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MARITIME STRATEGIC EVALUATION FOR ISRAEL 2017/18

Chief editor: **Prof. Shaul Chorev**
Edited and produced by: **Ehud Gonen**

Economy, Energy, Shipping and Marine Aquaculture

Shipping and Ports

Arie Gavish

Activity in Israel's ports

There are five ports operating in Israel, three of which (Haifa, Ashdod and Eilat) are commercial ports and two of which (Hadera and Ashkelon – Eilat-Ashkelon Pipeline Company) are energy ports for the unloading/loading of crude oil, petroleum distillates and coal. The Israel Shipyards port, which is private, has been operating since 2008 within the boundaries of the Port of Haifa. There are two new ports currently under construction – the Hamifratz port and the Hadarom port which are essentially terminals for containers and other cargo within the boundaries of the Port of Haifa and the Port of Ashdod, respectively. The start of operations of the terminals is planned for 2021 and both of them will have private operators.

The ports reform of 2005 and increased competition between Israel's ports

Since February 2005, the ports in Israel have been operating according to a new format based on the Shipping and Port Authority Law, from – 2004 (herein: The Law), which replaced the Port Authority Law, from – 1961, according to which the Port Authority had operated for the 44 years prior to the reform. The Law clearly defines the goals of the reform and the functions of the various entities in the ports, such as the port operating companies (Haifa, Ashdod and Eilat), the Israel Ports Company (IPC) and the Shipping and Ports Authority (SPA).[1] The Law encompasses the ports of Haifa, Ashdod and Eilat only, including the corporations within the boundaries of the ports as defined by the Law. The goal of the reform was to implement structural change in Israel's ports according to the "landlord" model.

Operation of the ports according to the landlord model

Most of the ports in the world operate according to the landlord model. This usually involves a municipal authority or other public authorized body that controls the land and the sea within the boundaries of the port. Its main goal is the development of the port and to provide assistance to the licensed corporations within its jurisdiction with respect to all of the common functions, so that each of them can focus on its area of responsibility in providing efficient service to users.

The main functions of the landlord are:

- Port's real estate management.
- Development of the port – expansion, new terminals, maritime development, etc.

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1 Under the Ministry of Transportation. It serves as the government regulator in these domains.

- Management of activity that is common to all of the corporations operating within the port, such as: the maritime domain, spatial security, transportation routes, marketing, information systems, etc.
- The execution of regulators' instructions to the port, i.e. those of the Shipping and Ports Authority and regulators in the areas of port security, environmental protection, etc.

The landlord leases land to the various corporations to be used for defined activities (containers, general freight, bulk freight, passengers, fuels, storage areas, logistics centers, etc.) and is also responsible for other activities that are common to all the corporations, such as land-based transportation (including railway lines), the maritime domain and maritime services (Port Control, navigation, towing, mooring, etc.), security of the port, dealing with marine pollution, etc. The landlord's activities are meant to serve as a kind of accelerator for this activity and the success of the licensed corporations in its jurisdiction, and therefore its own success as well.

It should be emphasized that the regulatory authority responsible for the ports is a state entity, in general, The National Shipping and Ports Administration (Belongs to the Transportation Ministry), that is in continual contact with international organizations, such as the IMO and others, and it is the one that translates international regulations into laws, regulations and temporary directives related to the ports.

The landlord model in Israel

The reform essentially set down three levels of responsibility and operations for Israel's ports:

1. The state: through the Shipping and Ports Administration (SPA) and the ports' managements.
2. Landlord: the Israel Ports Company (IPC).
3. The operation of the port: the government-owned port companies and in the future the private operators.

The establishment of the Shipping and Ports Administration (SPA): As part of the reform, regulatory responsibility for the ports (all five of them) was transferred to the Shipping and Ports Agency which became the Shipping and Ports Administration. The organization underwent a structural reorganization in order to carry out its regulatory tasks as defined in the Law.

The Israel Ports Company (IPC): As part of the reform, the IPC was created as a company under full government ownership; it is responsible for the development and assets of Israel's ports (Haifa, Ashdod, Eilat). Its main functions according to the Shipping and Port Authority Law, from – 2004 are as follows:

1. The management of the land within the boundaries of Israel's ports (Haifa, Ashdod and Eilat) which are defined in the shipping and ports laws as declared territories of the port.
2. Planning and development of the ports (Haifa, Ashdod and Eilat). Development of the Hamifratz and Hadarom ports was carried out as part of this function.

Following the approval of the reform and as part of an interim agreement between the IPC and the SPA, it was decided to create two port managements (Haifa and Ashdod) in February 2007 and that each would be headed by a port director (Haifa and Ashdod), as defined in the Law, and would organizationally be part of the SPA. This was in addition to the CEOs of the Haifa and Ashdod port companies who are responsible for the operation of the port companies as defined in the license granted to them by the SPA. These port managements serve as an organizational-managerial infrastructure for transforming the IPC into a landlord.

The intention of the interim agreement was to prepare the ground for the IPC to operate as a landlord for the Haifa and Ashdod ports. Since the Port of Eilat is small, it has no need for a port manager in addition to the CEO of the Eilat Port Company. The transfer of the Haifa and Ashdod port managers from the SPA to the IPC was planned to occur in 2008, according to a government decision, as the first step in transforming the IPC into the landlord of the Haifa, Ashdod and Eilat ports.

