



GAZA PORTS ALTERNATIVES

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GAZA PORT ALTERNATIVES

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GAZA PORTS ALTERNATIVES

I Background and Objectives

I.1 Past Promises and Present Stalemate

Gaza Port has long been considered by the Palestinians a key symbol of national independence and a critical foundation of economic development; not having a port is viewed by Palestinians as being under political and economic siege. Accordingly, the establishment of a port (seaport)¹, along with a “safe passage” between Gaza and the West Bank linked to this port has played a major role in the history of the Israeli/Palestinian conflict. The port was the subject of major clauses in both the 1993 Oslo Accord and the 1999 Sharm el-Sheikh Memorandum between Israel and the Palestinian National Authority (PA). In 2000, the PA began constructing a small port in the Gaza City area financed by European donations, but the port site was bombed and destroyed by the Israeli army during the Second Intifada, only 3 months since its construction began. The 2005 Agreement on Movement and Access, following Israel's withdrawal from Gaza, re-announced the start of the port construction; it also included a clause in which Israel agreed not to destroy the port again... Yet, with Hamas taking control of Gaza on 2007, the port construction has never been resumed. The 2005 agreement also included the opening of Rafah Border Crossing between Egypt and Gaza under the control of the PA with supervision by European inspectors (EU BAM), who deserted their border posts when Hamas took, causing Egypt to close Rafah for goods transfer. The inspection process during the short period that Rafah Crossing operated under European supervision was reportedly deficient. **Security inspection, indeed, is the most critical component in all Gaza Port Plans.**

In 2014, during cease-fire negotiations following the 2014 Gaza War between Israel and Hamas (Operation Protective Edge), Hamas demanded a renewal of the port construction, but Israel refused. Interestingly, the PA was not in support of Hamas' demand for a port in Gaza, viewing it as an attempt to separate Gaza from the West Bank, resulting in a de-facto, Hamas-controlled “mini-state” in Gaza.² In 2015, an attempt by Hamas to use the existing fishing port in Gaza City for international trade was blocked by Israel and Egypt.³ In 2016, Israel's Minister of Transportation and Intelligence Yisrael Katz, re-introduced his 2011 proposal to construct Gaza Port on an internationally-controlled artificial island offshore Gaza. Katz's island plan won the initial support of several Israeli ministers, but was later rejected by Prime Minister Benjamin Netanyahu and former Minister of Defense Moshe Yaalon because of security concerns.⁴ Later in 2016, the current Minister of Defense, Avigdor Lieberman, declared that: “*Israel will agree to... the construction of a **supervised (by Israel) seaport (in Gaza)**.”⁵ This position was reiterated by Israel's Prime Minister, but only “*if Israel has oversight.*”⁶ Support for Gaza Port also was expressed by Minister of Housing and ex-chief of Israel's Southern Command (which also includes*

¹ The terms seaport will be used in this paper only when needed to be distinguished from an airport

² See: <http://www.al-monitor.com/pulse/originals/2015/02/hamas-open-gaza-port-israel-reaction.html#ixzz4Gz20EnUI>

³ See: <http://www.israelnationalnews.com/News/News.aspx/183837>

⁴ See: <http://www.israelnationalnews.com/News/News.aspx/213970>

⁵ See: <http://www.al-monitor.com/pulse/originals/2016/10/israel-why-minister-liberman-offered-hamas-a-sea-port.html> parenthesis added.

⁶ See: <https://www.timesofisrael.com/netanyahu-not-against-gaza-port-if-israel-has-oversight/>

Gaza), Yoav Galant; Minister of Finance Moshe Kachlon; and Minister of Agriculture Uri Ariel.⁷ Minister Katz reintroduced his Island Port Plan at a widely-publicized meeting with the Trump Administration's envoy to the Middle East in April 2017, with Prime Minister Netanyahu present. In October 2017, Maj. Gen Yoav Mordechai, the Coordinator of Government Activities in the Territories, wrote: "*Israeli Army Calls for Gaza 'Marshal Plan' to Thwart Takeover by Forces More Extreme than Hamas.*"⁸ Gaza Port could be a major pillar of this plan. On April 2018, Minister Katz published an op-ed urging Israel to take advantage of the widening rift between the PA and Hamas and to **unilaterally** pursue his Island Port Plan intended **to permanently separate Gaza from Israel and, at the same time, separate Gaza from the West Bank.**⁹ On June 25, 2018, Minister Lieberman announced that he concluded an arrangement with Cyprus to inspect Gazan traffic in Larnaca, using ferries to carry it from Larnaca to the exiting fishing pier in Gaza City.¹⁰ On August 3, 2018 the Israeli media reported that Hamas agreed (and later-on rejected it) to a long-term ceasefire with Israel in return for a 3-phase plan, including the Egyptians allowing them using the Egyptian ports of Isamilia or Port Said.¹¹

While all sides involved in the Middle-East conflict agree on the critical importance of Gaza Port, no tangible progress in this direction has been made during the last 18 years, since the demolition of the Gaza City port site by Israel in 2000. **Presently, all the import-export traffic to/from Gaza Strip is moving through the Israeli port of Ashdod and the border-crossing terminal of Kerem Shalom, located 90 km south of the port.**

1.2 Sources of Information and Objectives

Meetings, Presentations, Interviews and Field Observations

The following paper summarizes a study conducted by the author and the Gaza Port Group of Experts. The study was initiated in response to the 2016 publication of Minister Katz's Island Plan. The research effort on which this study is based includes an exhaustive web search and compilation of a long list of past studies on Israel and regional ports, shipping services, trade statistics, environmental issues, artificial islands and security issues in both English and Hebrew.¹² But the main source of information is a series of meetings and site visits in Israel and the US during 2017 & 2018.

Meetings and site visits during 2017 include:

- Israel Chamber of Shipping
- Israel Ports Company (former Israel Port Authority)
- Israel's Ministry of Intelligence Affairs representative in charge of Katz Island Plan
- Israel's Institute for National Security Studies (INSS)
- Israel's Defense Forces Office of Coordination of Government Activities in the Territories (COGAT), the Army unit in charge of Gaza and West Bank
- Israel's Crossing Points Authority (Ministry of Defense unit in charge of border crossings)
- Israel's office of Portland Trust (the sponsor of Gaza's masterplan Connect Gaza 2050) and the head office in London

⁷ See: <http://www.maariv.co.il/journalists/Article-551393>

⁸ See: <https://www.haaretz.com/israel-news/.premium-1.821148>

⁹ See: <https://www.makorishon.co.il/opinion/34293/>, in Hebrew, translated by A. Ashar.

¹⁰ See: <https://www.jpost.com//Arab-Israeli-Conflict/Israel-announces-plan-to-relieve-Gaza-isolation-by-building-port-in-Cyprus-560859>

¹¹ See: https://www.mako.co.il/news-military/security-q3_2018/Article-21e58c0e2a00561004.htm

¹² Two notable sources are: (a) An INSS policy paper by Gilead Sher and Jonathan Heuberger, see: <http://www.inss.org.il/uploadImages/systemFiles/No.%20804%20-%20Gili%20and%20Jonathan%20for%20web915959359.pdf>; and (b) An unpublished report by Brigadier-General Yossef Ashkenazi of the Israeli Navy, see: <http://www.ynetnews.com/articles/0,7340,L-4697530,00.html>

- AECOM, the engineering firm responsible for Gaza Masterplan (via Skype)
- An Israeli merchant actively involved in trading with Gaza
- Kerem Shalom Crossing, including observation of the inspection and transfer process and meeting with its general manager and military commander
- Hamifratz Port, Haifa, Israel, a new port currently under construction in Haifa, including a boat tour and meeting with the site manager
- Embassies of Palestine and Egypt, Washington DC, USA, meeting high-ranked diplomats
- The Washington Institute for Near East Policy, Washington DC, USA
- The American Israel Public Affairs Committee (AIPAC), Washington DC, USA
- The Israeli/American Riviera Parliament, Miami, FL.

Meetings and site visits during 2018 included:

- The Middle East Quartet (UNSCO unit established in 2002 consisting of UN, EU, US and Russia)The Jerusalem Institute for Public Policy
- Israel's Defense Forces Office of Coordination of Government Activities in the Territories (COGAT), the Army unit in charge of Gaza and West Bank
- Ministry of Regional Cooperation, Office of Coordination of Government Activities in the Territories
- Israel's Council for National Security, Office of Prime Minister (MALAL)
- The UN Special Representative to the Middle East (via Skype)
- Port of Israel Shipyard (Maspenot Yisrael), Haifa, including tour of the facilities and meeting its CEO and Commercial VP. This port serves as a model for the type of port envisioned for Gaza (see Chapter VII. South Gaza / Kerem Shalom).

The meetings were conducted by Asaf Ashar and Nachum Ganzarski.¹³

Study's Objectives

The objectives of the study are to: (a) define a range of plans for providing the Palestinians with their own port, including a total of nine port plan, three of which originated by this author; (b) define criteria according to which these plans should be evaluated; and (c) evaluate, compare and rate these plans based on those criteria. In addition to discussing and comparing plans for Gaza port, the report outlines a visionary, long-term plan for a **regional transportation and economic development program, involving Gaza, the West Bank, Israel and Egypt**. The report's intent, however, goes beyond defining and assessing port plans. The latest round of Israeli-Palestinian negotiations, under the auspices of US Secretary of State John Kerry in 2013-14, focused on the four core issues: Security, Borders, Jerusalem and Refugees. These core issues also were at the focus of the more recent round in 2017 under the US President advisor Gerard Kushner and special emissary John Greenblatt. The collapse of both rounds suggests that the parties are not yet ready for coping with these seemingly-intractable core issues. It seems that the negotiation would be more fruitful if focused on practical and more manageable issues – such as the Gaza Port. This report could serve as the first step of a **comprehensive study followed by a special international conference on Gaza Port**, with participants from Israel, the PA, Hamas and Egypt, along with observers from the US, UN and the Quartet. The hope is that a successful conference will be followed by actual steps toward implementation of a selected port plan which, in turn, reignite the stalled peace process.

¹³ Former Senior Vice-President for Strategic Planning and Development of Zim Lines and President of Israel Chamber of Shipping, and currently a consultant and a lecturer on shipping at Haifa University and Ruppin Academic Center, Israel.

Gaza Seaport Group of Experts

The report was prepared by Asaf Ashar in consultation with the Gaza Seaport Group of Experts. The Group is an Israeli/American/U.K. think tank of individuals with expertise in the areas of ports, shipping, logistics, marine engineering, security and Middle East affairs. The Group is a-political and organized on a voluntary basis. The Group intends to provide professional advice and support in the areas of planning and development of a Gazan seaport, satisfying both Palestinian national aspirations and Israel’s security concerns. **Appendix A** includes the names and short professional resumes of the Group’s members, except for a renowned expert on US/Israel relations, who preferred to withhold his name at this initial stage.

II Alternative Port Plans

II.1 Port Typology: What and Where to Build

Functional Categorizations

Figure 1 Classification of Ports by Location and Type presents a list of alternative port plans for Gaza, classified according to their functionality, or type of port, and their location. The term “port” denotes the shore-based facilities whereby ships are moored, their cargo loaded/unloaded to/from shore, temporarily stored and later on transferred to/from trucks or trains. Ports are classified according to the type and size of ships and cargoes they handle, resulting in a wide range of port types. For the purpose of our discussion of Gaza Port and at a risk of oversimplification, I only define **three generic types of ports**:

- **Major Port** – a large container port designed for handling large, deep-sea containerships (“megaships”) such as those deployed on east/west trade routes between Israel, Asia and America;
- **Local Port** – a small multi-purpose port designed for handling small short-sea and feeder containerships, general cargo and bulk ships, such as those deployed on the trade routes between Israel, the Mediterranean, Europe, and Africa; and
- **Dedicated Pier** – a small, autonomous section within a major port.

An Israeli example for a major port is the new container ports currently under construction in Haifa and Ashdod, the Hadarom and Hamifratz Ports, each involving a total (marine, civil and equipment) investment of about \$1.3 billion. An Israeli example of a local port is Port Maspenot Yisrael in Haifa. This small port is located at the site of a former shipyard and is only allowed to handle up to 5% of Israel’s cargo. The port’s facilities include about 800-m of active berth with 12 m of depth alongside and about 30 ha of backup area. It mainly handles cement, steel, paper, and food products – similar to the cargo composition expected at the future Gaza Port (see Chapter VIII. South Gaza Port). The main shore equipment of Maspenot includes 6 (+1 on order) Mobile Harbor Cranes (Gottwald). Despite the irregular shape of its berth, annual throughput is about 3 million tons with capacity estimated by its management to reach 5 million tons.

The cost of constructing a major port is typically \$1+ billion; that of a local port \$100+ million, depending whether it is a standalone port and in need of its own breakwater and access channel, or a pier inside an existing port.

Geographical Categorization

Based on the above functional categorization, the type of the future Palestinian port can be either major or local. The geographical categorization relates the location of the future Palestinian port. Generally, this port can be located in three countries: Israel, Palestine (Gaza), and Egypt and in each country in several locations.

The 3 Israeli-based options include 2 options in Ashdod: continuation of the present system using the Port of Ashdod, or a slight modification of it in which the Palestinian cargo is handled at a dedicated Palestinian Pier in Ashdod. A third Israeli option includes a new local port constructed adjacent to the northern border of Gaza, in the Zikim area. The 3 Gaza-based options include a previous port site, now ruined, at Nuseirat adjacent to Gaza City, artificial islands off the coast of Gaza, or the existing fishing port of Gaza City. There are 2 locations proposed for the artificial island port: across from Gaza City (Katz Plan) and at the northern tip (Portland Trust Connect Gaza 2050 Plan). The 2 Egypt-based options include a Palestinian pier (terminal) within the new, major Port of El Arish, or a new local port constructed adjacent to Gaza’s southern border with Egypt. Altogether, the study encompasses the 8 options considered most reasonable. **Figure 1 Classification of Port Options** lists these options according to their general location and functionality (port type).

