

The Strategic and National Implications of General Cargo and Bulk Shipping – Foreign trade as the mainstay of Israel's economy and the importance of general and dry bulk cargo¹

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Introduction

Non-containerized cargo accounted for 53 percent of the cargo (in terms of weight) that passed through the ports of Israel in 2017. In other words, more than one-half of the trade that passes through Israel's port is not in containers. On the other hand, the two new ports being built in Haifa and Ashdod (Hamifratz and Hadarom, respectively)² are container terminals and are not planned to handle the loading and unloading of general and bulk cargo.

Therefore, about one-half of Israel's trade will not be exposed to the competition that has been promoted by the government of Israel for more than a decade and which has been achieved at the high cost of constructing the new ports.

It would appear that general and bulk cargo have not received the attention they deserve, in view of their importance to the Israeli economy, and clearly there is a need to modify the unloading infrastructure, the planning and the investment in the ports in order to take this type of cargo into account.

The importance of general cargo

For centuries and perhaps millennia, shipping involved general and bulk cargo. During most of the history of commercial shipping, cargo was transported by ship in bundles, on pallets, in barrels or in sacks, and sometimes the cargo was simply “dumped” into the holds of the ships.

The first container ships came into service in the 1960s and since then they have accounted for a major share of sea transport. Container ships are composed of special compartments for the containers, which are essentially huge packages (30 or 60 cubic meters) that are designed for transport by sea or on land. However, despite the dramatic

1 This article relates primarily to the ports of Haifa and Ashdod and not to the port of Eilat.

2 The two private international companies that were chosen by international tender to operate the ports are SIPG, a Chinese company that belongs to the Port of Shanghai, which will operate the Hamifratz port, and TIL, a company located in Switzerland that operates 29 container terminals worldwide, which will operate the Hadarom port. The Mifratz and Hadarom ports are leased for a period of 25 years.

switch to container ships, there remains a large amount of cargo that is transported in bulk carriers and general cargo ships. Moreover, the figures for Israel that are published by the Shipping and Ports Authority and the Israel Ports Company consistently show that the ratio of the percentage of containerized cargo to the percentage of general and bulk cargo remains relatively constant. Thus, it is reasonable to assume that in the foreseeable future, we will continue to see significant trade using general cargo ships and bulk carriers.

Bulk cargo is unpackaged cargo that is transported on a ship in large quantities. Bulk cargo can be either liquid or dry. Examples include grain, clinker,³ cement, coal, sulphur, etc. Examples of liquid bulk cargo include fuels, oil and various chemicals. Currently, a supplier or importer of goods can choose to transport his cargo on a container ship or a bulk carrier and the vast majority these types of cargo will be transported on a bulk carrier. There are rare instances in which large amounts of coal, for example, are transported by container ships.

General cargo is transported on ships as units/individual packages (i.e. not in bulk or in containers). Examples of general cargo include iron rods, bundles of wood, sacks of cellulose and steel coils. As in the case of bulk cargo and even though some of these goods are transported in container ships, the majority of general cargo is transported on general cargo ships. This phenomenon has a number of explanations, including the capabilities of suppliers and importers for loading and unloading, the need to transport very large quantities of cargo in one shipment, the means of transport within the ports, etc.

About 99 percent (in terms of weight) of all cargo traffic to and from Israel passes through the seaports.⁴ Therefore, Israel's economy is critically dependent on the optimal functioning of its ports. Israel's foreign trade constitutes about two-thirds of its GDP, one of the highest ratios in the world. Israel's manufacturing plants and commercial centers are modern and efficient and their output is exported to all parts of the world. Israel's imports consist of numerous types of raw material and consumption goods, as appropriate to the high standard of living of its inhabitants. It is no surprise therefore that the income of Israel's citizens is dependent on foreign trade.