As of 2017, the Haifa and Ashdod port managers had not been transferred to the IPC. The Haifa and Ashdod port managements have been operating for about ten years in this temporary format, i.e. the agreement between the IPC and the SPA. It can be assumed that the transfer of the port managers to the IPC and the transformation of the IPC into a landlord in the full sense of the term will take place after the transfer of the Marine Departments and the rest of the joint activity (which was described in detail above) from the Haifa and Ashdod port companies to the IPC and the creation of an organizational structure for the landlord as a Port Authority headed by a port manager.

It should be mentioned that a significant portion of the functions currently carried out by the IPC, primarily with respect to development of infrastructure and assets, is certainly consistent with its role as landlord of the ports. The IPC, which was "born" within the headquarters of the Port Authority that operated over a period of 44 years, is a bureaucratic structure that is mainly involved in the planning, monitoring, supervision and development of the ports. The IPC in its present format has no operational ability with which to deal with functions that are common to all of the corporations operating in the ports, such as in the maritime domain (Port Control, navigation and towing services), spatial security, etc.

The existing port managements constitute the IPC's operational capability in the Haifa and Ashdod ports for some of the areas that are common to all of the licensed corporations. Transforming the IPC into a full landlord of the Haifa and Ashdod ports requires an appropriate organizational structure, the division of responsibilities and authorities among the sub-organizations, the definition of mutual relations between the sub-units, etc. The lack of attention given to this matter is liable to create distortions in the operation of the new terminals (see above) and is liable to adversely affect the operation of the licensed corporations in the ports. This anomalous situation calls for major change that will lead to the cancelation of the Haifa and Ashdod port managements, which are currently operating on the basis of a temporary agreement between the IPC and the SPA, and at the same time will solidify the IPC’s status as landlord of the ports (Haifa, Ashdod and Eilat) with an official and legal status.

It should be mentioned that the decision to transform the Israel Ports Company (IPC) into the landlord of the three commercial ports in the country (Haifa, Ashdod and Eilat) to some extent reduces its ability to serve the three ports under conditions of competition.[2]

The opening of the new terminals (Hamifratz and Hadarom) is planned for 2021, which will require the ports to organize for activity according to the landlord system. The Haifa and Ashdod ports are already operated—and will in the future continue to be operated—by a number of licensed corporations and other bodies that "need" a landlord who will provide common services to them.

Following are the corporations and bodies operating in the Haifa port:

- The Haifa Port Company.
- The Israel Shipyards Port Company.
- The SIPG[3] Company – Hamifratz terminal.
- Tashan – the fuel pier which includes a mooring facility.
- Dagon – storage silos.
- Gadot pier.
- Chemicals terminal.
- Shavit harbor – a fishing boat anchorage and marina under the IPC’s responsibility.
- The naval base.
- Maritime police.
- Maritime contractors.

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2 In discussions that preceded the ports reform of 2005, a proposal was made to create a separate landlord for each port, as is the situation in most ports worldwide. If this proposal had been implemented, the function of landlord would probably have been given to a municipal authority (the Haifa Municipality, the Ashdod Municipality and the Eilat Municipality). As landlord, a municipality has a high level of motivation to encourage the growth of the port in its jurisdiction for the benefit of residents. However, as mentioned, this proposal was not accepted.

3 Shanghai International Port (Group).

Following are the corporations and bodies operating in the Ashdod port:

- Ashdod Port Company.
- TIL Company – the Hadarom terminal.
- Pier 11 and 12 – Israel Chemicals Ltd. – export of phosphates and potash.
- Pier 30 – responsibility of the IPC.
- The naval base.
- Maritime contractors.

Following are the corporations and bodies operating in the Eilat port:

- The Eilat Port Company.
- Israel Chemicals Limited – export of phosphates and potash.
- Maritime contractors.

The creation of the three port companies: The reform established that the activity in the ports would be consolidated into three port companies that would be government-owned. These companies (the Haifa Port Company, the Ashdod Port Company and the Eilat Port Company) would carry out the day-to-day operations in the ports. The reform also specified that within five years the process would begin of issuing the shares of the Haifa Port Company and the Ashdod Port Company on the stock market. This was to be accomplished in a gradual process such that, by 2020, 49% of the companies' shares would be owned by the public. The reform also specified that within five years the Port of Eilat's operations would be transferred to a private operator.

In actuality, the operations of the Eilat port were fully transferred to a private operator (Papo Maritime Ltd. owned by the Nakash brothers who won an international tender) for a period of 15 years. The Haifa and Ashdod port companies were not issued to the public and they did not switch to private operators as planned. This was due to a lack of agreement between the port workers represented by the Histadrut (The Union), on the one hand, and the managements of the Haifa and Ashdod companies and the Ministry of Transportation, on the other, in addition to other reasons.

Competition among the ports in Israel

The ports reform of 2005 was formulated with the goal of developing competition between the ports, which was to be accomplished by separating one from the other. The idea was to improve service and efficiency for the benefit of users and the public. Twelve years have passed since the beginning of the reform but it is still too early to carry out an in-depth assessment of the reform's outcomes and the extent to which its goals have been achieved. The new ports (Hamifratz and Hadarom) that are under construction (and are expected to begin operations in 2021, as mentioned) will have a major influence on the ports in Israel and on the results of the reform. Nonetheless, it is possible to examine the trend in competition between Israel’s ports.