Figure 1 Classification of Ports by Location and Type

Country	Location	Port Type	Plan Num.
Israel	Ashdod	Major	1
		Dedicated Pier	2
	North Gaza	Local	8
Gaza	Gaza City	Local	3
	Artificial Island	Major	4
	Cyprus	Improved Fishing Port	5
Egypt	El Arish	Major - Dedicated Pier	6
	South Gaza	Local	7

Major Port = \$1+ Billion; Local Port = \$150+ Million Ashar 2018

Gaza vs. West Bank Cargo

The above classification of port plans only relates to the supply side, but not to the demand side, or the cargo (traffic) that the Palestinian port is intended to serve. The volume of traffic that the future Gaza port could attract depends on the type of its facilities, geographic proximity and political considerations. A local port, by definition, will be limited to handling short-sea trades. However, the port can also handle deep-sea trades (e.g., Asian imports) based on transshipment of the Palestinian cargo from large to small, feeder ships at major ports (e.g., Ashdod, Port Said). Regarding geographical proximity, the West Bank, especially its northern region, is closer to Israel’s ports than Gaza, providing the future Gaza Ports tough competition for this cargo. Still, the PA could rule that all Palestinian cargo, regardless of hinterland location, has to use a Palestinian port. A further discussion of this issue is included in Chapter VIII Future Regional and Transportation Plan.

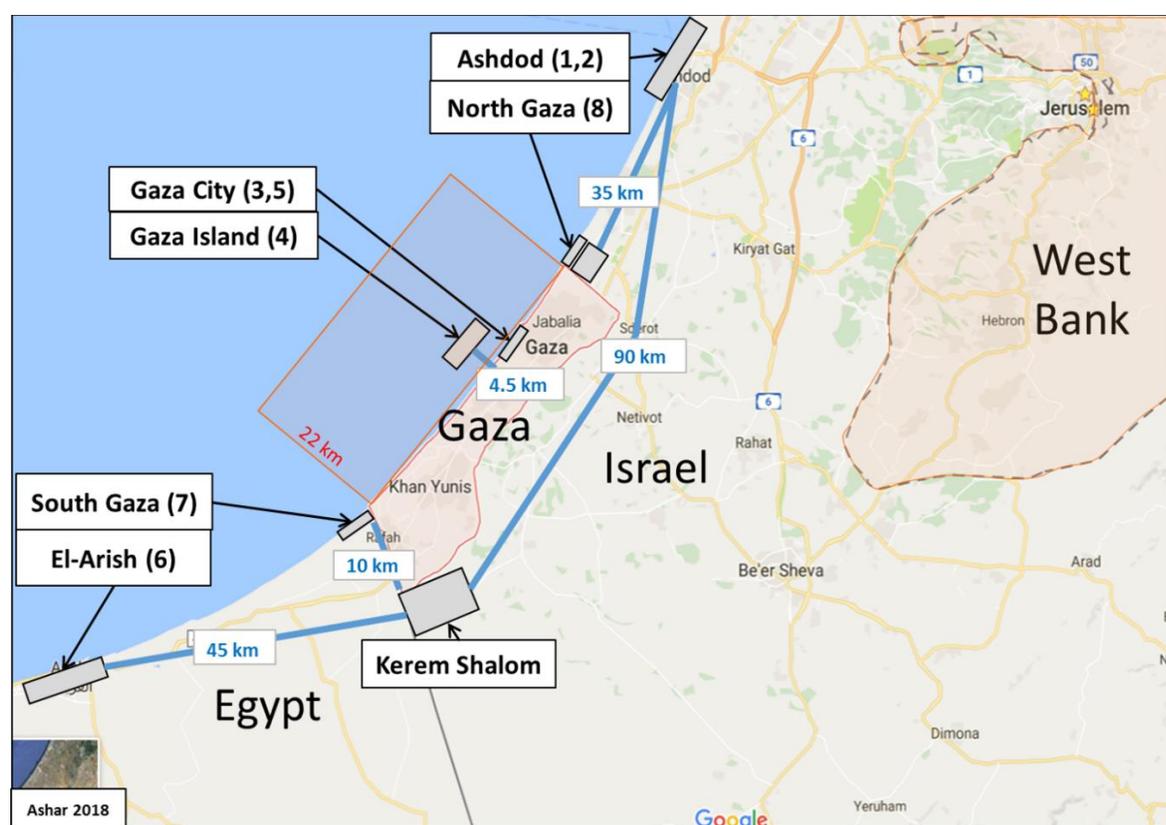
Specification of Port Plans

Figure 2 Alternative Plans for Gaza Port includes a schematic map showing seven of the eight above-listed plans reviewed and assessed in this paper. The plans are arranged according to the order in which they appear in the follow-up discussion, including:

1. **Ashdod/Kerem Shalom (Existing)** – Continue with the present system;
2. **Ashdod/Palestinian Pier/Erez** – Same as (1), but use a designated Palestinian pier in Ashdod and a rail (or road) connection to Erez Crossing;
3. **Gaza City (Hamam Plan)** – Construct a new, local port adjacent to Gaza City;

4. **Gaza Island (Katz¹⁴ Plan)** – Construct a major port on an artificial island 4.5 km offshore Gaza, connected to the mainland by a bridge with checkpoints for inspection;
5. **Cyprus/Gaza City Fishing Pier** – Discharge the Palestinian cargo at the Cypriot Port of Larnaca, inspect it there and re-load it onto smaller ships sailing under Israeli Navy escort to the existing Gaza City's Fishing Pier to be expanded into a local port;
6. **El-Arish/Kerem Shalom** – Construct a Palestinian autonomous pier as part of the new, major Egyptian El-Arish Port and truck the Gazan cargo to Kerem Shalom; variations on this plan include using the Egyptian ports of Ismailia and Port Said instead of El-Arish;
7. **South Gaza/Kerem Shalom** – Construct a Palestinian autonomous, local port in Egypt adjacent to Gaza's southern border and truck the Gazan cargo to Kerem Shalom; and
8. **North Gaza/Zikim** – Construct a Palestinian autonomous, local port in Israel adjacent to Gaza's northern border, including an adjacent terminal for inspection and a border crossing in Zikim.

Figure 2 Alternative Plans for Gaza Port



Three additional options are excluded from the list above: (a) a major port in Gaza City -- no room for it; (b) local port on an offshore island -- too expensive; and (c) a Cyprus option based on a new fishing/local port to be constructed in Khan Yunis near the Egyptian border – similar to Gaza City.¹⁵

¹⁴ Mr. Yisrael Katz is the Minister of Transportation and Intelligence Affairs of Israel.

¹⁵ See: <http://www.al-monitor.com/pulse/originals/2016/12/israel-gaza-sea-port-turkey-construction-khan-yunis.html>.

The methodology of evaluating the various plan is based on two rounds. The first round includes a short preliminary examination and elimination of two plans, Ashdod Dedicated Pier and Cyprus Plans (2 & 5), considered insufficient or nonsensical. The second round includes a detailed description and examination of the remaining 6 plans based on a series of criteria.

Ashdod Dedicated Pier (Plans 2)

The **Ashdod Autonomous Palestinian Pier / Erez** (Plan 2) involves using: (a) a dedicated Palestinian pier of Ashdod instead of common piers; and (b) the border crossing in Erez, 35 km south of Ashdod instead of the more remote Kerem Shalom, 90 km to the south. A dedicated pier in Ashdod was already (though unofficially) offered by the Israeli Port Authority to the Palestinians, based on limited PA's administrative presence in Ashdod.¹⁶ An expanded version, an Autonomous Palestinian Pier, could provide the PA full administrative control and operational autonomy, including Palestinian customs officers and Palestinian port labor brought in from the West Bank and Gaza. Ships with cargo destined to Gaza will be moored at the PA Pier, the imported Gazan cargo discharged there and temporarily stored at a secured area nearby and, later on, inspected there as well. The cleared cargo will be loaded onto sealed railcars (or in sealed containers) and transported by dedicated, short trains to Erez Crossing.

While appearing simple, there are many problems with this plan. First, there is a security problem stemming from having a large number of Palestinians working inside the Port of Ashdod, which has a large Israeli navy base. Second, the notion of Palestinian autonomous area located in the middle of Israel's largest port is deemed unacceptable to many Israelis. Third, the additional facilities required and, especially, cumbersome process consisting of multiple cargo handlings involved in rail operations, would be **prohibitively expensive**. The required facilities include a pier in Ashdod port, a Kerem-Shalom-like inspection facility and two rail-handling (intermodal) terminals in Ashdod and Erez, each consisting of working and storage tracks, parking areas for trucks and storage area for cargoes. There also is a need to construct a new rail connection between Ashdod and Erez. The cargo handling activities include moving cargoes from port storage to the rail terminal in Ashdod, loading railcars and the reverse in Erez. A simpler and considerably less expensive variation of Plan 2 involves using road instead of rail for the Ashdod/Erez trip. In fact, Erez along with other border crossings, was used in the past to process Gazan cargo. But, following the increase in cargo volumes and respective size of inspection facilities, all the border-crossing transfer of goods was consolidated in Kerem Shalom, where larger and more sophisticated facilities were constructed, taking advantage of the space available there. Finally, as already noted, the **PA categorically rejected** a past Israeli offer for a dedicated pier in Ashdod, viewing it as an insignificant variation to the present, unacceptable situation.

Politically, the plan is very problematic. Providing the PA with an autonomous pier in Ashdod seems to suggest that this pier should also be connected to the PA's main control area, the West Bank – a **“safe passage”** across Israel – which is unlikely to be accepted by Israel.

Cyprus / Gaza Fishing Port (Plan 5)

The **Cyprus Plan** (Plan 5) was included in Tony Blair's 2015 mediation accord with Hamas, presented in partnership with Turkey and Qatar. The plan also was suggested by the Israeli Navy and most recently re-introduced by Israel's former Defense Minister. The core of the plan is international or, in its newer version,

¹⁶ A similar concept was suggested by Major-General Samia in 2016. See: <https://www.inn.co.il/News/News.aspx/321224>

Israeli inspection of the Palestinian cargo at Larnaca Port, Cyprus (or, in another version, Limassol). The proposed system is cumbersome; it includes initial discharge of the Palestinian cargo from ships at a special pier constructed in Larnaca, from which the Gazan cargo is moved to a nearby inspection and temporarily storage terminal.¹⁷ The cleared cargo is then loaded onto smaller, dedicated “sterile” international ships (Turkish? Norwegian?), which sail to the existing fishing pier at Gaza City. The fishing pier has to be expanded to accommodate the larger ships and increased traffic volumes, including construction of a deeper dock, storage area, warehouses, etc. Interestingly, the 2015 plan was rejected by Israel on security ground, viewing international inspection at a foreign port as unacceptable. The re-introduction of it in 2018 includes Israeli inspection, though no clear indication has been provided by Cyprus. In any event, the plan would be **prohibitively expensive**: it requires the establishment of a “mini” Kerem Shalom with Israeli inspectors in Cyprus, an additional 370-km sea voyages by smaller ships between Larnaca and Gaza and a special (and very costly) escort in international waters by the Israeli Navy. The present fishing pier in Gaza City is shallow, small and highly congested, and cannot handle the additional traffic as seen in Figure 3. The pier’s expansion potential is limited since the developable area in front of the city center is small, and the truck access through the City difficult. It should be noted that as long as there is no “safe passage” between Gaza and the West Bank, the Cyprus Plan will only serve Gazan but not West Bank traffic.¹⁸

Figure 3 Gaza Fishing Port



In light of the short assessment above, plans 2 & 5 are eliminated from further considerations. Accordingly, the following discussion relates to the six remaining plans.

¹⁷ See: <http://forward.com/news/breaking-news/319229/israel-in-talks-with-hamas-for-longterm-gaza-truce>.

¹⁸ A detailed assessment of the Cyprus plan by a group of experts (in Hebrew) is available at <https://www.port2port.co.il> 7/30/2018

II.2 Assessment Criteria

Security, Political and Economic Criteria

The five main criteria upon which any proposed Gaza Port Plan should be assessed are:

- **Israel's Security** – Providing for: (a) cargo inspection to prevent the entrance of weapons, explosives and materials that can be used for manufacturing them, including “dual-use” goods; and (b) ship inspection to prevent the entrance of hostile ships;
- **Palestinian National Aspirations** – Providing the Palestinians with a sovereign or, at least, autonomous port;
- **Economic Feasibility** – Providing the Palestinians with an efficient and low-cost gateway for their import/export cargoes;
- **Economic Impact** – Developing import/export-related industries, generating substantial income and employment opportunities for Palestinians and, as will be seen later, Northern-Sinai Egyptians; and
- **Political Acceptance** – The expected level of support (or opposition) by each of the four parties involved: Israel, PA, Hamas and Egypt.

Israel Security = “Israeli Hands”

Assigning weights, or even ranking the criteria according to their importance, is difficult. Nevertheless, the order in which they are listed above, roughly reflects their importance. Accordingly, Israel Security is presumably the most important criterion, without which no plan will be accepted by Israel and, probably, by the PA. Using cameras, X and Gama-Rays scanners should be an essential part of the security inspection – but not all of it. Scanners cannot reveal if the chemical composition of a is exactly that declared on the Bill of Lading so the ingredients cannot be used for manufacturing explosives; or if an electronic board of a toy cannot be used as part of a weapon system. Hence, it is mandatory for Israeli inspectors to be able to physically “touch” the cargo: take apart suspicious machines, take samples of suspicious materials and send them to a lab, etc. This, indeed, is currently done at Kerem Shalom (see Chapter III. Ashdod/Kerem Shalom).