Furthermore, those involved in foreign trade have no real alternative to sea transport, even in the long run, since the alternatives of air and land transport are far from attractive economically (even under conditions of peace with our neighbors).⁵

3 Raw material for cement.

4 See the Committee for Socioeconomic Change, p. 170. (Hebrew)

5 Israel Ports Company – Strategic Masterplan for the Development of the Mediterranean Ports, p. 8.

The Israeli economy is essentially an “island economy” in the Eastern Mediterranean. There is almost no passage of cargo through the border crossings, although in view of its close proximity to the northern exit of the Suez Canal Israel is definitely located on the main international trade routes—from the Far East in the direction of Europe and North America, from North America and Europe in the direction of the Far East—and of course it is close to the various routes between the Northern and Southern hemispheres, such as to the countries of Africa, to the Oceania, etc.

Therefore, in view of its land isolation, the distances to remote markets and the absolute dependence of the Israeli economy on its seaports, it is essential that the State's leaders ensure that this primary and important link in the chain of supply be available and efficiently run throughout the year.

In a lecture given at the graduation ceremony of a Maritime Cadet's course in 1950, David Ben Gurion stated that “...the conquering of the maritime domain is even more important for a small country like Israel, which will expand and develop in the future. If we understand that the coast is not a barrier and a border, but rather a bridge and a doorway to a huge empire that stretches out almost to infinity...” There is no doubt that his prophecy has been fulfilled.

An examination of the general and bulk cargo passing through Israel's ports shows that the vast majority is used as raw material by Israeli manufacturing, both as part of the production processes for our own consumption and also in order to produce export goods:

- Grain transported in bulk is used by the food industry. Considered as a single product, it accounts for the highest proportion of imports (9 percent).
- Cement and clinker are used as raw material by the building industry.
- Shipments of iron are used as raw material by the building industry and in many civil infrastructures.
- Shipments of sulphur are used as raw material for the manufacturing of phosphates (designated for export).
- Shipments of fuel are used as raw material for manufacturing, transportation and energy in the private and public domains.

Development of the ports

The government of Israel decided on December 18, 2011 “to instruct the Director General of the Ministry of Transportation and Road Safety to work to accelerate the

implementation of National Zoning Plan 1/1/b/13 for the Hamifratz port in Haifa and National Zoning Plan a/2/1/b/13 for the Hadarom port in Ashdod...”⁶

This government decision followed the submission of the Strategic Masterplan for the Development of Israel's Mediterranean Ports by the Israel Ports Company in 2007.⁷ As part of this plan, it is worth mentioning a number of interesting insights:

“A comparison of the shares of the various types of transport in foreign trade shows that Israel's foreign trade is particularly dependent on its ports relative to other countries and it does not appear that in the near future there will be a realistic alternative to Israel's ports as the almost exclusive channel for foreign trade.”⁸

Professor Trajtenberg, who headed the Committee for Socioeconomic Change (which was established following the "grassroots protests" in the summer of 2011), also related to the issue of the seaports. The Committee's report stated: “An examination by professionals in the Ministry of Transportation and the Ministry of Finance shows that the output in term of containers per work team in Israel's ports is lower than other ports in the world; it is 15-25 percent lower than for other ports in the Middle East and by an even greater percentage in the case of the world's most advanced ports. The cost to the economy is estimated in the hundreds of millions of shekels each year.”

The report continues: “The existing port companies constitute a regional monopoly each in its domain and together constitute a national duopoly. Although the reform in 2005 created some degree of competition, it did not affect a large proportion of the cargo.” In addition: “The Committee feels that efforts should be made to achieve a more optimal balance between the interests of the general public and the behavior of the monopolistic bodies that are controlled by the State and which directly influence the cost of living.”⁹ Although the remarks referred to container traffic, there are even more applicable to general and bulk cargo traffic, as we will see below.

Following the government decision and the report of the Committee for Socioeconomic Change, construction began of two new container terminals in Israel at a cost of NIS 7 billion, one in Haifa, to be operated by SIPG, a Chinese company, and one in Ashdod, to be operated by TIL, a Dutch company. These two international operators specialize in the operation of container terminals around the world. The terminals currently being built are meant to, among other things, encourage competition among the ports and

6 Government Decision no. 3986.

7 Israel Ports Company – Strategic Masterplan for the Mediterranean Ports.

8 Ibid., p. 3.

9 The report of the Committee for Socioeconomic Change (the Trajtenberg Committee).

primarily within each port. The declared intent of the government was to build new piers with semi-automatic operation that would compete with the existing ports, which are meant to undergo an appropriate upgrade.