Although there is competition between the existing ports (the Haifa Port Company, the Israel Shipyards Port Company, the Ashdod Port Company and the Eilat Port Company), it is too early to determine its scope, in which port services it exists and whether it is efficient. The start of operations of the Israel Shipyards port in 2009 has significantly boosted the level of competition in certain types of ocean freight between the Israel Shipyards Port Company on the one hand and the Haifa Port Company and Ashdod Port Company on the other. The dramatic increase in container traffic in the Port of Ashdod can also be attributed in part to the increased level of competition between the Haifa Port Company and the Ashdod Port Company. On the other hand, it is a well-known phenomenon that freight can be a "captive" of a particular port, a fact that constitutes a barrier to full competition. It should be mentioned that an additional reason that competition is only partial is the geographical division between the existing ports. Users in the North tend to use the Port of Haifa while those in the South use the Port of Ashdod.

The activity of the new container terminals—Hamifratz in Haifa and Hadarom in Ashdod—will double the container traffic capacity in each port. This major addition to each port will certainly lead to competition within the ports (the Haifa Port Company opposite the Hamifratz terminal and the Ashdod Port Company opposite the Hadarom terminal) and between the ports of Haifa and Ashdod. It appears that the long-term vision, according to which the piers will wait for ships rather than the other way around, is close to becoming a reality.

The Port of Eilat, which has not handled container traffic since 2004, is not a player in the competition for container traffic at this stage.

The Haifa Port Company and the Ashdod Port Company have recently been intensively working to formulate plans to prepare and reorganize for the era of competition that is meant to begin in 2021 when the new terminals go into operation. On the one hand, the managements of the port companies are requesting approval and budgets for the development of the ports from the Ministry of Transportation and the IPC in order to upgrade their facilities to the level of the new terminals. In this context, the Minister of Transportation has promised to upgrade the container piers of the Haifa and Ashdod port companies in order to give them the ability to handle large ships of 18,000 TEUs or more. This task was assigned to the IPC which has begun to work in this direction, in collaboration with the managements of the port companies. On the other hand, the managements of the ports are intensively working on various projects and modifications that are meant to upgrade their capabilities and prepare them for competition with the new terminals (including the purchase of cranes, forklifts, tugboats, the overhaul of piers and the acquisition of knowledge in various types of freight, the deepening of the harbor, the adoption of more innovative methods, the upgrade of the Terminal Operating

System, early retirement of workers, etc.). One of the potential pitfalls facing the port companies' activities is the agreement that is expected to be signed with the workers who are represented by the Histadrut. The port companies will naturally be in an inferior position relative to the new terminals and the character of the agreement to be signed will to a large extent determine their ability to compete. There is an ongoing dialog on this matter between the Ministry of Transportation on the one hand and the Histadrut and the workers on the other, though until now there have been no results. At this stage, there is no immediate plan to issue the shares of the port companies on the stock market and to privatize them according to the format specified by the reform, but it can be assumed that this issue will remain on the agenda of the port companies. The chance of implementing the reform and transferring the operation of the port to private hands will grow to the extent that the managements of the port companies believe that this move will improve their ability to compete.

The preparations of the private operators (SIPG and TIL) for the launch of the new terminals (Hamifratz and Hadarom)

The ports' infrastructures are currently being constructed by the infrastructure contractors (see below). The private operators are meant to receive the terminals on the completion of the infrastructure work and they will then supplement the infrastructure work prior to the operation of the terminals, in accordance with the licenses issued to them by the SPA. The private operators will need to decide on a large number of issues and will need to deal with the acquisitions, the installation of systems and the organization of the staff, so that the loading and unloading of containers and other freight at the new terminals will begin in a timely manner. Following is a partial list of issues that the private operators will have to decide on prior to opening the terminals: automatic/semi-automatic container terminal, a TOS system, bridge cranes and a gate, additional types of freight, the entrance to the harbor, the information systems, training of workers, etc.

It can be assumed that the operating companies are already working to market the activity of the new terminals by providing attractive terms to the shipping companies. The private operating companies are highly experienced in the operation of container terminals and it is reasonable to assume that the format of operation to be chosen will influence the ability to compete, efficiency and service of the new terminals.

Freight traffic and the activity of Israel's ports in 2016

In 2016, 6511 ships visited Israel's ports as compared to 5893 in 2015, an increase of 10.4 percent. About 50 percent of them were container ships. It should be mentioned that the global trend toward containerization is continuing, as is the shift to container transport of freight that has traditionally been viewed as "general freight". This fact explains another global trend – the development of giant container ships in parallel to the development of terminals that are able to handle them.

In 2016, Israel's freight traffic (both imports and exports) totaled about 57 million tons. During the last 10 years, there has been an increase of about 58 percent in freight traffic (in terms of weight) and about 100 percent during the last 20 years. This data is a reflection of Israel's economic growth in recent years.[4] The energy ports (Hadera and Ashkelon) deal with another 30 million tons of fuel of various kinds (import and export).