Trade-Off: Israel Security vs. Palestinian National Aspiration

The Palestinian National Aspiration is considered almost as important as Israel Security. The problem is that these two criteria, by their nature, are contradictory: providing more sovereignty to Palestine is likely to result in less security to Israel and vice-versa. For example, locating the Palestinian Port outside Gaza is critical to Israel Security – but degrade its value for the Palestinians. Indeed, as will be seen in the following sections, the **trade-offs between Israel's Security and Palestinian Aspiration is at the center of the assessment process of Gaza Port Plans.**

Economic Impact or “Jobs”

Economic Impact, meaning providing employment and income opportunities (“jobs”), is the ultimate objective of all port plans. In this respect it should be noted that the port itself does not create many jobs. For example, the local port as defined in Figure 1, typically creates 100 – 200 jobs and a major port around 500 jobs. In comparison, the industries envisioned in Kerem Shalom FTZ (Chapter II) could create 10,000+ jobs.

Political Acceptance

The discussion of Political Acceptance here is intentionally brief, although Gaza Port, admittedly, is first and foremost a “political port”. The paper shuns elaborate discussions of political future scenarios (e.g., long-term ceasefire or “Hudna” with Hamas, reconciliation between the PA and Hamas, direct negotiation between Israel and Hamas, etc.); positions of sub-parties within each party (e.g., military vs. political wings of Hamas); and

positions of external parties (e.g., Jordan, Turkey, US, Europe, etc.). The focus of our study, in contrast to all previous ones reviewed by this author, is review of economic, technical and operational aspects of the various port plans, especially their prospects for **implementation**. Accordingly, **the implicit assumption here is no change in the present political situation**. As noted in the Section I.2 Objectives, it is hoped that the proposed conference and respective negotiations regarding Gaza's port will trigger such a change.

The following chapters include a short description of each of the remaining 8 port plans, along with their assessment according to the 5 above-listed criteria.

III Ashdod / Kerem Shalom (Present)

III.1 Description

Consolidation of Border Crossings

In the current system, the Palestinian import-export traffic to/from Gaza uses the Israeli Port of Ashdod and Kerem Shalom Border Crossing, between Israel and Gaza. Ashdod Port is a large, deep-water port with modern facilities, handling more than half of Israel's import-export traffic. Kerem Shalom is located 90 km south of Ashdod, at the southwestern tip of Gaza Strip and the meeting point between Israel, Egypt and Gaza Strip borders. The importing process includes initial inspection in Ashdod, moving the cleared goods¹⁹ by Israeli trucks to Kerem Shalom, conducting a second, in-depth inspection in Kerem Shalom (see below), and transferring the goods to Palestinian trucks for final delivery inside Gaza.

Kerem Shalom's is the only Gazan border crossing for goods, handling the entire traffic between Israel, West Bank and foreign countries and Gaza. In the past, there were several more border crossings handling goods, among them Nahal Oz, Karni and Sufa, but Israel decided to close them and consolidate all goods handling at the much larger and more sophisticated Kerem Shalom. The only other active Israeli border crossing, in Erez, is only used for passengers. The Egyptian traffic to/from Gaza was processed in the Rafah Crossing, located only 3.6 km west of Kerem Shalom. The Rafah Crossing was monitored by European inspectors, but since the Hamas takeover of Gaza in 2007 the Crossing is closed for goods and most of the time also for passengers. Because the cargo inspection facilities in Rafah are limited, there were discussions about directing the Egyptian traffic to/from Gaza through Kerem Shalom.

Kerem Shalom Inspection Process

The inspection and processing of Palestinian goods in Kerem Shalom consists of the following steps:

- The pre-approved Israeli trucks with Gaza-destined goods park outside the entry gate and submit transfer documents for review and final approval.
- Following approval, the Israeli trucks move into a special, fenced and protected, drop-off zones ("**cells**") whereby the palletized goods are unloaded and placed on the ground ("**grounding**") by Israeli labor. The empty Israeli trucks leave the cells and Kerem Shalom.
- The grounded goods in the cells undergo extensive examination by Israeli inspectors.
- Once the goods are cleared, Israeli inspectors leave the cells and Palestinian labor enters and loads the cleared goods onto "sterile" (cleared by Israel) trucks, which transfer them to the Gazan side.

¹⁹ The term goods, common in Europe and cargo, common in the US, are exchangeable in this paper.

- The goods are grounded again in cells at the Gaza side whereby Hamas’ inspectors conduct their own examination.
- The Hamas-cleared goods are loaded onto regular Gazan trucks for the final delivery trip into Gaza Strip.

The Israeli inspection of Gazan-destined goods include external visual inspection of goods and verifying their conformity to the attached documents and declared description and quantities. An additional examination often includes opening packages, bags, drums and cartons to physically inspect their content. In cases of suspicious materials, samples are taken and sent to a local lab for further testing. Sometimes, the inspection includes taking apart appliances (washing machines, ovens) and even cars and trucks, looking for hidden components that can be used in weapons, such as electronic boards which can be used for improving the control system and accuracy of missiles and drones – which **cannot be conducted just by scanning** but requires physical contact or “touching” the cargo. Suspicious goods can be confiscated and people involved with them arrested. The need for such a meticulous security examination is justified considering that in 2016 alone Israeli inspectors in Kerem Shalom foiled 1,226 (!) attempts to smuggle forbidden items into Gaza.²⁰ The recurrent smuggling attempts are mentioned as the justification to the insistence on involving *“Israeli hands”* in the security inspection system even in the future final peace agreement, both on the Gazan and West Bank²¹ borders (see Netanyahu’s statement in Section I.1).

Both the PA and Hamas collects dues from the goods entering Gaza through Kerem Shalom. To verify that the invoices attached to goods, the basis for calculating dues, are correct, Hamas, very much like Israel, physically inspects the goods. The Hamas inspection also intended to prevent smuggling of forbidden goods (e.g. drugs) as well as military goods to Hamas’ enemies in Gaza (Islamic Jihad, ISIS).

Figure 4 Kerem Shalom Border Crossing Terminal shows pictures of a typical cell and the activities taking place there. The left panel shows Israeli trucks waiting to be unloaded; the right panel shows the discharged (“grounded”) goods, with an Israeli inspector examining pallets of fresh eggs. As clearly seen in the figure, the cells are enclosed by high concrete walls, with light poles and security cameras. It is understood that suspicious goods can remain in the cell for further inspection and investigation for several days. In addition to piece goods, Kerem Shalom transfers large volume of bulk goods. It has a 500-m long conveyor for aggregates and pipes for various kinds of fuels straddling the border from Israel into Gaza, shown in the lower panels of Figure 3..

²⁰ See: <https://www.themarker.com/news/1.3234502>

²¹ The traffic between Jordan and the West Bank also is inspected by Israeli inspectors at the Jordan Crossing. While Kerem Shalom Crossing is managed by the Crossing Authority of the Defense Ministry, Jordan River Crossing is managed by Israeli Airport Authority.

Figure 4 Kerem Shalom Border Crossing Terminal



Gazan Goods: Volumes, Sources and Composition

The transfer process of goods between Israel and Gaza seems to work well due to the ***on-the-ground cooperation among Israelis and Palestinians, including between the PA and Hamas.***²² The PA has the overall responsibility for the Palestinian operations on the Israeli side; the PA also collects Customs, a major source of income. Hamas has the responsibility on the Gazan side. The border-crossing operation runs 5 days a week, 12 hours per day but, if warranted by additional demand, can run 24/7. Late in 2017 the daily volume of trucks processed was about 900, reaching 1,200 during peak days.²³ Most of the cargo is Gazan imports, there is almost no exports, the result of the present cumbersome and costly outbound logistic system (see more in the section on Transformation of Kerem Shalom). The largest import cargo is construction materials (cement, steel, aggregates, tiles, lumber), followed by food stuff (flour, rice, fresh produce, dairy products), and fuel. The 2017 annual value of the trade handled through Kerem Shalom is estimated at \$1.3 billion.

Israel is the largest source of import cargo, followed by the West Bank, Jordan and the UAE. About 15 – 20% of the cargo volume is coming from the Ports of Ashdod and Haifa. The present sourcing of import cargo is likely to change if a Gaza Port available. For example, cement, the largest cargo, which currently is sourced in Israel, could be bought at a much lower cost in Turkey and shipped directly to Gaza Port.

²² Kerem Shalom continued its regular activities even when Hamas fired rockets toward Israel in 2008. Hamas officials made sure to keep the peace at the border crossing, realizing its importance as the lifeline of Gaza. See: <http://www.al-monitor.com/pulse/originals/2016/04/road-232-gaza-strip-kerem-shalom-crossing-trucks-provisions.html#ixzz4HVjpMxOf>

²³ The volume declined to 300 – 400 in January 2018 as a result of the deteriorating economic situation in Gaza. See: <https://www.ynet.co.il/articles/0,7340,L-5072962,00.html#autoplay>

Customs Collection by the PA

Following Paris Agreements, the PA collects customs duties from all the goods imported into Gaza (and the West Bank), a major source of income. The actual collection is Israel which, in turn, transfers the monies to the PA. The collection is enabled by the funneling of all Gaza imports through Kerem Shalom, but will be impossible if Hamas will have its own port in Gaza City (see next chapter). Likewise, the PA will not have access to Gazan customs duties if the Gazan imports will enter through Raffa Crossing directly from Egypt.²⁴

Kerem Shalom's Facilities and Expansion Options

The present site occupies 650 dunam (65 hectares). The main facilities include walled grounding cells for palletized cargo, pumping stations for fuel, elevated conveyors for aggregate, large X and Gama-Ray scanning machines for full trucks, in/out gates, truck parking areas, offices, etc. Kerem Shalom has plenty of space for future expansion in the surrounding, desert-like areas. It was understood during a site visit that additional support services, such as storage of cargoes, parking and repair of trucks, accommodation for drivers, etc., are provided in adjacent villages.

The 2-lane access road, the southern portion of Highway 232 may pose a capacity. I understood that plans for widening and doubling this road were already approved but the budget has not been allocated yet.

Cost of the Present System

The drawback of the present Ashdod/Kerem Shalom system is that the complicated transport/transfer process involves long transit times and high costs. The high cost is attributed to the extra caution mandated in handling the Palestinian cargo in Ashdod and the need to strip (de-stuff) containers and store their content there prior to trucking the cargo in loose form to Kerem Shalom. In addition, Ashdod has relatively-high port dues and the long, 90-km trucking by Israeli trucks is expensive. The Palestinians claim that the cost of trucking from Ashdod to Kerem Shalom amounts to \$1,500 (!) per import 40-ft container and that the Ashdod/Gaza transfer process takes 20 - 30 days.²⁵ An econometric model, developed by a notable Palestinian economist, estimates that the use of the Israeli port instead of a Gazan port increases the cost of trade by 25%. Accordingly, he calculated that using a Gazan port will increase Gaza's GDP by 4% and the imports and exports by 12.93% and 27.41% respectively.²⁶ Still, the present Ashdod/Kerem Shalom system is functioning relatively well and, as elaborated in the following section on Economic Feasibility, has the capacity to continue handling the Gazan traffic for the long term. Other, much smaller Gaza border crossings (Erez, Karni), were used in the past on a temporary basis to relieve congestion at Kerem Shalom, but the processing of goods in these crossings was terminated due to the lack of facilities, especially the vast grounding areas. Israel also inspects the traffic at Allenby Crossing between Jordan and the PA, although Israel and Jordan have a long-established peace. The inspection system there is mostly done during the "back-to-back" transfer of goods between Jordanian and Palestinian trucks.

Port of Ashdod's Capacity

The forecast underlying the Israeli Port Authority's development plans assumes handling Israeli, Palestinian, Jordanian and, in the long-term, Iraqi traffic (via rail connection). Moreover, following an institutional reform, two new major ports are being constructed in the main ports of Ashdod and Haifa, to be inaugurated at 2020. Both new ports are operated by private, global port operators under long-term concession and a land lease to Israel Ports Companies (former Israeli Port Authority). Facing competition, the existing port companies of

²⁴ See: <https://www.kan.org.il/item/?itemid=32233>

²⁵ See: *port2port*, 14-5-2015

²⁶ Eltalla, H., (2016). *Journal of Economic Cooperation and Development*, 37,2, 35-50. The cost includes the entire process from shipside in Ashdod to importer's premise in Gaza.

Ashdod and Haifa also are planning major investments in facilities and equipment. Consequently, no shortage of port capacity for handling the Israeli and Palestinian traffic is expected for the foreseeable future in Israel's main ports.

Long-Term Need for Kerem Shalom

The distance between Ashdod and Gaza City through Erez Crossing is only 35 km, well within trucking range. Hence, under normal, peaceful conditions, Gaza should be served by Ashdod and there would be no need for Gaza Port and Kerem Shalom. However, as noted at the outset of this paper, "real" peace is not achievable in the foreseeable future and even at the time of such peace there will most likely be need for an elaborate system of border processing and, especially, security inspection. Hence, it seems that the Kerem Shalom complex will be needed in the long term and is likely to be expanded to handle the future demand of Gaza's economy. A more elaborate discussion of the future of Kerem Shalom is included in the section Kerem Shalom's Peacetime Role in Section VI.1.

III.2 Assessment

Israel's Security

The current system seems to fully satisfy Israel's security concerns. The system involves two inspections, a preliminary one in Ashdod and an in-depth one, including grounding and **physical contact with goods**, in Kerem Shalom.