According to Member of Knesset Yisrael Katz, the Minister of Transportation and Road Safety, "Today there is no doubt about the need for the two new ports; it is absolutely clear that new ports must be built that have deep-water piers that can accommodate larger ships. Furthermore, there is currently no doubt that greater competition is needed and this can happen only between one port and another. There is competition between Haifa and Ashdod but it is limited because customers are a "captive audience."¹⁰ It is worth mentioning that research carried out by the Israeli Shipping Bureau clearly showed that the competition between Ashdod and Haifa is highly limited and 70 percent of the demand is determined by proximity to one port or the other, mainly due to the high cost of land transportation.

There is no doubt that the government of Israel did indeed act and it acted quickly, following, among other things, the Strategic Masterplan for the Development of the Mediterranean Ports submitted by the Israel Ports Company, the report of the Committee for Socioeconomic Change, the Government Decision and publications by the Bank of Israel, the Ministry of Finance and others. There was no doubt regarding the need to build additional infrastructure and the construction of the Hamifratz port in Haifa (by the Shafir-Ashtrom partnership) and the Hadarom port in Ashdod (by the China Harbor Corporation) is in their final stages. Unfortunately, general and bulk cargo did find a place in the new terminal plans. At best, there is an intention to upgrade the existing ports (the Haifa Port Company, the Israel Shipyards Port and the Ashdod Port Company) in order for them to handle container traffic more efficiently.

The question of how the existing ports will deal with a situation in which they are expected, on the one hand, to lose a significant share of the container ship market and on the other hand to carry out investments in order to deal with the general and bulk cargo market is critical and has major consequences for the entire Israeli economy.

The question then arises of whether the State's leaders have paid sufficient attention to bulk and general cargo, which as mentioned constitute about one-half (by weight) of the total cargo passing through Israel's ports (not including energy cargo), from the point of view of resource allocation, construction of infrastructure, investment, operation and the like.

10 The Marker, June 6, 2013.

The operational parameters of general and bulk cargo

There are many parameters that can be used to analyze the handling of general and bulk cargo in Israel's ports. This discussion will focus on a few main parameters, such as ports and cargo piers, the volume of general cargo and other issues, including the operational queue or the allocation of "hands" in the ports:

Where is general and bulk cargo unloaded in Israel's ports?

Port of Haifa: western pier, eastern pier, fuel terminal, Kishon pier, East Kishon pier, Gadot, chemicals terminal.



איור 1: מנוף לשינוע בשיטת צובר חופנים, נמל חיפה



איור 2: פריקת מטען כללי ברציף המערבי בנמל חיפה (צילום דוברות נמל חיפה)

With respect to the loading/unloading piers in the Port of Haifa, it is worth mentioning the following: As part of the new reform agreement with the Haifa Port Company, it was decided not to upgrade the container piers but rather to focus on upgrading the ability to handle general and bulk cargo. This is a dramatic decision with many ramifications and may herald a change in perception and approach in the Haifa Port Company.

Western pier: National Zoning Plan approval a/3/13 for the development of an urban seafront in Haifa means that the territory of the Western pier in the Port of Haifa is to be used for the development of an urban seafront that will include activity such as tourism, leisure, commerce and holiday recreation. The pier is currently used for the unloading of general and bulk cargo and the change in its use to an urban seafront means the "loss" of a major pier.

Eastern pier: This pier is currently used for the unloading of containers. The order of priority in the operational queue allows for an “exemption” for bulk carriers at this pier; however, in practice, there is hardly any unloading of bulk cargo on this pier.

Kishon East: This pier is currently used by the Shafir-Ashtrom partnership for the construction of the new Hamifratz port. According to the plan, in 2021, this pier will return to operating as part of the Haifa Port Company. The return of the pier will constitute a major addition to the infrastructure for unloading of general and bulk cargo.

Deepening of the approach channel and the piers: There is no doubt as to the need to deepen the entry channel to the Kishon port (and the Israel Shipyards Port) in order to allow the unloading of the Panamax-class ships¹¹ (about 60,000 tons).