The container traffic in the ports of Haifa and Ashdod totaled 2.711 million TEUs in 2016, an increase of 7.5 percent relative to the previous year. During the last 10 years, there has been an increase of 53 percent in container traffic and about 100 percent during the last 15 years. In the past, it was generally believed that container traffic in Israel's ports doubles every 10 years; however, it appears that in recent years this has turned out to be an underestimation. Nonetheless, it can be said with high probability that the growth in container traffic will continue for quite a few years to come. It should be mentioned that the average annual rate of growth in global container traffic is 4-6 percent.

In 2016, container traffic was divided between the ports as follows: Haifa Port Company – 46.7 percent and Ashdod Port Company – 53.2 percent. This is a continuation of the upward trend in the container traffic of the Ashdod Port Company which accounted for only one-third of the total about 10 years ago, while the Haifa Port Company accounted for the remaining two-thirds. The main factors explaining this trend are the following:

- The close proximity of the Port of Ashdod to Israel's business center.
- Competition between the port companies.
- A temporary advantage in the means of production: the Eitan pier in Ashdod began operating in 2006, in contrast to the Carmel pier in Haifa which began operating only in 2010.
- Level of services
- Marketing

The doubling of container capacity in each port once the Hamifratz and Hadarom ports begin operations in 2021 will affect the future division of container traffic between the four terminals (Haifa Port Company, Hamifratz terminal, Ashdod Port Company and Hadarom terminal). It appears that Israel Shipyards Port Company will not be entering the container market (although its license allows it to do so) and it will continue to specialize in the niche of general freight and bulk freight. This development has led the managements of the Ashdod and Haifa port companies to take steps in order to remain attractive once the Hamifratz and Hadarom terminals begin operations.

The container traffic through the Port of Eilat ended completely in 2004 when the ZIM Company decided that using the port was not economically or logistically worthwhile. It

4 Israel's ports also serve the residents of Judea and Samaria and the Gaza Strip.

appears that there will be no container traffic through the Port of Eilat in the foreseeable future.

Other freight through Israel's ports

The Haifa and Ashdod port companies were "born" from within the Ports Authority which operated three ports: Haifa, Ashdod and Eilat. They are multi-purpose ports that handle additional types of freight, such as bulk products of various types (by means of cranes for bulk loading/unloading and automated facilities); the import of vehicles; the import and export of general freight; passenger ships; non-standard freight, such as railway cars; etc. Although the main business of the two port companies is containers (which accounts for about 50 percent of their traffic according to the various measures), they must be prepared to provide solutions for other types of freight and activity according to their licenses and the Shipping and Ports Administration Law.

The trend of increasing competition between the port companies can also be seen in the case of other types of freight, primarily since 2009 when the Israel Shipyards Port Company went into operation. . The Israel Shipyards Company, which is located within the boundaries of the Port of Haifa, created a subsidiary called Israel Shipyards Port Company. In 2008, it received a permit for the unloading of sugar and in 2009 the permit was expanded to other types of freight. The Israel Shipyards port began to operate as the first private port in Israel and in this context it is worth mentioning the "shift" of general freight and bulk freight from the Ashdod Port Company and the Haifa Port Company to the Israel Shipyards Port Company (in 2009, 0.456 million tons of freight was moved through Israel Shipyards while in 2016 the figure was 2.826 million tons, an increase of more than fivefold). The Israel Shipyards Port Company serves as a prime example of two phenomena:

1. A private port is able to develop in a professional, efficient and profitable manner without harming the rights of its workers.
2. Competition has brought about increased efficiency, an improvement in services and lower costs of transshipment to the benefit of customers and the public.

The permit of the Israel Shipyards Port Company limits the amount of freight it can handle to 5 percent of the total movement of freight in Israel’s ports. It is the intention of the Company to request that the SPA remove this limitation. The Israel Shipyards Port Company is considering the creation of seed silos in addition to the cement silos that were recently built, as well as a railway connection for the efficient transport of freight.

Due to its remote location, the Port of Eilat focuses on two main types of freight: the export of phosphates and potash and the import of cars from the Asia ("captive" freight). Although the importance of the Port of Eilat under the existing circumstances is strategic, its importance will grow with the construction of the railway line to Eilat, if and when the decision is made to build it. In view of this, the Port of Eilat will not be upgraded by the

Israel Ports Company under the present circumstances, unless such a decision is made by the owners of the operating company which will have to invest its own funds in the project.

The development of Israel's ports

In 2017, a number of ships with a capacity of more than 20 thousand TEU's were completed by the shipyards in east Asia. These are giant ships with a length of about 400 meters, a width of about 60 meters and a draft of about 16 meters. Some of them have already begun to carry international cargo. The large shipping companies are continuing to order the giant ships in significant numbers and it can be assumed that we will soon see the launch of ships with a capacity of 22 thousand TEUs, which are currently under construction. In the future, we will likely see ships of 25 thousand TEU's, which are currently on the drawing board. This trend has directly influenced the planning of the new terminals that are currently under construction, i.e. the Hamifratz port (in Haifa) and the Hadarom port (in Ashdod). I would venture to say that the growth in the size of container ships surprised many port planners. It will be even more difficult in the future to predict the trends in the size of container ships and the size of the ports needed to handle them.