Palestinian National Aspirations

The current system does not satisfy the national aspiration of neither the PA, nor Hamas. Using Ashdod also reneges on Israel's commitment to provide a Palestinians with a national port in Gaza as discussed in Section I.1 Promises and Stalemate.

Economic Feasibility

The current system does not require investments in additional port facilities in Ashdod since the Palestinian traffic consists only a small portion of it, estimated in 2014 at about 4% of Ashdod's import traffic by Israel.²⁷ Moreover, Ashdod is currently undergoing a major expansion intended to double its capacity by introducing a new private port, Hadarom Port, based on a long-term concession with the Israeli Port Authority. Hence, there is no objective need for Gaza Port. Still, using Ashdod is **very costly for the Palestinian** (see above).

Economic Impact

Kerem Shalom can be further developed as Inland Port and Logistic Hub as described in the El-Arish/Kerem Shalom Plan (Section VII). However, since the current Ashdod-based system is perceived by the Palestinians as provisional, it is doubtful that they will support Kerem Shalom's development plan.

Political Acceptance

Israel's position is unclear. On one hand, Israel benefits from the economic activities related to the Palestinian traffic; on the other hand, Israel prefers that, as part of the separation policy, that Palestine severs its dependence on Israeli ports and has its own port. The continuation of the present system is considered by the PA as the least desirable option. Still, for lack of other options, the PA and, especially, Hamas, begrudgingly

²⁷ Based on Israel's Chamber of Shipping. Another estimate indicated that only 3,000 containers, or 0.4% out of the total of about 800,000 containers handled in Ashdod, was destined to Gaza.

cooperate with Israel. Egypt has not been involved in the debate on the Palestinian port. Hence, Egypt's position is unclear. However, it seems that since Egypt's main concern is its own security, it acquiesces to the current system based on Kerem Shalom.

IV Gaza City Port (Hamas Plan)

IV.1 Description

The Gaza Port site destroyed by Israel is located in the Nuseirat area, adjacent to Gaza City's boundary. The proposed port is about 3 km south of the existing small and shallow-water port located within Gaza City, which is only used for fishing. This plan is supported by the Hamas. Only limited information is available on the Nuseirat port project. **Figure 5 Gaza City Port at Nuseirat** shows the location and a conceptual rendering of the envisioned port facilities based on plans developed in the early 90's. As seen in this figure, the planned port facilities were limited, mainly geared for handling general cargo and liquid bulk. The site, adjacent to Gaza City, included about 500 dunam of private property purchased by the PA. It is doubtful that this port could serve the entire import/export traffic of the 4.7 million Palestinians in Gaza and the West Bank. Moreover, it is understood that the area has already been taken by squatters from the nearby refugee camps. Generally, **Gaza Strip is densely populated and highly congested**, especially the Gaza City area, whereby the entire Strip's width is only 6 km.

Figure 5 Gaza City Port at Nuseirat



<https://www.israelandstuff.com/wp-content/uploads/2016/02/Proposed-Gaza-seaport.png>

The plans to construct this port were prepared in 1994 and the Dutch and French Governments committed about \$45 million for its construction. We estimate, that the present cost of constructing this port, after adjusting its facilities to handle the growth in ship size in recent years, would probably be in the \$300 -- 400 million range, since as seen in the above figure the terminal includes a midsize container terminal. This cost does not include new road and rail accesses (see below).

The area reserved for this port is relatively small and surrounded by refugee camps. Clearing the area requires demolition of houses and removal of inhabitants presently living there. The port, as seen Figure 5, includes a major tank farm for storage of oil, creating a major environmental hazard for the surrounding population. Providing highway access for heavy trucks through the surrounding refugee camps including multi-lane gates, truck parking areas, etc., would be difficult, requiring further demolition and evictions to create the necessary right-of-way. It is unclear if rail access to the proposed port area is possible at all. There is no room at the Nuseirat location for future expansion and, especially, for port-related industrial parks, the main source of future employment. It should be noted in this respect, that constructing a new port in an urban area contradicts the worldwide trend of removing ports and the heavy traffic generated by them out of cities.²⁸ As seen in the case of the Israeli ports, modern ports occupy vast areas for both the facilities inside the port and, especially, the adjacent port-related industrial parks. It seems that the area at the southern edge of Gaza City should be better used as expansion area for the highly-congested City, for modern residential neighborhoods, parks, hotels, etc. Interestingly, realizing the difficulties of developing a port in the Nuseirat area, the Palestinians suggested, in 1999, to relocate the port to the wider and less congested southern region of the Strip, near Khan Yunis.²⁹

Developing Gaza City Port will not eliminate the need for Kerem Shalom, since this port will only handle the seaborne import/export traffic moving by ships, currently accounting for 15 – 20% of the Kerem Shalom’s traffic. The rest, or the traffic to/from Israel, the West Bank and Jordan will continue using Kerem Shalom.

IV.2 Assessment

Israel’s Security

Israel considers the Gaza City port plan as the worst in terms of security, even if Hamas agrees to international inspectors there and security cameras for remote Israeli inspection.

Palestinian National Aspirations

Gaza Port will fully satisfy the Palestinian national aspirations. Gaza Port was a prominent requirement in all negotiations thus far and a commitment to construct it included in at least 3 agreements between Israel, Hamas and the PA.

Economic Feasibility

Constructing a standalone port, especially the marine infrastructure (breakwaters, channels, docks), is expensive. Moreover, due to its small size and limited capacity, the port will only be able to handle part of Gaza traffic with the rest remaining in Ashdod. Still, if operated efficiently, Gaza Port could be economically feasible since, due to its location, it will not face competition for handling the Gazan traffic.

Economic Impact

The port area is limited and only allows the construction of basic facilities, but not port-related industrial parks such as those envisioned in Kerem Shalom (see section on Transformation of Kerem Shalom). Hence, the economic impact of this plan is limited.

²⁸ For example, the Israeli Port of Ashdod was constructed to replace the small and inadequate city ports of Jaffa and Tel-Aviv. Ashdod was constructed on a wide and open stretch of shoreline 40 km to the south.

²⁹ See: <http://www.globes.co.il/news/article.aspx?did=174631>

Political Acceptance

The main supporter of this plan is Hamas, viewing it as a major political victory over Israel. Hamas also expects the port to be a catalyst for economic activities and, especially a source of income from Customs currently collected by the PA. The PA already stated its objection to this plan, viewing as an attempt by Hamas to create its own “mini-state”.³⁰ Israel vehemently opposes to this plan. Egypt has not voiced public opposition to Gaza City Port, but is likely to support Israel’s opposition because of the same security concern. Egypt is worried that weapons brought in through the port will be smuggled to terror organizations in Sinai through the under-border tunnels.

V Gaza Island Port (Katz Plan)

V.1 Description

Location of the Port Island

Following the impasse in the Gaza Port, Israel's Minister of Transport, Yisrael Katz, has proposed first in 2011 and more recently in 2016 and 2017 the construction of a Palestinian port on a large, 2 x 4 km artificial island, 4.5 km offshore Gaza. ***Why locating the island 4.5 km offshore?*** In our investigations and interviews we found four possible explanations -- none of which would stand to reason. The first explanation was that, perhaps by mistake, it was thought that the territorial waters of Gaza only extend 3 statute miles, or roughly 4.5 km. Accordingly, the island would be located at the closest possible distance to the shore, but outside Gaza’s territorial waters, in **international water**. While historically, territorial waters reached 3 nautical miles (**NM**), or 5.6 km, based on the 1982 UN Convention of the Law of the Sea, the boundary was extended to 12 NM or 22.2 km, presently ratified by almost all nations worldwide. Hence, the 4.5-km offshore Island is well inside Gaza’s sea border. The Island also is located well within Gaza’s fishing zone, recently extended by Israel from 6 to 9 NM or 16.7 km.

The second explanation is the need for the port to **reach deep waters**. This explanation also seems incorrect since, as seen in the plans for the new port of Ashdod, deep waters can be reached much closer to shore, at about 1.5 km offshore. Interestingly, Portland Trust published in 2017 a master plan for the entire Gaza Strip prepared by AECPM, a major international engineering firm. The plan, called Connect Gaza 2050 Plan, also included an island port -- located only at about 1.5 km offshore. A third explanation relates to the need to leave sufficient room and avoid blocking the littoral drift, or the **coastal current** that carry sand vital to maintaining the coastline. This, however, is contradicted by the construction of the two new Israeli ports, both are shoreline-based, with long breakwater protruding from the shoreline into the sea. The proposed island-based Tel Aviv airport is also located about 1- 2 km offshore, which is in line with the recommendations of a comprehensive study regarding the space required for coastal currents.³¹

The fourth explanation for locating Gaza port on an Island is the **security provided by the bridge** which, presumably, can be easily cut by Israel in response to renewed hostility. If this indeed is the case, why not construct the island 0.5 or 1 km offshore, resulting in huge savings in costs of both the island and the bridge? The security provided by a 4.5-km bridge can be equally provided by a 0.5-km bridge... Altogether, we do not

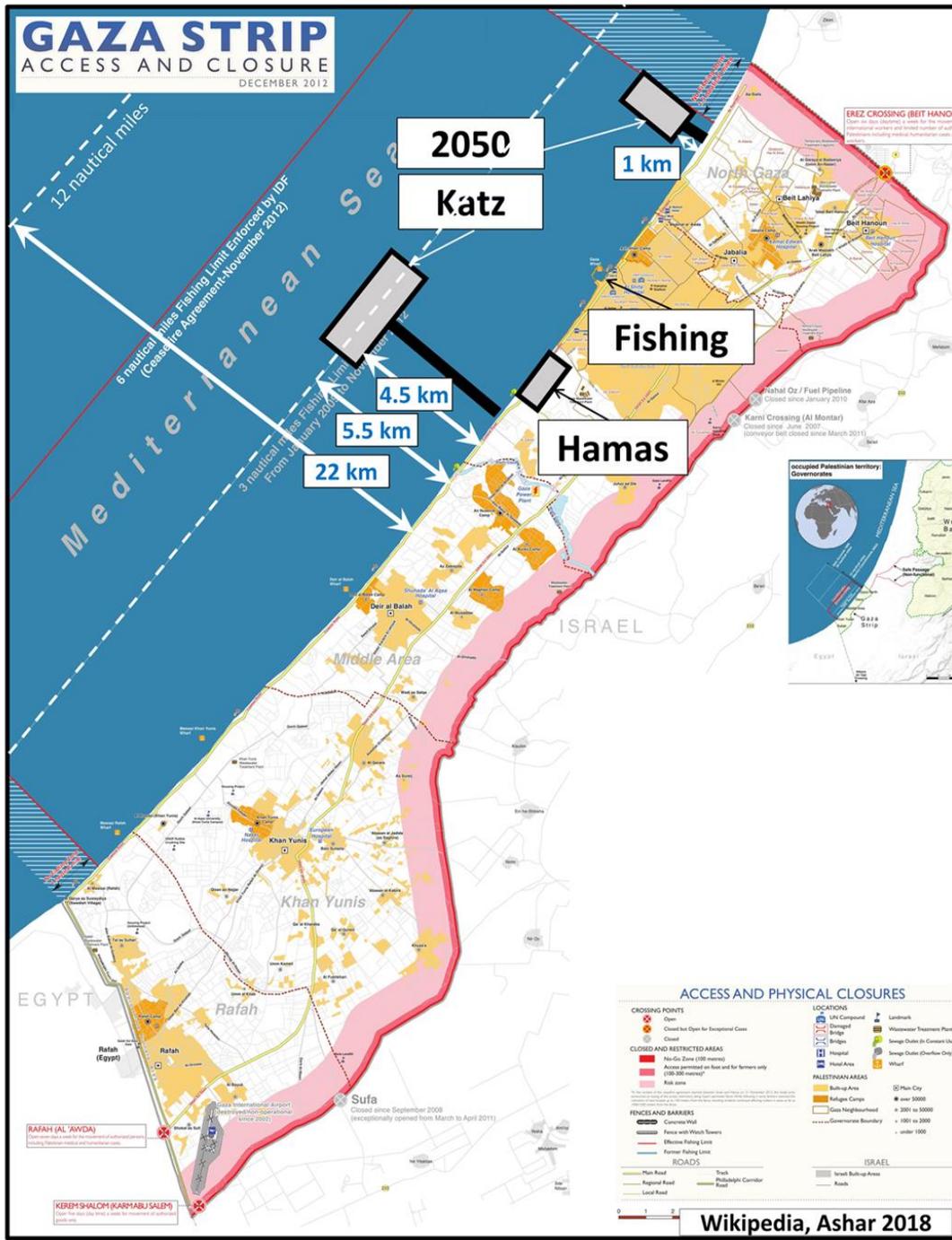
³⁰ See: <http://www.jpost.com/Arab-Israeli-Conflict/Will-Gaza-Get-a-Port-459745>

³¹ Israel Interior Ministry, Planning Division, *Policy Guidance for Using Artificial Island for Infrastructure*, Summary Report, July 2007 (Hebrew).

understand the reasoning underlying Minister Katz’s plan for locating the port island 4.5 km offshore, resulting in substantial increase in construction cost (see below).

Figure 6 Island and Shore-based Ports within Gaza Boundaries schematically presents the locations of four Gazan ports: two shore-based, Hamas Port (discussed in the previous chapter) and the existing fishing pier; and the two island ports included in the 2050 and Minister Katz plans. The selected location of the island port at the 2050 Plan is at the northern border of Gaza Strip with Israel since, as the name “Connect” suggests, the port would be the terminus point of a transportation corridor connecting the West Bank to Gaza. According to preliminary sketches, the island in the 2050 Plan will include two marine terminals, for cargo and passengers – but not an airport and power plants or marina as in Katz Plan. The location of the island port in Katz Plan has not been specified yet, but it seems that it would be nearby Gaza City, presumably at the site planned for the Hamas Port which is purported to replace. The following discussion in this report is only concerned with Katz Island Plan. The island port of the Portland Trust 2050 Plan will only be briefly mentioned at the end of this section.