Dagon granaries: Most of the grain cargo arriving in Israel is unloaded at this granary in Haifa. The National Zoning Plan 13 (a), which includes the plan for a seafront to replace the Western pier and the Dagon granaries, forces all of those involved to find a suitable alternative for the location of the granary. At the time of writing, there was still no approved alternative plan. This is a national strategic resource of the first order and there is no doubt that a suitable alternative must be found as soon as possible.

Carmel 5 pier: This pier does not currently have cranes or other cargo handling means. The positioning of a number of suitable mobile cranes (such as those currently on Kishon pier) will enable the unloading of large bulk carriers and the efficient exploitation of a useful port infrastructure.

Port of Ashdod: Piers 1, 3, 5, 21 and the ICL pier.

With regard to the unloading/loading piers in the Port of Ashdod, it is worth mentioning the following:

Pier 21: This is an important pier for the unloading of general and bulk cargo in the Port of Ashdod. There is an intention to convert the eastern part of the pier to container unloading. This conversion, in addition to the construction of a seed conveyer belt, without a suitable alternative location, is liable to hinder the unloading of large bulk carriers and will cause harm to the port and its customers.

Seed conveyer belt: There is a plan (which is currently in the tender stage) to build a conveyer belt for grain cargo from the western section of Pier 21 to the granary located about 2 kilometers from the port. This conveyer belt will enable the substantial expansion of the amount of grain that can be unloaded at the Port of Ashdod. Nonetheless, there is a need for an overall plan for the expansion of the granaries and the construction of a

11 Panamex – the maximal size of a ship that can pass through the Panama Canal.

warehouse for grain products in order for the unloading to be efficient and economically worthwhile.

Pier 24: This pier currently serves as a work platform for the building of the Hadarom port. There are discussions as to whether this pier will serve the Ashdod Port Company or will be transferred to a private operator, whether by means of privatization or a long-term operating tender.



איורים 3-4: פריקת מטען כללי של גילי ברזל ופריקה בשיטת צובר חופנים, נמל מספנות ישראל

Israel Shipyards Port

With respect to the piers of the Israel Shipyards Port: The Israel Shipyards Port, based on its authorization document, is limited to 5 percent of the total cargo handled by Israel's ports. As of the end of 2018, the port had reached this limit and currently there is negotiation underway (whether by way of the courts or by direct negotiations) to remove it, particularly in view of the start of operations of the new container terminals in the near future. In view of the policy to encourage competition between the ports and within them (including the building of new terminals and the expected upgrading of the Haifa and Ashdod ports), it is desirable that the Israel Shipyards Port participate without any constraints placed on it. The western part of Pier A is devoted to the drilling and production of natural gas.

Total cargo handled in Israel and the relative share of general and bulk cargo (by weight)

In 2017, total cargo handled in all of Israel's ports (Haifa Port Company, Ashdod Port Company, Israel Shipyards Port, and the Port of Eilat) stood at 51.42 million tons.¹²

¹² The Shipping and Ports Authority – Branch for Economics and Foreign Relations.

Almost half (46.7 percent) was general and bulk cargo, which is a significant share of Israel's foreign trade. A similar ratio has been observed during each the last seven years.

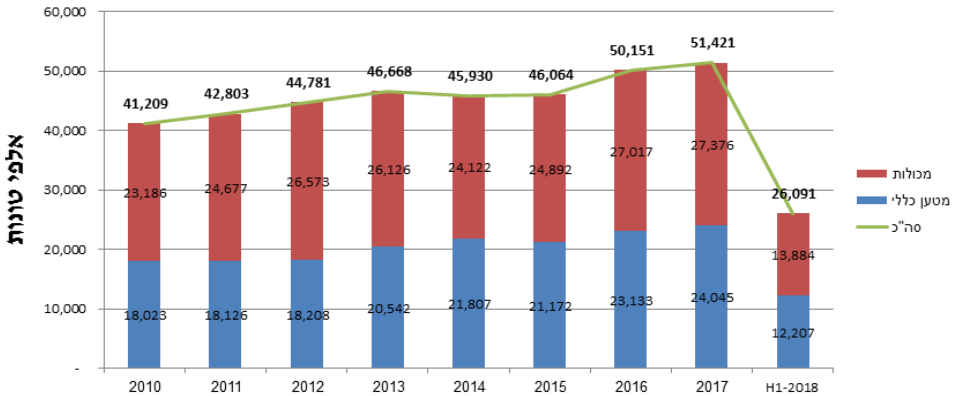


Figure 5: The breakdown between container cargo and general cargo in Israel's ports
 Source: The Shipping and Ports Authority – Branch for Economics and Foreign Relations