The maneuvering of giant container ships in the ports of Haifa and Ashdod has become increasingly difficult and complex given their size on the one hand and the lack of sufficient maneuvering room among the ports' container piers, on the other. The acquisition of large tugboats with a towing capacity of 70 tons is improving the ability of the pilots to maneuver these large ships; however, the problem has not been eliminated. This situation has a direct effect on the efficiency of the ports, which is determined by the time needed to move, maneuver and moor these ships by the ports' pilots. The Harbor Master of the Haifa and Ashdod ports and the pilots are carrying out simulations and investing in various accessories and improvements in the piers which are meant to facilitate the entrance and exit of these giant ships. The delay in the transfer of the Marine Departments from the port companies to the IPC as landlord will hinder the preparations of the departments for the operation of the ports once the new terminals open. Already today, the process to acquire tugboats for the ports is being delayed due to the uncertainty surrounding their fate.

The most significant development project in the ports is the construction of the Hamifratz port (to be located within the boundaries of the Port of Haifa) and the Hadarom port (to be located within the boundaries of the Port of Ashdod). The IPC is managing the project, which includes planning, the issuing of tenders, the selection of the construction contractors and the operator, etc. The IPC is seeking to complete the construction of the infrastructure for the new ports in 2021 and to hand over their operation to the two private companies that won the tender, which was issued and managed by the IPC. The development of the ports is based on long-run freight forecasts that are evaluated at least once a year by an economic consulting company.

The standard ship for the ports is the TRIPLE E of the Maersk Company which has a capacity of 18,000 TEU's. The ship is approximately 400 meters in length and 60 meters in width, with a draft of about 16 meters.

The Mifratz and Hadarom ports are planned to have a depth of about 17.3 meters and turnaround circles of about 600 meters. Their piers are built for giant (Ship to Shore Cranes) cranes that have the ability to load/unload 23 containers widthwise. The distance between the Hamifratz pier and the Hacarmel pier is planned to be about 400 meters (the distance between the new piers in Haifa and Ashdod is 250 meters while the distance between the piers in the original Port of Ashdod is 150 meters). These distances will determine the maneuvering ability of the large ships. The entrance to the Port of Haifa after the construction of the Hamifratz port will be no more than 300 meters, which as mentioned will restrict the entry and exit of ships. The possibility is being considered of routing PanaMax[5] ships to the Kishon harbor within the Port of Haifa by deepening it to a depth of 13–14 meters (currently it is 11.5 meters deep). The maritime dimensions of the Port of Ashdod after the completion of the Hadarom port are not optimal either and as a result the port has acquired a guidance system called Sector Light, which operates both day and night.

The two private companies chosen by international tender to operate the ports were the Shanghai International Port Group (SIPG), a Chinese company owned by the Port of Shanghai, for the Hamifratz port, and Terminal Investment Limited (TIL), a Swiss company that operates 29 container terminals around the world, for the Hadarom port. These two companies are now planning the systems under their responsibility: the type and size of the bridge cranes, the terminal operating system (TOS), the computer systems, etc. The Hamifratz and Hadarom ports are leased for a period of 25 years to these companies, subject to various security restrictions in view of the fact that Israel's ports are a national strategic infrastructure. The start of operations of the Hamifratz and Hadarom ports, which is expected in 2021, will constitute a serious source of competition for the Haifa and Ashdod port companies and they are investing thought and energy in order to prepare for the new era and to achieve the ability to effectively compete.

The Hamifratz Port

Start of construction – 2015.

Expected completion of construction – 2021.

Responsibility of IPA – Planning and statutory approvals, management of the construction and operating tenders, management of the construction, etc.

Principal Israeli contractor – Ashtrom-Shapir.

Expected cost of construction – NIS 4 billion.

5 Ships built to a size that can pass through the Panama Canal.

Operating company – the Chinese SIPG Company (Shanghai International Port Group Company), a subsidiary of the Port of Shanghai in China.

Area of the Hamifratz port – 820 dunam (about 200 acre) of which 720 are designated for a container terminal.

Main pier (containers) – 800 meters; secondary pier – 720 meters.

Extension of main Port of Haifa breakwater – 880 meters.

Construction of a secondary breakwater – 2100 meters (600 meters of which is by means of 19 caissons).

Depth of the water – 17.3 meters.

Entrance canal – 2 kilometers in length with a depth of 19.1 meters.

Construction of a railway line to the container terminal.

Responsibility of the operating company (SIPG) – completion of the infrastructure (electricity, communication, water, etc.), super structure, operating equipment (cranes, tugboats, forklifts, etc.), TOS, the port entrance, automatic/semi-automatic terminal, etc.

The port was built to be environmentally friendly and is meant to solve the numerous problems of environmental protection.

A modern and safe fuel pier which was meant to be moved from the Port of Haifa will not be built at this stage of the development program. In the future, it will be possible to build a fuel pier within the Hamifratz port and to move the existing fuel port to it.

Figure 1 – The Hamifratz port will be built next to the Port of Haifa and the Israel Shipyards port.