Figure 6 Island and Shore-based Ports within Gaza Boundaries



Locating Installations on the Island or Mainland?

Figure 7 Gaza Island Port shows a rendering of the proposed island as appeared in the original publication of Israel’s Ministry of Transport. The large, 8 sq km (4 x 2 km) island, located 4.5 km offshore Gaza, is connected to the mainland via a long bridge with checkpoints. The Island will accommodate a major seaport, marina, airport,

power plant, desalination plant and other infrastructure installations -- but no residential or port-related industrial areas. The 8 sq km Island will not meaningfully increase the present area of the Strip of 365 sq km.

Only the seaport requires direct access to deep water; the airport, desalination and gas-fired power plants can all be located on mainland and, if needed, fed seawater and gas by pipes. Gaza's current land-based power plant in Nuseirat is fueled by industrial diesel carried by tanker trucks. Likewise, plans to construct desalination and power plants in mainland Gaza have already been prepared, including obtaining some of the required financing for them, e.g., \$400 million of the \$600 million required for 55 million cu-m desalination plant.³² Gaza's land-based airport in Dahaniya, located across the border from Kerem Shalom, has operated for 12 years (1998 – 2000), until partially destroyed by Israel during the Second Intifada – but can easily being renovated.

Figure 7 Gaza Island Port (Katz Plan)



The seaport occupies about 1/3 of the island's area. If the non-port installation proposed to be located on the island are located onshore, there is a possibility of constructing a smaller island to only accommodate a seaport. However, such seaport will be prohibitively costly, since most of the cost of artificial islands, especially those constructed in open, deep-water sea, is spent on constructing the huge seawall/breakwater around their perimeters (see more below).

Undesirable Adjacency of Seaport, Airport, Marina, Power and Desalination Plants

The planned island, based on the sketchy description provided by Israel's Ministry of Transportation, is expected to host, in addition to the Seaport, a major airport, marina and a powerplant. The adjacency of an airport to a

³² See: <https://www.middleeastmonitor.com/20180321-conference-on-gaza-desalination-plant-kicks-off-in-brussels/>

seaport and a powerplant is considered undesirable due to the high cranes of modern container terminals and high stacks of powerplants. Marinas are usually located in shallow waters; there is definitely no need for the water depth (30 m) provided by the Island's offshore location. Also, most marinas are located nearby city centers, serving as an anchor for commercial developments such as restaurants, hotels, etc. The airport and marina also will generate passenger traffic interfering with the seaport traffic, since all be sharing the same narrow bridge and checkpoints.

Separating Israel from Gaza

Katz Plan has wider aspirations than just providing Palestinians with a port to fulfill Israel's Oslo obligation or to create economic benefits. Katz's broader aim is to use the Island Port to permanently separate Gaza from Israel and "absolve Israel from any responsibility" for Gaza³³. Accordingly, Katz dubs his Island in Hebrew **האי-פרדות** 'העונה', meaning "the island of separation from Gaza".³⁴ He sees his plan as a follow-up step of the 2005 Disengagement Plan, when Israel uprooted all its settlements and unilaterally withdrew all its forces from the Strip. "Let's build the Island and relegate (Israel's) responsibility for Gaza to the world" the minister declares in a recent interview, without specifying who in the "world" is going to take responsibility for Gaza and, more specifically, provide the billions of dollars required to finance the construction of the Island.³⁵

A complete separation will not be achieved even if the Island constructed, since Israel continues to be actively involved in Gaza security. Moreover, the construction of the Island Port, will not eliminate the flow of goods through Kerem Shalom. Presently, only 15 – 20% of Kerem Shalom's traffic consists of seaborne goods coming from Ashdod which, theoretically may shift to the Gazan Island Port. The rest of the Gazan-destined goods originate in Israel, the West Bank and, to a lesser extent, Jordan. Constructing the Island Port is likely to increase the percentage of Gaza's seaborne goods; still, the majority of Gaza's future trade will continue to be with Israel and the West Bank, meaning that Kerem Shalom will remain active for the long future. Also, the island port by itself will not dramatically improve the economic situation in Gaza since the port activity by itself, i.e., handling goods to/from ships, involves a limited number of jobs. For creating a meaningful number of jobs, there is need to develop a large, port-related industrial zone for which the island has no room. In fact, Katz's plan does not mention port-related industrial zones and, in line with the overall goal of separating Gaza from Israel, not a joint Israeli/Palestinian zone, quoting the failure of Erez Border Crossing Zone.

The recent thrust for separation of Gaza from Israel is in fact a change in policy. Prior to the 2007 Hamas' taking over Gaza, up to 120,000 Gazans worked in Israel, accounting to about 40% of the entire employment in Gaza.³⁶ Even during the Hamas' period, in 2010, "Southern Israel's farmers in the villages bordering Gaza Strip demands that Gazans will be permitted to work in their fields to cope with the growing shortage in farm labor".³⁷ Unlike the situation in Gaza, Palestinians in the West Bank are allowed to work and their current number is estimated at 150,000; their salaries account for 40% of the PA GDP.³⁸

Separating Gaza from the West Bank but Not the West Bank from Israel

According to Katz Plan, Gaza Island Ports is intended to only serve Gaza – not the West Bank. **The West Bank will continue to be served by Israel's ports.** This, in turn, will allow Israel to renege on its Oslo Accord obligation to provide "safe passage" between Gaza and West Bank. Indeed, in a recent op-ed, Minister Kats calls upon "Israel

³³ See: <http://www.israelnationalnews.com/News/News.aspx/213970>

³⁴ See: <https://www.inn.co.il/News/News.aspx/280606>

³⁵ See: <https://www.ynet.co.il/articles/0,7340,L-5086425,00.html>, in Hebrew, translated by A. Ashar.

³⁶ See: <https://www.maariv.co.il/news/israel/Article-665273>

³⁷ See: <https://www.ynet.co.il/articles/0,7340,L-5122607,00.html>, in Hebrew, translated by A. Ashar.

³⁸ See: <https://www.themarket.com/career/1.4404738>

to take advantage of the current rift between the West Bank and Gaza ... in order to forever remove from the agenda the concept of “safe passage” ... and any possibility for a territorial connection between Gaza and the West Bank ... to permanently separate them”.³⁹ As discussed at the outset, the West Bank foreign trade, like Gaza’s, is currently served by Israel’s ports through special border crossings, which are also used for Israeli/Palestinian traffic. For example, the largest crossing, Tarqumiyah, handled in 2017 an average of 8,300 pedestrians (mostly laborers) and 1,300 vehicles per day.⁴⁰

The West Bank, according to Katz Plan, continues using Israel’s port and therefore remains dependent on Israel. Minister Katz is well aware that while his Plan “takes two million Palestinians in Gaza off Israel’s responsibility”, which he sees as “a major achievement”⁴¹, it keeps the 2.5 million Palestinians in the West Bank permanently conjoined to Israel.

Katz’s agenda of “double separation” should be contrasted with this plan’s agenda of cooperation.⁴² The central theme of this port plans is fostering the current cooperation among Israel, the PA and Hamas in Kerem Shalom, to serve as the basis for the future development of a tri-state Free Trade Zone for port-related industries (see below in the section on South Gaza).

Island’s Susceptibility to Hamas’ Attacks

Already confronting resistance from both Hamas and the PA, Minister Katz calls on Israel to implement his plan **unilaterally**.⁴³ But, constructing the Island without the consent of Hamas “will turn the Island and, especially the bridge highly vulnerable to attacks” according to Israel’s former director of the Counter-Terrorism Bureau at the Israeli Prime Minister and a security expert who participated in the discussions regarding the future border crossings between Israel and Gaza.⁴⁴ The Island would be an easy target for the Hamas shooting missiles and mortars to stop construction and, later on operations. Also, reaching the Island from the mainland by water should not be difficult for Hamas’ marine forces. Moreover, smuggling to/from the Island would be relatively easy since the Island is located inside the fishing zone in which Gazans currently operate a fleet of over 1,500 boats.

Cargo Inspection by International Inspectors vs. “Israeli Hands”

The reason for constructing the port on a costly offshore island in Minister Katz’s plan is Israel’s security – not shortage of space on mainland or a need to reach exceptionally deep water to accommodate very large and deep-draft ships. Accordingly, the two main reasons for choosing to build the port on an island and not on shore are: (a) Physical separation from Gaza; and (b) **Location in international waters**, outside Palestinian rule. The advantage of an island in terms of separation is clear: the only connection with mainland is via a single, long and narrow bridge which, in case of resumed hostility by Hamas, Israel can block, or if has no access to it -- bomb(!).

The assumed Island’s location outside Gaza territorial waters, in international waters, is presumably based on an incorrect assumption in the original plan that Gaza’s territorial waters only reach 3 Statute Miles, or 4.5 km. However, the territorial sea boundary of states has been extended many years ago from the historical 3 Nautical

³⁹ See: <https://www.makorrishon.co.il/opinion/34293/>, in Hebrew, translated by A. Ashar.

⁴⁰ See: <http://www.maavarim.mod.gov.il/Heb/CrossingPoints/Pages/Tarqumiya.aspx?ItemId=6>

⁴¹ See: <https://www.makorrishon.co.il/opinion/34293/>, in Hebrew, translated by A. Ashar.

⁴² Israel’s defense establishment claims that there is a “Gordian knot” between Israel and Gaza hence the unavoidable need for cooperation. See: <https://www.haaretz.co.il/news/politics/1.4512140>.

⁴³ Katz’s interview, in Hebrew, with Israel TV Channel 10, Feb 5, 2018.

⁴⁴ See: <http://www.israeldefense.co.il/he/content/%D7%94%D7%90%D7%99-%D7%94%D7%9E%D7%9C%D7%90%D7%9B%D7%95%D7%AA%D7%99-%D7%A9%D7%9C-%D7%A2%D7%96%D7%94>

Miles (NM), or 5.5 km, to 12 NM, or 22.2 km. Hence, **the proposed island will be located inside Gaza territorial waters**. This fact, seems to be ignored, was confirmed in our recent meeting with a representative of the Ministry of Intelligence Affairs in charge of Katz Plan (see section below). Accordingly, the island would be, by definition, a sovereign Palestinian territory and not an international territory as Minister Katz's original plan assumed. Nevertheless, the current Katz Plan states that international police force will be in charge of security on the Island itself, while PA inspectors man checkpoints on the bridge. This seems to contradict a previous statement by Minister Katz: *"It's clear that **there would have to be Israeli security at the port** – that's a condition of the Shin Bet security service"*.⁴⁵ The insistence on inspection by "Israeli hands" also was expressed by Israel's former Minister of Defense pointing out the failure of international inspectors stationed in Rafah Crossing.⁴⁶ A more recent concern was expressed by both the current Minister of Defense and the Prime Minister observing: *"the issue of inspection (on the Island) is problematic ... there is no way to assure effective inspection"*.⁴⁷ Will Israel be satisfied with international inspectors even if they provide Israel with access to security cameras, X and Gamma Ray scanners in light of the failure in the past of a similar arrangement in Rafah Crossing?

Grounding Areas for Cargoes Inspection

The present, well-proven inspection system in Kerem Shalom, is based on placing cargoes in large grounding areas surrounded by high security walls and steel gates, defined as "cells". The vast cells in the Kerem Shalom terminal have capacity to hold the goods brought in by hundreds of trucks and, if needed, to store suspicious goods for several days. Constructing similar cells on the island will dramatically increase the size -- and the cost -- of the port. There is obviously no room for constructing these cells on the bridge's checkpoint. Another advantage of Kerem Shalom is Israel's ability to incarcerate and interrogate suspects in case of smuggling attempts, impossible on an international island.

Inspection by the Israeli Navy

Currently, the Israeli navy is patrolling Gaza's waters, making sure that Gazan fishing boats do not sail beyond the 6 or 9-mile security zone -- and no foreign ships enter this zone. Future ship inspection by the Israeli navy is one of the pillars of the security system in Katz Island Port plan. But, performing such ship inspection at the entrance channel to the Island Port will be problematic in the future, since the Island Port is located within Gaza's territorial waters (Israel has never been assigned, or claimed, territorial rights over Gaza's waters). Theoretically, the inspection could be performed outside Gaza's 22-km away from the shore, in international waters. But, the Israeli navy cannot board and inspect foreign ships sailing in international waters in peace time according to the 1982 United Nations Convention on the Law of the Sea (UNCLOS). Also, boarding ships in open seas, 22-km offshore, is dangerous.

Most importantly, even if Israeli inspectors do board Gaza-bound ships, they can only check the ship and crew documents; they have no access to the cargo stored inside hatches or containers. Altogether, **the inspection by the Israeli Navy would be quite limited**.

