posed a challenge that continued for about ten years (1970-79) that the IDF, with all of it resources, including the navy, was not able to overcome. The most serious attacks to this day (the coastal road massacre, the Savoy Hotel in Tel Aviv, and Nahariya) caused heavy losses in the heart of the country and seriously harmed civilian morale. In 1979, the navy adopted a new plan of action. In a proactive rather than reactive approach, it took the initiative and attacked every coast on which a force of terrorists was organizing, and interfered with their ability to sail or to move in the deep sea. This approach reflected the view that rapid, flexible special forces (Shayetet 13) should be used against terrorist forces, assisted, as ncessary, by "heavier forces" (missile boats, submarines, and the like), and that they should always have the advantage of surprise. All of this would be carried out with meticulous care (including taking risks) to avoid innocent casualties. All of the navy's

actions during the six years of "obstruction" against the terrorists ended without any casualties, and with the use of air force planes or ground forces outside the navy in a limited manner. They were carried out with careful attention to the rules of international law, and while avoiding publicity and media announcements. Eighty varied operations against terrorists were carried out between 1979 and 1984, with the result that twenty-three "contaminated" ships were caught and brought to justice in Israel, and seven ships were sunk in the harbors of Lebanon. All this brought about the complete eradication of deadly terrorist infiltrations from the sea. In fact, even in 1979, the change wrought by this campaign – which has continued to this day, for thirty-two years – was apparent. This is the sole sector along the country's borders that can boast of such a result.

Operation Peace for the Galilee opened after terrorist infiltrations from the sea had already been stopped for three years. In fact, all the methods and techniques for fighting the terrorists were tapped and practiced along the coasts of Lebanon during these three years, and they were the most effective and thorough preparations in the potential combat sector. Many operational patrols, which included all components of the fighting force (missile boats, submarines, and Shayetet 13), were carried out in the same period in other naval theaters as well, and were run secretly according to the "joint naval battle" format. These patrols were intended for the purposes of gathering intelligence and/or practicing the approach and the method. Indeed, the navy never distinguished between ongoing security activity and preparations for war, and therefore, the transition to Operation Peace for the Galilee, in spite of the complexity of landing and providing gunfire assistance to ground forces, was simple and smooth.

In the three years from 1979 to 1982, the navy evacuated its bases and its forces from the Red Sea theater, and during this time, the components of the landing, transport, and beaching forces were assembled at the Ashdod base and placed under one commander, who would ultimately serve in Operation Peace for the Galilee as the commander of the sea landing operation. He relied on the combat doctrine that was formulated and practiced in the Red Sea theater prior to Operation Green Light (which was prepared for the Yom Kippur War), and he trained his troops on this basis. His presence on the coasts of southern Israel and near armored corps and paratrooper bases facilitated the practice of

landing exercises and made the exercises and joint preparations more effective. During those years, many landing beaches along the coasts of Lebanon and other coasts were searched secretly by Shayetet 13 and the underwater mission unit (defensive divers). These were sorted, mapped, and marked as possible points for landing ground troops of all types.

Operation Peace for the Galilee was the largest direct naval aid given to ground troops in the history of the IDF. Some fifty-four vessels took part in the operation itself: twenty-two missile boats; two submarines; fifteen Dabur boats; three landing craft (outdated); an auxiliary boat with thirty-four rubber boats for transporting the paratroopers to the landing beach; a tow tug for rescuing vessels; and a group of Sa'ar and rubber boats for transporting beachhead and ambush troops operated by Shayetet 13 forces to seize and protect the landing beach.

In the first ten days of the operation, the navy landed 388 armored fighting vehicles of various types, including tanks, cannons, and transport and rescue vehicles, 604 paratroopers from Division 96, and armored corps soldiers, without any real mishaps. The navy refused aerial fire assistance (for fear that its forces would be hit), and the navy also refused troops of another division, who were stuck south of the city of Sidon and transferred northward. In the course of the paratroopers' advance along the coast northward in the direction of Beirut, the navy, using missile boats, landed 128 artillery shellings (about two thirds of them based on requests from the paratroopers).