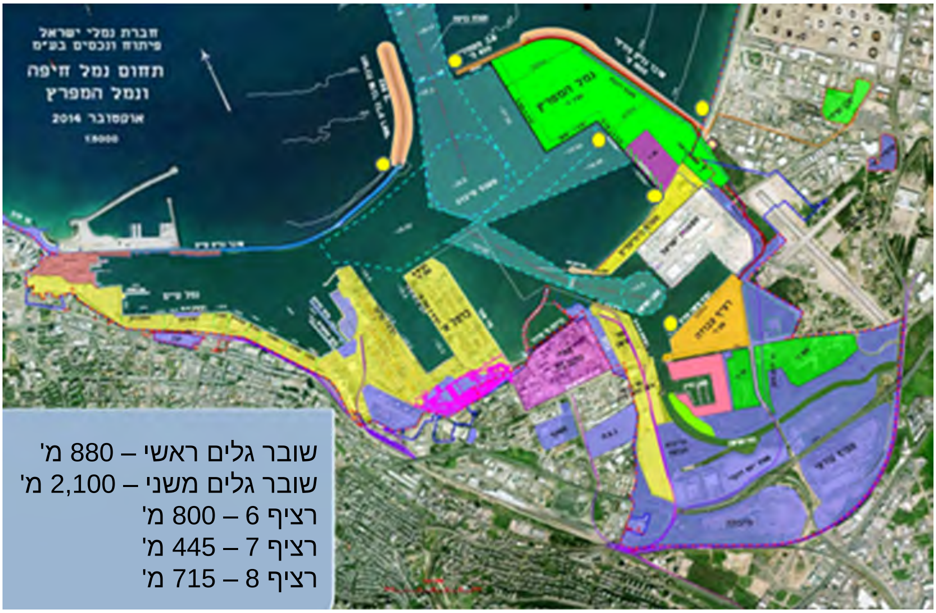

Figure 2 – Haifa Bay Port (HaMifratz port).

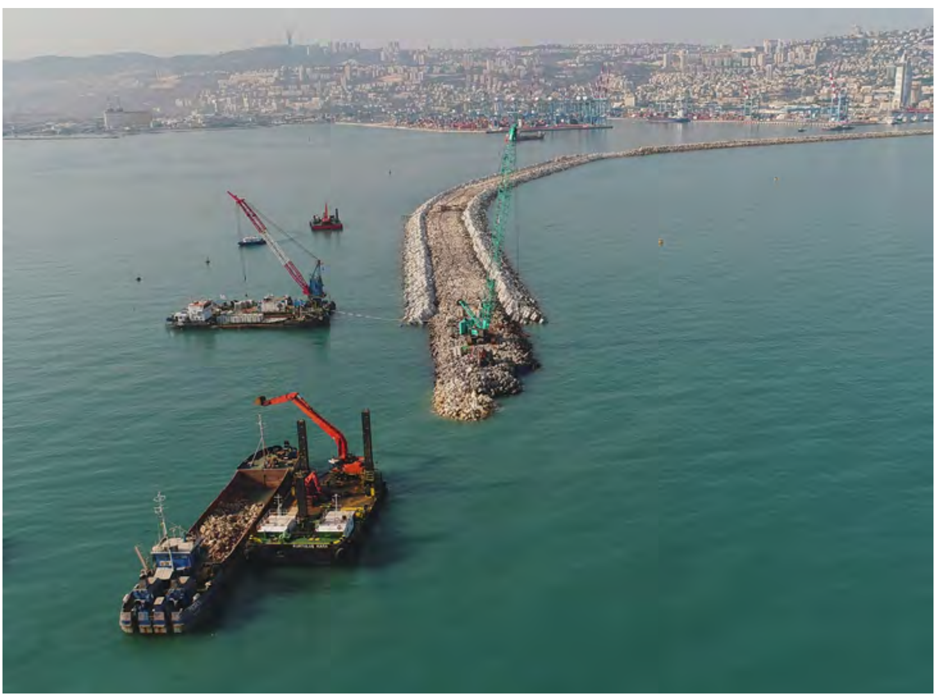

Figure 3 – Extension of Haifa Bay break -water

Figure 4 – The extension of the Port of Haifa breakwater and the drained area of the Hamifratz port (as of mid-2017).

The Hadarom port

Start of construction – 2014.

Expected completion of construction – 2021.

Responsibility of IPC – Planning and statutory approvals, management of the construction and operating tenders, management of the construction, etc.

Principal contractor – PMEC – Pan Mediterranean Engineering Company, which belongs to China Harbor, a Chinese company.

Expected cost of construction – NIS 3.3 billion.

Operating company – Terminal Investment Limited (TIL), a subsidiary of MSC, a shipping company that operates 29 container terminals worldwide.

Area of the Hamifratz port – 630 dunam.

Main pier (containers) – 800 meters; secondary pier – 500 meters.

Extension of main Port of Ashdod breakwater – 600 meters.

Construction of a secondary breakwater – 1500 meters.

Depth of the water – 17.3 meters.

Entrance canal – 1 kilometer in length with a depth of 24 meters.

Construction of a railway line to the container terminal.