Island's Location Inside or Outside Gaza's Territorial Waters

The issue of inside/outside Gaza's territorial waters is pivotal in Katz Plan and warrants an additional discussion. Territorial waters are defined as the portion adjacent to the state's shoreline and regarded as a sovereign

⁴⁵ See: <http://www.water.org.il/05/%D7%9E%D7%99%D7%9D-%D7%98%D7%A8%D7%99%D7%98%D7%95%D7%A8%D7%99%D7%90%D7%9C%D7%99%D7%99%D7%9D/>

⁴⁶ Major-General (ret.) Moshe Yaalon speaking at MMSI, March 15, 2017

⁴⁷ See: <http://www.israelhayom.co.il/article/403173>

territory of the state. According to UNCLOS, the territorial waters can extend up to 12 Nautical Miles (**NM**), or 22 km, which most of the world's nations have adopted. Israel also adopted UNCLOS, although it elected not to officially sign the Convention. The Palestinian Authority, the legal sovereign of Gaza, signed the convention and was accepted as a member (2015).⁴⁸ The 12-NM is also mentioned in Oslo II Agreement (1995) as the maritime zone for which the Palestinian Coastal Police will be in charge.⁴⁹ Nevertheless, for security reasons, Israel presently maintains full control over Gaza's land and sea borders, including all land, sea and air accesses, which the Palestinians regard as "siege". A related term is "Security Zone", referring to the area where Gazan fishermen are allowed to fish. Initially the Security Zone was 3 Statute Miles (**SM**) offshore (4.5 km), later extended to 6 SM (9 km) and, since 2016, to 9 SM (14 km).⁵⁰ Under Oslo Accords, Palestinians could fish up to 20 NM (36 km) offshore.⁵¹ Another common term related to the sovereignty of states over the waters adjacent to their shore is

In order for the Island to be in international waters outside Gaza's territorial waters, Katz's original intention, the Island has to be constructed outside of the 12 NM boundary, or more than 22 km (!) offshore. At this distance, the water depth could reach 200+ m, rendering large-scale reclamation and construction of an artificial island with a 22-km long bridge prohibitively expensive, and perhaps, even a technical impossibility.⁵² Moreover, countries are not allowed to expand their territories into international waters by creating artificial islands outside their territorial waters, which may encounter the objection of neighboring countries as recently demonstrated in the South China Sea conflict.

Competition from nearby Major Ports

Unlike the relatively-small Gaza City port, the Island port in Katz Plan, with its 30-m water depth and large footprint as depicted in Figure 6, is a major container port. Is there market demand for a new, major Gazan port exclusively serving the small Gazan economy? It is unlikely that megaships operating on global trade routes will directly call in Gaza Port because: (a) Gaza, currently accounting to only 4% of Ashdod cargo, will generate enough cargo volume to justify direct call; and (b) Ashdod, currently undergoing major expansion, is only 40 km north of Gaza. In addition, as will be discussed in the next chapter, Egypt has begun developing a major port in El Arish, 40 km south of Gaza southern border. Put differently, there is no economic justification for constructing a third major port between the major ports of Ashdod and El Arish.

Construction and Maintenance Costs

Unfortunately, although the Island plan has been under discussion for almost 10 years, very little technical data is known about it. No documents consisting of scale drawings, preliminary engineering design, review of environmental issues and cost estimates have ever been published. Moreover, the layout of the port in Figure 7 indicates unfamiliarity with port operations. According to interviews with Minister Katz, the construction cost and time of the artificial Island is about \$5 billion and 5 years; other sources suggested much higher cost of \$7 -

⁴⁸ See: https://en.wikipedia.org/wiki/Territorial_waters

⁴⁹ See: <http://www.mfa.gov.il/mfa/foreignpolicy/peace/guide/pages/the%20israeli-palestinian%20interim%20agreement%20-%20annex%20i.aspx#article14>

⁵⁰ See: https://www.nytimes.com/2016/04/04/world/middleeast/israel-expands-palestinian-fishing-zone-off-gazas-coast.html?_r=0

⁵¹ See: <https://www.dailysabah.com/mideast/2017/06/28/israel-reduces-gaza-fishing-area-to-6-nautical-miles>

⁵² A literature review conducted by this author found depth of 70-m as the maximum possible.

12 billion and 10 years.⁵³ Our own, very rough cost estimate is about \$10 billion; it is based on extensive review of previous studies on artificial islands along Israel's coast. It should be noted that there is little and perhaps no experience in constructing standalone artificial islands in 30+ m deep unsheltered water. The famous island of Kansai Airport, was constructed in the almost fully-enclosed Osaka Bay and in water depth of 18 m.⁵⁵ Hence, our cost may exceed \$10 billion, especially since bathymetric maps suggest that the depth at the western seawall of Gaza Island, 6 – 7 km offshore, could far exceed 30 m (40 m?). According to Minister Katz, the Island's construction cost will NOT be paid by Israel -- but by still-unnamed international investors.

The above cost estimate is equivalent to about \$2,000/sq m (\$2 million per dunam), assuming that the net land area created on the Island is about 5 sq km. In general, the cost of the land on artificial islands is significantly higher than onshore, even if they are located close to shore. Hence, artificial islands are mainly used for luxury hotels and high-end residential areas (e.g., Dubai and, perhaps, in the future, Tel Aviv), or for environmentally-unfriendly infrastructure (e.g., noisy airports) and industries (e.g., air-polluting petrochemical plants, hazardous LNG installations). In light of the high cost of land, it would make little sense to locate on Gaza Island a large, port-related industrial park such as that envisioned for the desert-like land at Kerem Shalom (see section on Space Availability in Kerem Shalom).

Distance from Shore, Shortage of Sand and Ecological Impact

It should be noted that the 30-m depth of the proposed artificial Island is way beyond the 17-m planned for the new major ports of Haifa and Ashdod. Offshore Islands are mostly constructed in shallow waters, 0.5 – 2 km offshore and in sheltered waters, in harbors or enclosed seas. One notable example for a port located on artificial island is Moin Port, Costa Rica.⁵⁶ This major port, currently under construction, is located 0.5 km offshore, with water depth of 17 m and investment cost of about \$1 billion. The Even Plan (2003) to provide the Palestinians with a series of small islands as part of land exchange also referred to location only 0.6 km offshore.⁵⁷ In an INSS study on an artificial island in Gaza, the proposed location was only 0.6 km offshore, where the water depth is about 10 m.⁵⁸ Gaza Island, however, is located in an open sea, with waves reaching 7+ m and water depth of 30+ m. Hence, construction of the Island requires a huge amount of fill materials, mainly sand, amounting to 10 times that required for the 2 new Israeli ports combined. Sand, however, is difficult to obtain in Gaza and Israel. Accordingly, a recent study on artificial islands concludes: "*reclamation-based offshore islands are impractical for Israel due to lack of local construction materials (sand)*".⁵⁹

Constructing a huge, 8-sq km island is likely to have major ecological impacts on the shores of Gaza, Israel and, perhaps, even Lebanon resulting, among others, in substantial erosion. This, in turn, will mandate costly remediation projects for shore reconstruction, beach replenishment, as already seen in the case of the much smaller, 0.7 sq km, new ports in Haifa and Ashdod. The remediation cost should be added to the cost of Island's

⁵³ See: <http://www.nrg.co.il/online/54/ART2/237/742.html>

⁵⁴ The construction of the new Hamifratz Port in Haifa, presently underway, is estimated to take a total of 12 years, including planning, licensing, bidding and actual construction. Hamifratz involves construction of a 3-km breakwater and reclamation of 0.78 sq km in sheltered waters adjacent to the shore vs. 10 km and 5.6 sq km in open sea for Gaza Island.

⁵⁵ See: https://en.wikipedia.org/wiki/Kansai_International_Airport

⁵⁶ Two members of the Gaza Port Expert Group were involved in the planning and construction of this port.

⁵⁷ See: <http://www.news1.co.il/Archive/003-D-2311-00.html?tag=21-24-01>

⁵⁸ See: [http://heb.inss.org.il/uploadimages/Import/\(FILE\)1194247949.pdf](http://heb.inss.org.il/uploadimages/Import/(FILE)1194247949.pdf)

⁵⁹ See: *Maritime Strategy of Israel 2016*, Haifa Research Center for Maritime Policy & Strategy, January 2017, p.166. The report suggests using "floating islands", or steel platforms anchored to the sea bed, instead reclaimed islands. However, platforms have limited area and therefore are unsuitable for ports. The new breakwater in Ashdod, reaching at its end 22 m deep water, is 32 m high with its base 140 - 260-m wide (!).

maintenance. In addition, a strong resistance to Gaza Island is expected from Israeli and Palestinian environmental groups.

Cost of the Island's Major Port vs. Shore-based, Local Port

For the sake of discussion, let's assume that 1/3 of the \$5 billion of the Island's construction cost, or \$1.7 billion (5 x 1/3), is allocated to the port's basic infrastructure. There is a need for additional \$0.5 billion for superstructures (utilities, docks, yards, fences, gates) and equipment (cranes, computers) of the major port planned on the Island, resulting in a total investment of about \$2.2 billion – almost 10 times that of the \$250-million that required of local ports proposed in South and North Gaza Plans (see later). The cost ratio between the Island and shore-based port may reach 20(!) if the construction cost of the island is \$10 billion, as preliminary estimated by our group of experts. In addition to the initial construction cost, artificial islands, especially in open sea, require costly periodical maintenance due to settlement and loss of fill materials (sipping) and for the highly-exposed marine structures, as well as periodical remedial cost for the affected shoreline.

Land Access Problems

Another problem with Katz Island, already addressed in the previous chapter on Gaza City Port, is landside access for heavy trucks and, if a connection to the West Bank is envisioned, access to rail. A rail connection requires allocating a large area for an intermodal railyard, storage yards, etc., along with a dedicated rail bridge between the Island and mainland. The landside access would be especially difficult if the Island is constructed adjacent to Gaza City with its surrounding congestion. An alternative location for the Island, at the northern tip of Gaza Strip, is proposed by Portland Trust 2050 plan. The reason for the northern location in the 2050 Plan is the proximity to the West Bank.⁶⁰ But, as seen in Figure 6, the Strip at its northern section is narrow and already densely populated and cannot accommodate a railyard especially since the 2050 also envisioned there a large, port-related industrial park (see later in the section on North Gaza Port).

Israeli and Palestinian Response

Politically, Gaza Island Port should be viewed similar to Gaza City Port; both are located inside the Gaza Strip and therefore controlled by Hamas. This similarity was the reason for the rejection of Katz Island Port Plan by Israel's Prime Minister and Minister of Defense, claiming insufficient inspection arrangements as noted above. Interestingly, judging by recent publications, it seems, however, that Minister Katz and his supporters consider this rejection only as temporary.⁶¹

The Palestinian response to Katz plan has been negative thus far. The Palestinians regard the island plan as unrealistic because of its high cost, questioning Katz's assertion that the Island will attract "foreign investors". The Palestinians observed that the Island was "*pure fantasy and an attempt by Israel to divert attention from the real problems of Gaza resulting from the Israeli siege*".⁶² Some Palestinian commentators even suggested that it is a plot by Israel to put off discussions about more realistic port plans. The Palestinians also noted that the Island cannot serve as an Israeli land to be exchanged against Palestinian land in the West Bank as part of the Final State Agreement, since the island is located on Palestinian territory (within the territorial waters).

⁶⁰ See: http://www.portlandtrust.org/sites/default/files/pubs/executive_summary.pdf

⁶¹ See: <http://www.ynetnews.com/articles/0,7340,L-4933282,00.html>

⁶² See: <https://af.reuters.com/article/egyptNews/idAFLDE72T0IZ20110330?pageNumber=2&virtualBrandChannel=0&sp=true>

V.2 Assessment

Israel's Security

The Gaza Island Port Plan, relying on international inspectors, does not satisfy Israel's security concerns. Israel has already stressed numerous times that it does not trust international inspectors even if they provide Israel with access to security cameras and/or remote inspection equipment. The only acceptable inspection system is that allowing for Israeli hands to "touch" the cargo and ships, similar to the present system at Kerem-Shalom.

Palestinian National Aspirations

Assuming that the island is located within the territorial waters of Gaza and operated by Hamas, there is no much difference between the Island Port Plan and the Gaza City Port Plan described in the previous section; both plans fully satisfy the Palestinian aspirations. However, if the Island is NOT part of Gaza, as is the case with Minister Katz's Plan, it does not satisfy the Palestinian Aspirations.

Economic Feasibility

Unlike the relatively-small Gaza City port, the Island port, with its 30-m water depth, is a major port. There is no demand for such port in light of the construction of the new major port in Ashdod with capacity to satisfy the long-term needs of both Israel and Palestine. In addition, as will be discussed in the next chapter, Egypt intends to develop a major port in El Arish. Ashdod is only 35 km north of Gaza border and El Arish is 45 km south of it. It is difficult to economically justify the development of a new, major port between these two, especially a highly-expensive, island-based one involving investments of \$2.2 billion and requiring expensive periodical maintenance.

Economic Impact

The port area on the Island is limited and will only provide for basic port facilities -- but not for industrial parks such as those envisioned for Kerem Shalom. Hence, the economic impact of this plan is limited.

Political Acceptance

The main supporter of this plan is Israel's Minister of Transportation and, reportedly, other Israeli ministers and security experts – but not both the current and former Ministers of Defense and not the Prime Minister. If the Island will be under the control of Hamas, Hamas may support the Island plan as a "second best" to the land-based Gaza City Port. However, as stated clearly by its originator, keeping the Island outside the reach of the Hamas is a key component of the plan. Therefore, both the Hamas and PA have already expressed their objection to the Island Plan, considering it as a "*pure fantasy ... and an Israeli plot to divert public opinion away from the real problem, the siege*".⁶³ Egypt has not voiced its opinion regarding the Island Plan.

⁶³ See: <http://www.mako.co.il/news-military/israel/Article-a163748b4760f21004.html>

VI El-Arish / Kerem Shalom

VI.1 Description

Kerem Shalom Transformation into Inland Port

The main problem with Katz Island Plan, along with its gigantic cost are its inadequate international-inspectors based security system and lack of area available for port related industrial park on the island. The plans proposed here are devised to redress the deficiencies identified in Katz Plan, especially in the area of security, since all provide Israeli inspectors **direct contact** with Gaza's import/export traffic at Kerem Shalom and Zikim.