The operational queue

A ship arriving at an Israeli port is subject to the “operational queue” which determines the order of entry and exit from/to that port.¹³

The operational queue is decided on by the Shipping and Ports Authority and essentially it decides whether a ship which arrived first is dealt with first (first come, first served). “The order of entry into the port and the allocation of a pier to the ship will be according to the ship’s date of arrival in the port and the order of exit from the port will be according to the date on which the ship is ready to sail...”¹⁴ In addition, the operational queue gives priority to certain vessels according to the bylaws, such as priority for passenger ships, for essential cargo in an emergency, for container ships over general cargo ships, etc. The result is that a general cargo ship and a bulk carrier have almost last priority in entering and leaving a port.

There is an ongoing debate between the various shipping authorities in Israel on the question of whether an operational queue is necessary when there are so many exemptions. There are those who claim that having an operational queue is justified in order to allow container ships to meet their schedules, while there are others who claim that the operational queue discriminates against general cargo ships and bulk

13 The Rules of the Operational Queue in the Ports of Haifa, Ashdod and Eilat, 5768 – 2008.

14 Ibid.

carriers and that priority should only be given according to “first come, first served”. In practice, a result of the situation in which container ships (and others) receive priority over general cargo ships and bulk carriers is that the waiting time outside the port for general cargo ships and bulk carriers is longer and this involves higher costs, which are in the end passed on the customer.

Another problem that developed over the years and which is related to the operational queue is that the ports have chosen to “use” the rules of the operational queue to allocate manpower (“hands”) for the unloading and loading of ships. The implication of allocating “hands” according to the operational queue is that general cargo ships and bulk carriers suffer twice: first, when waiting outside the port and second, because of their low preference in the allocation of “hands” in each shift.

Ships waiting outside the port (service indexes)

When a ship arrives at an Israeli port it waits outside the port until a pier is available. When the pier become available, the ships is tied up to it using tugboats and a Pilot from the port's Sea Department. The entry of the ship into the port is a complex maneuver that requires skill and a great deal of experience. The waiting time outside the port is dependent on the availability of a pier for unloading/loading and the time spent at the pier itself is a function of the availability of an appropriate team of dockworkers.

An accepted rule in ports all over the world is that “the pier waits for a ship rather than a ship waits for a pier”. As shown in the graph below, there is a large difference between container ships and general cargo and bulk carriers in the time they must wait for an available pier and/or an appropriate team of dockworkers. The gap in waiting time between the types of ships can reach hundreds of percent. The immediate ramification of these gaps is relatively simple:

Longer waiting time = less productivity = less efficiency = additional cost to the economy

Claims are sometimes made with respect to the waiting time of ships and the difference between container ships on the one hand and general cargo ships and bulk carriers on the other hand that the random arrival of general cargo and bulk carriers does not allow for the efficient allocation of infrastructure and work teams. And indeed the arrival of general cargo ships and bulk carriers is influenced by volatility in the commodity markets (grain, iron, etc.), the weather conditions, kashrut demands, accessibility of ships in the various ports of origin and the directives of the Antitrust Authority.

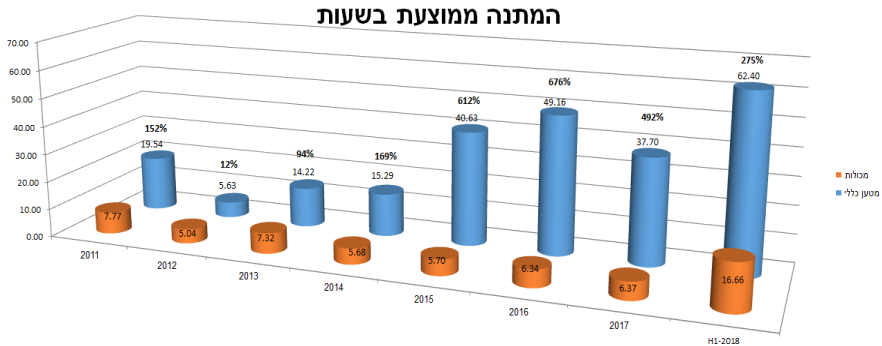


Figure 6: Average waiting time of ships (in hours) with a breakdown between container ships and general cargo ships. Source: The Shipping and Ports Authority – Branch for Economics and Foreign Relations