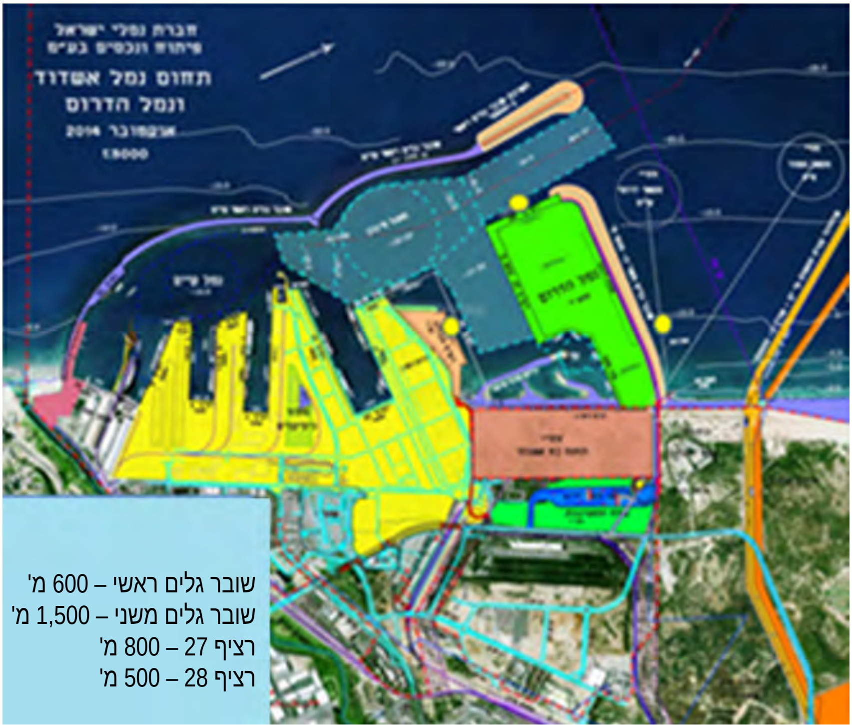

Figure 5 – The Hadarom Port

Figure 6 – The extension of the Port of Ashdod breakwater

Figure 7 – The drained area of the Hadarom port (as of mid-2017)

The Israeli commercial fleet

Shipping is one of the most globalized industries in the world. This is because it does not require any connection between the shipping company's country of registration, the ship's country of registration (the ship's flag), the countries where it provides service and the nationality of its crew. This explains why ships choose flags of convenience in order to minimize taxes and the cost of meeting regulations. Therefore, in surveying the Israeli commercial fleet a distinction is made between ships flying an Israeli flag according to the Shipping (Vessels) Law, from -1960 and ships under a foreign flag but under Israeli control according to the Shipping (foreign vessels under the control of an Israeli entity) Law, from – 2005.

In July 2017, the fleet under Israeli ownership or control consisted of 34 ships with a deadweight tonnage (DWT) of 1,832,000 tons. Of those, eight fly the Israeli flag.

ZIM Shipping Services: ZIM owns or controls eight ships with DWT of 434,000 tons, all of which are container ships. Of those, three fly the Israeli flag. The company leases these ships for varying periods of time.

XT Shipping: XT has 12 ships with DWT of 926,000 tons, of which two are container ships and one is a coal-carrying bulk ship. Two of the ships fly the Israeli flag.

Other companies: Seven general cargo ships, two grain-carrying ships, one coal-carrying ship – with a total DWT of 471,000 tons.

The share of ZIM in the fleet, which was once the backbone of the Israeli commercial fleet, has fallen drastically. Other companies have increased the size of their fleets and they constitute the "iron" fleet that is meant to be mobilized for various purposes by the State when needed.

Tonnage tax

In the global shipping industry, there has developed a practice of registering under flags of convenience. In other words, commercial fleets have "fled" to countries with convenient tax and regulatory regimes. As a solution to the phenomenon of flags of convenience and manning by foreign crews, an incentive was introduced in Europe called the tonnage tax. This is a tax payment according to tonnage of all the vessels owned by a company (a reduced tax that encourages greater tonnage), as opposed to corporate taxes at a higher rate (26 percent in Israel). This tax regime is beneficial to the shipping companies and is accompanied by an obligation on the part of the ship owners to maintain a partly domestic crew (an Israeli crew) and to participate in the costs of training lower officers.

The passing of tonnage tax legislation to replace the corporate tax currently paid by the Israeli shipping companies is in an advanced stage. The tax legislation is being advanced by the Ministry of Finance, the Tax Authority and the State Revenue Authority. The Ministry of Transportation is a partner in this effort and supports the tonnage tax legislation.

The tonnage tax law was approved a few months ago (in mid-2017) by the Ministerial Committee for Legislation and is currently being drafted by the Ministry of Justice. Subsequently, the law will be submitted for discussion to the Knesset prior to first, second and third reading as a proposed law. If it is approved, it will replace the corporate tax that is currently applied to Israeli shipping companies. It is doubtful whether the legislative process will be completed in 2018.

Maritime manpower

Israeli shipping companies have moved to flags of convenience in an effort to reduce operating costs, which includes the high cost of employing Israeli officers and seamen relative to those from developing countries. The government of Israel has subsidized the shipping industry in order to maintain the existence of an Israeli commercial fleet, including both ships and seamen, based on a series of government decisions that specified a minimal Israeli crew (officers only), subsidization and financial assistance and also tax benefits. However, this did not stop the decline in the number of ships flying the Israeli flag or under Israeli control.

Currently (i.e. 2017), there are 630 seamen in the Israeli commercial fleet, of which 207 are Israelis. The number of active officers is 255, of which 166 are Israeli, and all of the cadets are Israeli.

The small number of cadets (about 20) in the commercial fleet and the small number of ships under the Israeli flag make it difficult to recruit new cadets or to open courses at the Institute for Maritime Training in Akko.