The principles underlying all the plans involving Kerem Shalom are:

- Retaining the present and well-proven system of **processing all Gaza's traffic through Kerem Shalom**;
- **Transforming Kerem Shalom into Inland ("Dry") Port** and further developing it into tri-state industrial park; and
- Providing the PA with an **autonomous seaport** located on Egyptian soil under a **long-term lease**, a close substitution to a full sovereign port.

Expanding and Transforming Kerem Shalom is the focus of the first two Plans. The intention is to build on the success of the present Ashdod/Kerem Shalom cooperation, expanding the existing facilities to take advantage of the availability of ample land there and, especially, the strategic tri-border location. Kerem Shalom is the only meeting points between the borders of Israel, Gaza and Egypt.

The first version of these plans, described in this section, is to include the Palestinian port as part of the expansion plan of the Egyptian Port of El-Arish; the second version, described in the next section, is to construct a new port adjacent to Gaza Strip, on the Egyptian side of the border. A third version, does not involve Kerem Shalom but the construction of a new cross-border terminal in Zikim.

Autonomous Port based on Long-Term Land Lease

El-Arish is an Egyptian port located 45 km south of Gaza's southern border with Egypt. The inclusion of an autonomous Palestinian terminal within the Egyptian El-Arish Port follows a common practice worldwide. There are several countries presently providing their neighboring landlocked countries with autonomous ports via long-term leases (99 years): Tanzania/Zambia, Tanzania/Malawi; Peru/Bolivia; and others. In this respect, it is interesting to note that Saudi Arabia provided Jordan with most of the land needed to expand Aqaba Port. It should be emphasized that in all these cases, the port land was given under long-term lease, with no transfer of sovereignty -- unlike the case of the strategically-located Red Sea Islands of Tiran and Sanafir, recently transferred from Egypt to Saudi Arabia.

Following a growing worldwide trend, the actual investor and operator of the Palestinian terminal would most likely be a global port operator. All Egypt's new ports at the entrances of the recently-expanded Suez Canal were given to foreign global port operators through concessions and long-term leases. For example, Alexandria's main container terminal is under concession to HPH, Honk Kong; and Port Said to APM Terminal, based in The Hague, Netherland. Recently, El Sokhna, located at the southern entrance to the Suez Canal, was given to the Dubai-based DPW under a concession involving investments of \$700 million. This also was the case with Israel's new ports in Ashdod and Haifa, both were given to foreign concessionaires: Ashdod's new Hadarom port was given to the Swiss-based Terminal Investment Ltd (TIL) and Haifa's Hamifratz Port to the China-based Shanghai International Ports Group (SIPG), with each concession involving investments of about \$500 million.

Leasing Egyptian Land in Sinai

The El-Arish and South Gaza (see below) plans are based on long-term leases of Egyptian lands and therefore are critically dependent on Egypt's consent. The Egyptians have been consistently declaring their commitment to support the Palestinians in resolving the Israeli/Palestinian conflict. Egypt also maintains close relationship with both Hamas and Israel, including brokering the recent ceasefire between the two. Over the years, there were persistent news about talks between Egypt, the US and the PA regarding settling Palestinian refugees in northern Sinai, including suggestions that Saudi Arabia would compensate Egypt for this area. More recently, there were several indications of clandestine discussions about "triangular" transaction, whereby Israel compensates Egypt for the land transfer to the PA in Sinai with an equivalent land in the Israeli Negev.⁶⁴ Another option was an indirect transaction, whereby Egypt leases the land to Israel which, in turn, subleases it to the PA.

It should also be noted that Egypt already has used El-Arish Port to handle Gazan traffic, mainly relief cargo. During the Egyptian control of Gaza (1948 – 1967), all Gazan traffic also was handled through Port Said and Rafah crossing. Rafah crossing is still used sporadically, mainly for passengers.

The Port of El-Arish

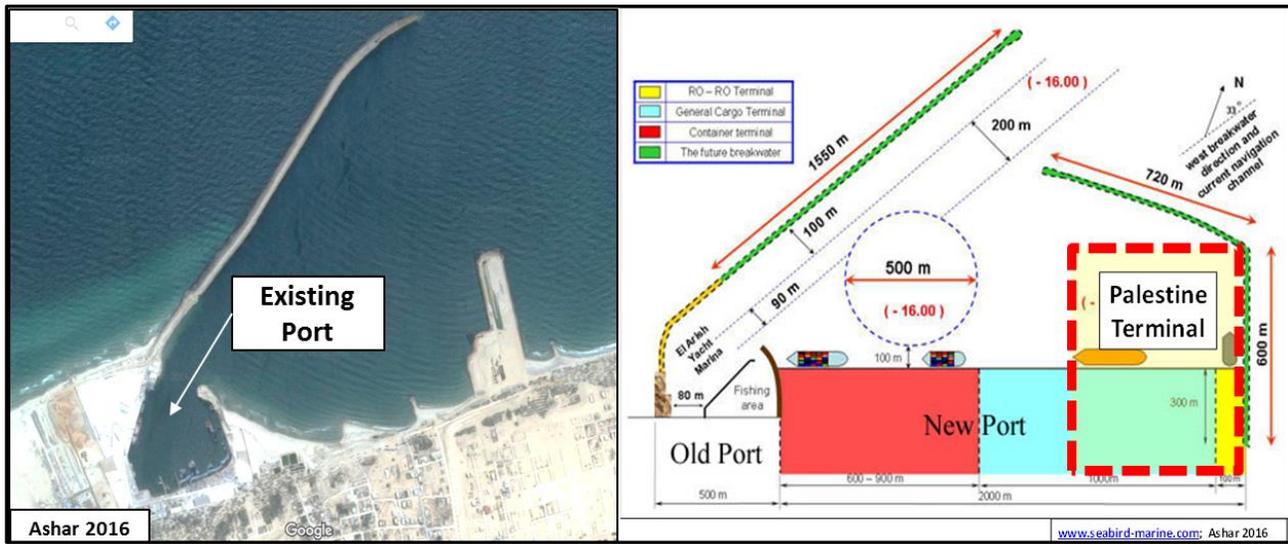
Figure 8 Present and Future Plans of El Arish Port shows, on its left panel, the existing port; and on its right panel, the expansion plan with the proposed Palestinian port. Presently, El-Arish has a small port, seen on the lower left panel of Figure 8. Current facilities include 2 piers, the largest of which 242 m with 7.5-m depth alongside and the smaller 122 m with 3.5 m depth alongside. The port was closed in recent years due to security concerns, but following recent improvement is expected to open soon. The port is mainly intended to serve local exports of salt, special sand for glass making and marble stones.

The future facilities of Al Arish are for a **major port**, as seen in the right panel of Figure 8. The specifications of the proposed port are still unclear. Older, 2008 plans, prepared by a renowned Japanese consulting firm (JICA), indicates a total berth length of 3.2 km (!) with -16 m alongside at a cost of \$2.01 billion. The first phase, including 500 m berth, is estimated to cost \$340 million. It seems, based on Figure 8, that El-Arish has already begun constructing a new breakwater, but stopped.⁶⁵ The reason for not pursuing the development of El-Arish, presumably, is that the local population of 160,000 and its related economic activity cannot generate sufficient traffic to justify the cost of constructing a major port. Apparently, to support the construction of a major port, Egypt needs the traffic generated by Gaza's population of 1.8 million. A probable arrangement would be for the Palestinians to have their autonomous terminal within the expanded El-Arish, as depicted by the red rectangle on the right panel of Figure 8, based on a long-term concession (but not sovereignty). Since the Palestinian terminal will be part of a larger port complex, it will have to cover only a portion of the cost of the marine infrastructure such as breakwaters and navigation channels. Accordingly, the estimated total cost of the Palestinian autonomous terminal ranges \$100 - 150 million. Based on worldwide experience, with that level of investment, the **Palestinian terminal in El-Arish is likely to be self-sustained**. However, there is no clear indication yet regarding when (and perhaps if) the new port of El-Arish will be developed.

⁶⁴ See: <http://www.ipost.com/Arab-Israeli-Conflict/Security-and-Defense-A-port-for-Gaza-in-Sinai-460436> and, especially, <http://www.middleeasteye.net/in-depth/features/analysis-there-plan-force-palestinians-sinai-1669375394>.

⁶⁵ More recently, Egypt announced its intention to build a completely new port outside the existing one. See: Port-to-Port, May 21, 2017.

Figure 8 Present and Future Plans of El-Arish Port



The Palestinian Port operations and the trucking to Kerem Shalom will be under the control of the PA and performed by Palestinian labor and trucks. To re-emphasize, all the Palestinian cargo in El-Arish will be trucked (and, in the future, railed) to the existing border-crossing complex in Kerem Shalom. Accordingly, the El-Arish/Kerem Shalom Plan is as secure as the present Ashdod/Kerem Shalom system. The goods moving between El-Arish (or South Gaza) and Kerem Shalom will be “in-bond” with Customs clearance provided at Kerem Shalom, as it presently done. See more on the future of Kerem Shalom in the next chapter on South Gaza.

The Ports of Ismailia and Port Said

Media publications on August 3, 2018 indicated that as part of a deal being formulated between Hamas and Israel, Gazans will be allowed to use the Egyptian port of Ismailia or, based on another source, Port Said.⁶⁶ Ismailia is a small port on Lake Timsah, a shallow body of water, located well inside Suez Canal. Ismailia Port has not been involved in international trade, following the development the much deeper and larger Port Said at the entrance to the Suez Canal. Port Said, the better choice among these two, could be connected to Gaza City’s Fishing Port via “sterile” ferry system, similar to that suggested for Larnaca, Cyprus. Still, the ferry-based system will have the same problems cited in the case of Larnaca: the added cost of double-handling and intermediate storage of cargo at the Egyptian port, the cost of inspection (by Egyptians?), the cost of the ferry itself and the (Israeli?) guard onboard, and the narrow dimensions of the Fishing Port.

A more economical option would be to truck the cargo from the Egyptian port to Gaza. But, if trucking is considered, El-Arish is by far superior to Ismailia and Port Said. Port Said is located 280-km away from Gaza by road and Ismailia 250 km – compared with 45 km for El-Arish and 10 km for South Gaza (see next chapter). Moreover, because Ismailia and Port Said are located well inside Egypt, developing a Palestinian autonomous presence there, including Palestinian administrators, labor and trucks, appears politically implausible (see next chapter). Altogether, as was the case with Larnaca, the alternatives of using Port Said and/or Ismailia do not make sense and, therefore, will not be further assessed in this report.

⁶⁶ See: <https://www.haaretz.com/israel-news/.premium-gaza-talks-end-to-border-protests-in-exchange-for-open-crossings-1.6340600?=&ts=1533315256022>

VI.2 Assessment

Israel's Security

In the El-Arish plan all the Palestinian traffic is moving through Kerem Shalom. Hence, in terms of security the plan is similar to current system using Ashdod. Still, there is some risk of “leakages” in El-Arish and along the road between El-Arish and Kerem Shalom, with prohibited staff finding its way through tunnels into Gaza. However, such risk already exists, since Israel gave up the control on Gaza’s southern border to Egypt. Moreover, Egypt seems to do a better job than Israel in maintaining security on Gaza’s southern border, including clearing a wide area and digging a channel with seawater along the border to flood tunnels.

Palestinian National Aspirations

Although the Palestinians will have their autonomous terminal, presumably named Palestine International Port in El-Arish, it will still be located on Egyptian soil well inside Egypt. Hence, this plan will only partially satisfy the Palestinian national aspirations.

Economic Feasibility

Constructing the port as part of a larger port complex would substantially save on investment cost. But, the 45-km of trucking between El-Arish and Kerem Shalom will add to the operating cost. Still, it is about half the present, 90-km Ashdod/Kerem Shalom trucking distance, which also involves using high-cost Israeli truckers.

Economic Impact

The development of the Kerem Shalom complex, as described above, is expected to have substantial economic impact on Gaza, the West Bank and to a lesser extent Egypt. The development of El-Arish port will also have substantial economic impact on Egypt’s Northern Sinai area.

Political Acceptance

The El-Arish/Kerem Shalom Plan depends on the consent of Egypt. It seems that the plan would be advantageous to Egypt since El-Arish Port will probably not be developed without the Palestinian traffic. Still, it could well be that despite Egypt’s public statements supporting the Palestinian case, Egypt, being worried of Hamas, would prefer to veer away from any real involvement in the conflict. A refusal of Egypt to assist with the Palestinian port may have far-reaching implications on their status in the Israeli-Palestinian conflict and among other Arab states. Egypt also will not be comfortable with Palestinian labor and trucks operating deep inside Egypt.

Hamas may object to the El-Arish plan viewing it as a threat to their Gaza City Port ambitions and an attempt by the PA to control Gaza. Still, in terms of actual cargo flow, the El-Arish plan is similar to the existing one through Ashdod, with both using Kerem Shalom. Hence, it is reasonable to expect Hamas to begrudgingly accept the El-Arish/Kerem Shalom Plan. Hamas may also realize that the “historical” Gaza City Port plan is technically impractical due to shortage of space and congested land access and that the El-Arish plan is preferable over the Ashdod one (Hamas prefers Egyptian control over Israeli one). The PA is likely to support the plan, extending its control and influence from Kerem Shalom all the way south to El-Arish, and expecting it to boost the development of the Kerem Shalom Complex, in which the PA is already present.

Israel has no political reason to oppose the plan and may even support it, seeing it as an important step toward implementing its declared policy of separating Israel from the Palestinians.