Container ships are characterized by a specific and pre-determined allocation of lines and ports and the arrival of a ship at a port is according to a known and predetermined timetable. This is not the case with general cargo ships and bulk carriers. Despite the upward trend in the amount of general and bulk cargo arriving in Israel every year (see Section b), these ships do not arrive according to a predetermined timetable; however, on a monthly and annual basis, there is little variation in the total cargo arriving in the ports. The situation in Israel is no different than in other countries. The same parameters listed above affect the patterns in the transport of commodities (raw material) all over the world.

Allocation of work teams (“hands”)

The Haifa Port Company and the Ashdod Port Company suffer from a shortage of manpower. There are those that claim that it is serious. There is currently a consensus in the industry that the shortage in manpower is causing damage to all the parties involved – customers, ship owners and the ports. Without getting into the political questions and issues related to the reform being implemented in the ports and the reason for the manpower shortage, it is clear to all that this is currently one of the leading problems in the ports of Israel and one which demands an immediate solution.

Moreover, the fact that the ports allocate manpower on the basis of the operational queue means that general cargo ships and bulk carriers receive fewer teams than container ships (Section d above). Using the data of the Shipping and Ports Authority, an analysis of the response of the ports to the demand for hands in the ports of Haifa and Ashdod shows that container ships receive significantly larger allocations of hands relative to general cargo ships and bulk carriers, with a gap that sometimes reaches tens of percent.

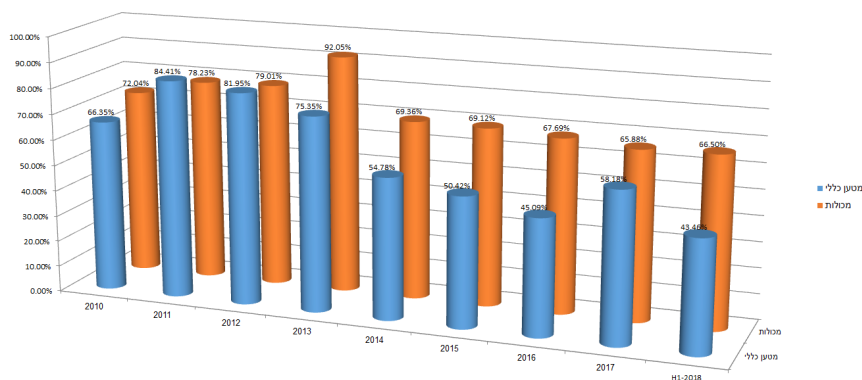


Figure 7: Response to the demand for hands in the Haifa and Ashdod ports according to container cargo and general cargo

As mentioned earlier, the report of the Committee for Socioeconomic Change stated that “An examination by professionals in the Ministry of Transportation and the Ministry of Finance shows that the output in term of containers per work team in Israel’s ports is lower than for other ports in the world; it is 15-25 percent lower than for ports in the Middle East, and by an even greater percentage in the case of the world’s most advanced ports.”¹⁵

Since according to the data of the Shipping and Ports Authority with regard to the response to demand for hands in the Haifa and Ashdod ports as depicted in the graph, container ships receive a significantly larger allocation of hands relative to general cargo ships and bulk carriers—with a gap that sometimes reaches tens of percent—a simple equation is obtained:

Less hands = less productivity = less efficiency = higher cost to the economy.

Investment in infrastructure and equipment

If we analyze the investment in port infrastructure during the past ten years, there is a significant gap between investment in infrastructure for containers and that in infrastructure for general and bulk cargo.