For three months more, the navy undertook a naval blockade of the Beirut-Tripoli sector, and during that time additional troops and armored fighting vehicles were landed and many attacks were carried out, especially in the Tripoli sector. In all, 4,469 people and 1,087 vehicles of various kinds (tanks, armored personnel carriers, cannons, and trucks) were landed and transported during this time. Following the navy's offensive action in the Tripoli area, IDF POWs in the hands of the terrorists were returned (by sea) on November 24, 1983, and Arafat and the terrorists under him were removed from this region on December 20, 1983. In the period preceding Operation Peace for the Galilee, most of the members of the General Staff were apprehensive regarding the landing operation, with the exception of the chief of staff, Rafael Eitan, who unwaveringly supported and encouraged the navy, which believed that the operation was possible. Throughout Operation Peace for the Galilee,

as well as in the preceding and succeeding periods, the navy suffered no casualties and no naval vessels were damaged.

Conclusion

Combat experience, taken with an assessment of the elements operating in the naval theater, leads to several conclusions. First, a naval force alone that is built correctly and equipped with enough of the right tools will in the foreseeable future be able to halt or prevent a massive attack from the depth of the sea against Israeli territory. It would be difficult if not impossible for an aerial or ground force to prevent or thwart such an attack.

Over more than thirty years, from 1979 – when planning began for the navy's order of battle – until today, the approved order of battle has been whittled away and has shrunk to three Lahav Sa'ar 5 missile boats, eight Nirit Sa'ar 4.5 missile boats,[6] and five Dolphin submarines; the latter have not yet been built. (This minimal order of battle was built thanks to the examination and recommendation of Maj. Gen. Tal, who headed a defense establishment committee appointed by then-Defense Minister Yitzhak Rabin and Chief of Staff Dan Shomron.) A development space was planned that will be capable of integrating other advanced systems into the infrastructure, which was built to carry a significant amount of varied armaments, including missiles, and therefore, an effort should be made to allocate resources in order to exploit and complete these systems.

The Sa'ar 5 boats, where "suitable armaments" will be installed on the decks (this may require that they be enlarged), can in the future also participate in defending the country's skies, by acting as mobile fire bases that are difficult to locate. This is in sharp contrast to airports and sea ports in Israel, which are stationary and publicly identified, and a target for enemy attack. The addition of "suitable armaments" will also help to assist in carrying out long range naval raids.

Experience has shown that to execute landings and beachings from the sea to the coast and to undertake raids against both near and remote targets (which are near the shipping lanes to Israel), decisive naval tools are needed such as missile boats, submarines, and Shayetet 13 forces that will protect and cover the landing troops, without necessarily requiring aerial forces. While naval task forces carry the full strength of weapons and means of protection and are equipped to conduct a battle

along the way against targets located at long ranges, under the best of circumstances aerial forces are built to reach the targets, strike at them, and return immediately to their base because of time constraints and because other troops require coverage and protection, without which they have a curtailed ability to act and attack far targets.

Only a command and control system that is based mainly on naval components can prevent terrorist infiltrations from the sea to Israel's coasts, since only a naval force is built to identify (and usually also to detect and process a naval picture, and to prepare a pinpoint response immediately (before the terrorist target disappears/escapes) in the maritime space. This has been proven in the only sector in Israel in which in the past thirty-two years, fatal infiltrations from the sea have been completely stopped and there have been few casualties (the notable exception is the mishap in a Shayetet action in Lebanon in 1997).

Only a naval force can ensure the movement of essential cargo shipping during wartime and afterwards. With the same order of battle built for conflict and confrontation on the naval battlefield, it is in fact possible to realize this freedom of movement. For this purpose, a specific addition to the order of battle, beyond what was planned and decided on in the General Staff – i.e., eight Sa'ar 5 boats and six Dolphin submarines – is not necessary. An offensive action by the navy's advanced fighting force has the ability to confine enemy navies to their ports and create freedom of maritime movement, which will make it easier for the state to function in emergency situations and in war. Thus, not only will it become possible to transfer essential equipment to Israel's ports; it will also be possible to supply weapons and systems for IDF aerial and ground troops.

The new order of battle that was built has the potential for development and for a lifespan that is much beyond 10-20 years. Time cycles in the navy are necessarily planned to be much longer than the norm in the other branches of the IDF, but this is for purposes of operational exploitation that preempts the enemy and not as a delay in buildup. The first Sa'ar 5 boats did not arrive in 1986 as planned but in 1994, and the first Dolphin submarine arrived in 1999, fifteen and twenty years, respectively, from the start of the planning. This was notwithstanding that in the basic work plan, twenty-four missile boats, including eight Sa'ar 5 boats and six Dolphin submarines were planned, and in certain time segments were

even approved for building. It is true that the navy took advantage of the delays in building for more in-depth planning, but the vessels that arrived were too few and too late. The delays stemmed from failures of decision making and interference, and a lack of integrative and systemic vision, and not from budgetary reasons. In any case, with the delays, prices rose, which reduced the scope of the order of battle that was planned.