The shortage in maritime manpower also has implications for the operation of the ports in Israel, on the supervision by the Israeli government (regulation) and also on the manning of coastal positions in the shipping companies with experienced commercial fleet officers, since these positions require maritime experience and it is generally the practice that candidates to fill these positions originate from the Israeli commercial fleet. It is the expectation that the population of pilots in Israel, which is fed by experienced captains from the commercial fleet, will decline to the point that it will be difficult to fill the positions in the ports.

This gloomy forecast is likely to lead to the "death" of Israeli shipping (ships and crews), unless the problem is dealt with comprehensively, strategically and systemically. The first stage in dealing with the problem is for the government to recognize the importance of having a significant commercial fleet and a population of experienced seamen (especially deck and machinery officers) that is sufficient for the country’s economic and security needs. However, the nature of global economic activity, and as a result that of Israel as well, emphasizes the bottom line and therefore constrains the development of the Israeli commercial fleet.

Conclusion and Recommendations

The wonders of competition in the ports

Since the beginning of the reform of the ports, we have been witness to growing competition among the ports and among the corporations licensed to operate within them. Even without fully analyzing the results of the reform in the ports, it can be said that there exists genuine competition between the port companies and between the licensed companies. The importance of competition as a factor that affects the profitability of a company/corporation has been internalized by the managements and indeed they are working proactively in order to improve their ability to compete, with the goal of attracting the shipping companies to use their services. The shipping companies for their part are influenced by the importers and exporters (the users/customers) in determining the destination port and the licensed corporation that is chosen for unloading/loading. It is still not full competition nor even efficient competition, but there are indications that the level of competition will increase with the entry of the new operators (Hamifratz and

Hadarom) and that the results will produce significant benefits for users and the Israeli economy as a whole. These include:

- Improved service.
- Reduced costs and indirectly a reduction in the cost of imports (cost of living).
- Reduced damage.
- Rapid response and shorter waiting time and turnaround time in the ports (efficiency).
- Flexibility in choosing between companies.

Future Development of the Ports

The planning of a port from the conceptual stage to the time it goes into operation is a long process (10–20 years) since there is a need to deal with many issues, including the forecasting of freight traffic, regulatory barriers, initial planning, sources of funding, detailed planning, tenders, execution of infrastructure, preparations by the operators, etc.

The growth in the population of Israel is expected to continue in the future and along with it the growth in the economy. Therefore, the existing ports, including the new terminals, will not be sufficient for freight traffic within a relatively short time (15-20 years).

Therefore, it is important to think about the next stage of development of the ports (construction of ports on artificial islands, development of existing ports, new ports in a different location, etc.) and the sooner the better. It is recommended that a forecast be made of the trend in freight traffic and that a vision and work plan for the future development of freight loading and unloading is decided on.

The acquisition of advanced abilities for freight loading and unloading by Israel's ports will also determine its strategic character and will serve as, among other things, a multiplier of military, political and economic strength.

Establishment of the IPC as landlord

The landlord system is the most suited for the operation of Israel’s ports under the current circumstances. The delay in transforming the IPC into a full landlord of the ports is liable to harm the operation of the ports, their corporations and the new terminals. It is recommended that the managements of the existing ports (Haifa and Ashdod), which constitute an appropriate managerial infrastructure for the establishment of the landlord (a port authority), be replaced by the IPC as the official landlord according to law. This document is not suggesting what the correct structure of the IPC should be as landlord. It is recommended that comprehensive discussions be held in order to decide on the IPC’s organizational structure as landlord and that this be implemented as soon as possible and certainly before the new terminals (Hamifratz and Hadarom) go into operation in 2021.

The decline of shipping and seamanship in Israel – is it inevitable?

Shipping and seamanship has been on the decline in Israel for many years. The decisions of the government and the efforts of the Administration are trying to halt this trend by various means; however, without a major turnaround and if the trend continues (and there is no reason to think that it won't) Israel will find itself without any shipping industry (essentially, and in spite of the small "iron" merchant marine fleet, this is the situation already today) and with declining numbers of seamen (in actuality, this means officers since there have been no Israeli seamen for many years). This gloomy forecast requires strategic, national and systemic thinking about shipping and seamanship in Israel. This issue will also have an effect on maritime education (maritime schools) which is also in a long-term decline. (This document did not relate to maritime education.) There is a need to raise this issue to the level of the government and the Knesset since their recognition of the strategic importance of these issues will set in motion various processes to provide an appropriate response.

The maneuvering of giant ships in Israel's ports

As part of the conclusion, I decided to bring this important matter to the attention of the readers. The giant ships that are coming into service now and in the future require a professional analysis as to their possibilities for maneuvering in the existing ports and in those that are planned and constructed.

The structure of the existing ports (which is given and does not allow for any major changes) will place constraints on the maneuvering of the giant ships to an extent that appropriate measures should be planned in order to reduce these constraints as much as possible. The current structure allows for only limited maneuverability for the giant ships. Means need to be developed or acquired that will include suitable and powerful tugboats, navigational aids, lighting, etc. The early transfer of the Marine Departments from the Haifa and Ashdod port companies to the IPC will enable this process to proceed without delays.

The reduction in the constraints on maneuverability in the existing ports will increase their efficiency in providing service to the shipping companies.

In the planning of future ports, it will be necessary to forecast the size of ships in the distant future (20 years and beyond) and to consider solutions that will provide maneuvering ability to these giant ships.