According to the data of the Israel Ports Company, over NIS 7 billion has been invested in the two new terminals currently being built – Hamifratz port in Haifa and Hadarom port in Ashdod. This is in contrast to the relatively small investment in general and bulk cargo infrastructure in all of the ports. Although there are discussions concerning the construction of a grain conveyer belt in Ashdod, it should be mentioned that this plan

¹⁵ The report of the Committee for Socioeconomic Change (the Trajtenberg Committee).

was approved already in 2008 but has not yet been implemented. In any case, this project involves an investment of NIS 200 million, which is not negligible but is small relative to the investment in container infrastructure.

Member of Knesset Yisrael Katz, who is the Minister of Transportation and Road Safety, has stated that “the existing ports should be upgraded for the sake of fair competition.”¹⁶ There is no doubt that there is an immediate need to upgrade the handling systems for general and bulk cargo, whether it be piers, handling equipment (cranes, unloaders, etc.), forklifts, loaders or manpower. Moreover, it can be said that this small amount of investment is many fold smaller than the huge investment in the new container ports.

Environmental quality

The need for protecting the quality of the environment also exists in the case of Israel's ports. The ports operate according to comprehensive regulations in numerous domains, including permits for emissions into the sea, the Clean Air Law,¹⁷ the Prevention of Ocean Pollution Law¹⁸ and others.

The handling process for bulk cargo constitutes a challenge for all the related parties (ports, users, ship owners, etc.). The loading and unloading of certain commodities, and primarily grains or powders, can involve small-scale emissions into the air if not carried out properly. The handling of such cargo requires special and precise preparations in order to meet the demands of the various authorities and in parallel investment in suitable equipment is necessary. From the ports' perspective, this involves training and instruction of workers, acquisition of the proper equipment and the correct and efficient operation of handling systems. From the perspective of the customer, there is a need for appropriate trucks, appropriate ships and optimal planning of loading and unloading. From the authorities' point of view, there is a need to set rules that the customers are able to comply with, while still fulfilling the demands of the law.

There is a delicate balance between protecting the environment on the one hand and the handling systems and the needs of the economy on the other.

For example, in view of the fact that most of the grain cargo is unloaded at the Dagon granaries in Haifa, about one million tons of grain are transported by truck. Thus, on the one hand, the cargo is unloaded according to the accepted standards but on the

16 Port2Port May 22, 2018.

17 The Clear Air Law, 5768 – 2008.

18 The Prevention of Ocean Pollution from Land Sources, 5768 – 1988.

other hand this creates indirect environmental damage on the roads (congestion, air pollution, etc.).

Conclusion

1. The Israeli economy is almost totally dependent on the ports and on their availability and efficiency.
2. General and bulk cargo constitute about one-half of the cargo passing through Israel's ports.
3. An analysis of the various operational parameters and a comparison to container ships leads to the following insights:
4. General cargo ships and bulk carriers have low priority in the operational queue.
5. General cargo ships and bulk carriers wait much longer outside the ports (relative to container ships).
6. General cargo ships and bulk carriers are allocated less "hands" than container ships.
7. There is a huge gap between the national investment being made in container infrastructure and that in general and bulk cargo infrastructure.
8. The "High cost of living" starts here: Since most of the general and bulk cargo is used for raw material in manufacturing, the more expensive is loading and unloading of this cargo, the more the Israeli consumer will pay.
9. There is an immediate need to upgrade the existing ports with respect to the unloading of general and bulk cargo.

Recommendations

1. In order to achieve an optimal level of investment in the existing ports and to facilitate long-term planning with respect to general and bulk cargo, there is a need to prepare a national strategic plan for general and bulk cargo, similar to the master strategic plan of the Israel Ports Company of 2007.¹⁹
2. From the perspective of environmental protection (an important issue for these types of cargo), there is a need for continuous dialogue between the various users, with the goal of ensuring that the various interests—of the ports, of the customers and of the public by way of the regulator—are considered and primarily that there be transparency and clear and quantifiable rules for all the parties.
3. In order to increase the efficiency of work in the ports and to reduce costs, there is a need to establish indexes of service that are binding on the ports (using the carrot and stick method) as in other sectors of the economy.

19 Israel Ports Company – Strategic Master Plan for the Development of the Mediterranean Ports.