In the current and future battlefield, imperatives will apparently continue to exist that are relevant and unique to the naval branch. The potential inherent in the navy has not yet been tapped, both because of the delay in completing the systems for the excellent vessels that were built in the new order of battle, and because the building and completion of a quantity of the order of battle and its required systems is being delayed. The quality of these vessels, in the opinion of top experts (such as former US Secretary of the Navy John Lehman and the heads of the Dutch navy, who helped to build them), is way ahead of those of other navies in the world. They were specified, planned, and built by virtue of advanced operational and professional thinking by the commanders and engineers of the Israeli Navy, and they are operated today with great success by first rate officers and fighters.

In 2001, then-Chief of Staff Shaul Mofaz stated:

> When I say in the battlefield, I mean also on land, on sea, and in the air. Our vision today is a multi-branch vision. This is how we are building the IDF, this is how its strength is being built, and this is how the General Staff operates its forces in these three arenas – through optimal integration and with the goal of decision and victory.[7]

It is evident, however, that the integration and the multi-branch vision is still lacking, in terms of a realistic assessment of the far reaching threats in the naval theater that Israel must confront, the correct balance between the naval branch and the other components of power in the IDF, and the navy's contribution to IDF victories in the operational battlefield. Therefore, the time has come to close the investment gap in Israel's naval branch at a faster pace. The existence of the wide, deep expanse should be recognized, as should the possibilities latent in the medium and the technology that have been developed for it, in the rest of the world and in Israel. Today, more than at any other time, these suit Israel's current and future needs. It is worth rising above conventions and adopting what is called in naval combat slang "a view beyond the horizon and precise

fire on a desired target." An analysis of the modern battlefield necessarily urges reorganizing the system for more effective yield by the IDF force components.

In his book *National Security: The Few against the Many*, Israel Tal wrote: 'The concept of strategic depth usually refers to geographic land spaces, but the sea can also constitute strategic depth if there is a navy that exploits its spaces and depths. Israel's navy must turn the sea into part of its security depth. The navy's mission must change – it must no longer be an auxiliary branch, but a strategic deterrence branch. Even though Israel's naval power is relatively small in quantity, it must be large in quality."[8] This vision has not yet been completely realized.

Notes

1　On June 11, 1971, nine RPGs were fired from a small boat near the Strait of Bab el-Mandeb at an Israeli tanker on its way to Eilat. Through great luck and resourcefulness, the tanker did not explode.

2　On December 1, 1983, for example, against all assessments, a Libyan submarine reached the Syrian port of Tartus, and anchored there. It succeeded in secretly moving from one of the ports of Libya, which is in the center of the Mediterranean, without the Sixth Fleet noticing it, in spite of the fact that many of its vessels were then at sea across from Libya and Syria and operated frequently in the Lebanon sector.

3　In March 1983, four years after the signing of the peace agreement with Egypt, a committee appointed by the Defense Minister to examine the IDF's budgetary resources and headed by Zvi Tropp, the Ministry of Defense economic advisor, "recommended the development of Sa'ar 5 by 1989, and supported the procurement of eight ships, two of them during the period of the Shahar B plan (by 1992), while attempting to increase the resources with the goal of realizing even three ships during Shahar B," Ministry of Defense, March 16, 1983.

4　This was done in Operation Peace for Galilee on a smaller scale.

5　Mustafa Kabha, *Harb al-Istanzaf: The War of Attrition through the Prism of Egyptian Sources* (Tel Aviv University, Yad Tabenkin, the Galili Institute for Settlement, Defense, and Foreign Policy Studies), p. 86.

6　These missile boats were built by Israel shipyards at the initiative of this writer, and were intended for the intermediate stage only.

7　General Staff symposium on "Decision and Victory on the Future Battlefield" at the National Security College.

8　Israel Tal, *National Security: The Few against the Many* (Dvir, Zemora Bitan, 1996), chapter 42, "National Security in the Future," p. 223.