VII South Gaza / Kerem Shalom

VII.1 Description

Sea Extension of Kerem Shalom

This plan has much similarity to El-Arish/Kerem Shalom Plan, since in both plans the Palestinian port is located on Egyptian soil and the port traffic is processed through Kerem Shalom. The main differences are in location and type of port. Instead of locating the Palestinian Port 45 km away from Gaza in El-Arish, the South Gaza Port will be located on Egyptian land adjoining the south border of Gaza, 10 km from Kerem Shalom. Hence, the South Gaza seaport can be considered as “sea extension” of Kerem Shalom. Unlike the major port planned for El-Arish, the intention here is to develop a small, **local port** (see Section II.1). In both South Gaza and El-Arish cases, the PA (or a third party on its behalf, see below) will be granted a long-term lease for the port site, for which it will pay rent to Egypt based on a combination of fix and variable fee related to the tonnage handled at the Port (\$/ton). The PA (or a third party on its behalf) also will be responsible for the cost of constructing the port.

South Gaza will be an autonomous Palestinian port. Accordingly, the PA will assume all the operational and administrative responsibilities for the seaport and the corridor connecting it to Kerem Shalom where, as described in Section III.1, the PA is already actively involved. However, since the seaport and corridor are both located on Egyptian sovereign territory – the overall responsibility for security will remain with Egypt. That is, the Egyptian navy will supervise the sea traffic to/from the seaport and the Egyptian army the land traffic to/from Kerem Shalom through the corridor. In this respect, there is no difference in terms of security between South Gaza and El-Arish ports, as well as the present Gazan cargo handled at Egyptian ports.

Port Facilities and Cost

The envisioned South Gaza port will be a local port (see Functional Categorization), meaning a general-cargo port geared toward handling the specific goods and cargoes required by Gazans: imports of construction materials (cement, steel, lumber), basic foods (grain, flour, oil), live animals, energy products (fuel oil, gasoline), cars, farm and earth-moving equipment, and exports of fresh produce, furniture, textile, etc. Most of the cargo handled at this port will be carried onboard multi-purpose ships, Ro-Ro ships, small bulk ships and small (Panamax) feeder/shortsea containerships of up to 40,000 dwt. Some of the ships could combine a call in Israel or Egypt with a call in South Gaza. For example, a ship with bringing 20,000 ton of cement, could discharge 15,000 ton at an Israeli port and 5,000 ton at South Gaza.

The proposed seaport facilities are relatively small and only include the ship-handling activities, with all terminal activities handled at Kerem Shalom. Based on preliminary engineering, the seaport will only require 900 m of shore line. Phase I facilities will include breakwaters, entrance channel, 450-m turning basin, 650-m dock (3 berths) with 12-m depth alongside, 2 ha of paved yard, utilities, tugs, and cargo handling equipment (Mobile Harbor Cranes, forklifts, tractors), with capacity of about 3+ million tons. The total investment is estimated at \$200-250 million and construction time of 2-3 years. Phase II will double the number of berths and the respective port capacity. Maspenot Port in Haifa, serving as a model for South Gaza Port, has an active dock of about 750-m, and currently handles 3 million tons/year but, according to its manager, has capacity to handle 5 million tons.

Private Global Port Operator

It is reasonable to expect that the PA mandates that all Gaza's traffic will be directed through South Gaza Port. Hence, the port will have a captive market which, when combined with the relatively-small investment, will make it profitable and attractive to the private sector. Ideally, the port will be operated by a partnership between the PA and a global port operator (**GPO**), who also will be the investor. However, due to the desire of Egypt to avoid any insinuation that Egyptian land is given to Palestinians, the concession and the land lease can be assigned to the GPO who, in turn, will contract with the PA. This also is the current situation in both Egypt and Israel, where all new ports were given in long-term concession to GPOs. The Egyptian ports under concession include: Alexandria to Hong-Kong-based Hutchinson; Port Said East, currently the largest Egyptian container port located at the strategic north entrance to Suez Canal, to Hauge-based APMT; and Sokhna, located nearby the south entrance, to Dubai-based DP World.

Direct Delivery from South Gaza Seaport to Kerem Shalom Inland Port

The operations system of the port will be based on **direct delivery, with no cargo stored at the seaport**, on Egyptian land. The intention is to limit the use of Egyptian land to a narrow strip of shoreline as well as the security risk. Direct delivery is a common practice for most of the general (non-containerized) and bulk cargo in Ashdod, with outside trucks are parked on the dock nearby the ships, loaded at shipside with the cargo discharged from the ship, and driven out of the port to importers' sites outside the port. The operating system envisioned for South Gaza will be similar, except that the imported cargo will be transferred from ships to **port trailers** and immediately transported to Kerem Shalom for storage and processing. Accordingly, Kerem Shalom will be transformed into a land-based port, or **inland ("dry") port**.⁶⁷ Export cargo will follow similar process, but in opposite direction. Altogether, the seaport will function as **sea extension of Kerem Shalom**.

Dedicated Inter-Port Corridor

The sea and inland ports will be connected via a special 10-km, dedicated and **secured road**, defined as **inter-port corridor**, considered as part of the sea and inland port complex. The corridor will be located in the no-man, 1-km wide security zone adjacent to the 20-m deep canal and fishing ponds that Egypt began digging along Gaza's southern border. Only port equipment, mainly yard trailers, will be allowed on the inter-port corridor. The inter-port transfer could be facilitated by using multi-trailer system ("rubber trains") such as that shown in **Figure 9** below. Conveyors and pipes also will be constructed inside the inter-port corridor to facilitate the transfer of inland and liquid bulk cargoes between the seaport and inland port. The proposed sea/inland port arrangement, defined as "detached dock", is common worldwide in cases whereby sufficient waterfront land is unavailable. This, for example, is the case with the recently-reconstructed Port of Prince, Haiti; Port of Valparaiso, Chile; Lirquen Port, Chile; DPW Port, Surabaya, Indonesia; Itapoa, Brazil; Pecem, Brazil⁶⁸; and many others.

⁶⁷ The inter-port trucking can be performed by multi-trailer system (MTS), whereby 3 – 7 trailers are permanently linked to create short trains. See: <http://www.buisscar.com/products/multi-trailer-systems-/multi-trailer-system-mts/>

⁶⁸ The distance between the dock and yare in Pecem is more than 4 km.

Figure 9 Multi-Trailer System to Connect South Gaza Sea and Inland Ports



South Gaza Complex: Seaport, Corridor, Inland Port, Industrial/Logistic Park and FTZ

Figure 10 South Gaza Port Plan illustrates the general arrangement of proposed seaport, located on the southern side of the Egypt/Gaza border, the port-corridor along the border and the Kerem Shalom Inland Port. Gaza Strip is densely populated. Kerem Shalom is located at Gaza’s widest and least populated region, where developable land is still available, and where Israel is likely to provide additional land as part of the future land-exchange with Palestine. Kerem Shalom can be expanded, becoming the logistic/industrial hub of Gaza, focusing on export/import-oriented activities. Accordingly, Kerem Shalom will be the origin/destination point of the import/export goods.

The following example will be used to illustrate the operation of the future South Gaza Port/Kerem Shalom system. Let’s take the case of a large Gazan importer of steel (or lumber, cement, tiles, autos, flour, etc.). At the present, the importer may have a relatively-small storage yard with capacity of 500 tons of construction steel (coils & rods) near Gaza City. Because of his small storage, the Gazan importer has to buy the steel from an Israeli importer, who brings the steel through the Port of Ashdod and store it in his yard in the vicinity in the Ashdod area. The steel is sent to Gaza via Kerem Shalom, 90 km south of Ashdod. In the future, the Gazan importer could have a much larger storage yard in Kerem Shalom Dry Port/Industrial Park with capacity of, say 5,000 tons or even 20,000 tons, allowing him to bring the steel by vessel directly to South Gaza Port to his Kerem Shalom yard, saving on both transportation and handling costs and commissions paid to the Israeli importer. In addition to storage yards, steel-related industries can be developed in Kerem Shalom, whereby steel coils are cut to dimension, bent into reinforcement forms and sent directly to construction sites in Gaza. Gaza Strip is small and the distance between Kerem Shalom, located at the southern tip of the Strip and Gaza City is only about 25 km. The port-based industrial park in Kerem Shalom could include manufacturing of various construction materials (ready-mix concrete, tiles, steel structures, doors & windows, sanitary fixtures), petrochemicals, plastics, fertilizers, auto parts, furniture, food products, textile, etc., all of which benefiting from the nearby South Gaza Port. Kerem Shalom could also be the location of warehouses and distribution centers (DC) for Gazan stores. A fresh produce center, with a packing house and cold storage, could be developed at Kerem Shalom to support the export of Gazan and, in the longer future, Israeli fresh produce.

South Gaza Seaport and the dedicated Port Corridor are on Egyptian land. However, the envisioned Kerem Shalom complex, as depicted in Figure 10, could encompass Israeli, Gazan and Egyptian lands and employs,

accordingly, Gazan, Egyptian and Israeli labor. Further discussion of this potential inter-country cooperation is included in the following section on Tri-State Industrial Park.

Figure 10 South Gaza Port Plan



Kerem Shalom’s Tri-State Industrial Park

Presently, Kerem Shalom’s only purpose is serving as a border crossing terminal; its main activity is inspection of Gazan import/export traffic. In the proposed system, Kerem Shalom undergoes two transformations into, first, seaport-support facility and, in the long future, tri-state logistic and industrial park. In the first transformation, the present border-crossing facilities will be expanded (100 ha) with storage yards and warehouses for cargoes in-bond, becoming an **“inland port”**. The second transformation includes further and much larger (1,000+ ha) expansion and declaration of a **Special Economic Zone (ECZ) status**, serving as a **Free Trade Zone (FTZ)**, logistic hub and industrial park for a wide-range of port-related industries. ECZ provides tax incentives and FTZ provides exemptions from Customs, both are designed to attract investments and facilitate the development of port-related industries. Egypt, a potential participant in Kerem Shalom transformation, has a long history of developing ECZs and FTZs nearby its major ports along the Suez Canal. Recently, DP World, a leading global port and logistic operator based in Dubai, established a joint venture with Egypt’s General Authority for the **Suez Canal Economic Zone** to further expand and enhance the zones.⁶⁹ Another example is **Jordan Gateway**, a

⁶⁹ See:

https://www.porttechnology.org/news/dp_world_to_develop_suez_canal_economic_zone?utm_source=GatorMail&utm_medium=email&utm_campaign=Newsletter+Daily+10-08-2017

DPW, mentioned previously as a potential operator of South Gaza Port, is the largest worldwide operator of FTZs and could also be involved in the development of the tri-state one in Kerem Shalom.

recently inaugurated FTZ and Industrial Park straddling the Israeli/Jordanian border, planned to reach 3,500 dunams (350 hectares), and expected to employ 13,000 people, Israelis and Jordanians.⁷⁰

Kerem Shalom has a strategic location, at meeting points of the borders of Gaza, Egypt and Israel, and therefore, in the future could be declared a **tri-state Free Trade Zone (FTZ)/special Economic Zone (ECZ)**. A future peace agreement will diffuse the security concern, facilitating Kerem Shalom's FTZ/ECZ industrial activities, as well as the trade-flows between Gaza, Israel and Egypt funneled through it. Kerem Shalom also will be connected to the Israeli rail system which, in turn, will be extended to the West Bank and to Egypt. In addition, the **Nitzana** Border Crossing will be relocated to Kerem Shalom. The expanded Kerem Shalom also could be used to move goods between Egypt and Gaza, by extending its area to include the nearby **Salach-a-Din** border-crossing located about 2 km to the west. In this case, Rafah Crossing will only be used for passengers, complying with the 2005 Agreement on Movement and Access.⁷¹

The Israeli rail system, which already reaches Netivot, about 40 km north of Kerem Shalom, will be extended to reach Kerem Shalom, resulting in a direct rail connection to the border crossing of the West Bank in Tarkumiya, near Hebron, 100 km away. The Israeli rail system would be used to transfer inspected foreign goods to/from the West Bank via "**landbridge**" services by unit-trains.⁷² The same rail service also will be used for handling **intra-Palestinian traffic** between Gaza and the West Bank. To support this rail operation, a large intermodal and switch/storage yards will be developed at Kerem Shalom. Finally, Kerem Shalom will be connected to the Egyptian rail system and the nearby airport at Dahaniya rehabilitated, turning Kerem Shalom into a major **transportation hub**, with superior **road, rail, sea and air connectivity**.

Space Availability in Kerem Shalom

Figure 11 Kerem Shalom Surrounding Areas shows an aerial photo of Kerem Shalom Border-Crossing Terminal in Israel, the complimentary inspection facilities in Gaza and the nearby region. The availability of developable areas in this region is clearly evident in this figure. The developable area, on the Israeli side, currently used for agriculture, amounts to more than a thousand hectares (10 sq km). Some of this area could be annexed to Gaza as part of the future land-exchange between Israel and Palestine, as already discussed at the Annapolis Conference, 2008.⁷³ The developable area on the Egyptian side of Kerem Shalom is much larger, since the desert-like region is sparsely populated. There also is some developable area on the Gazan side, mostly south and west of Dahaniya Airport.

Gaza Strip is already densely populated. The Portland Trust 2050 Plan for Gaza Strip indicates that its annual population growth rate of 3.4% is one of the highest worldwide.⁷⁴ At this rate, the remaining open areas between the urban centers in the Strip will be soon fully occupied. Kerem Shalom is located at the widest and least populated section of Gaza, where open space is still available. For this reason, the 2050 Plan designated the area across from Kerem Shalom as Gaza's main industrial area. This also is the aim of South Gaza/Kerem Shalom plan.

⁷⁰ Watch: <https://www.youtube.com/watch?v=Q0TB7d16uKI>

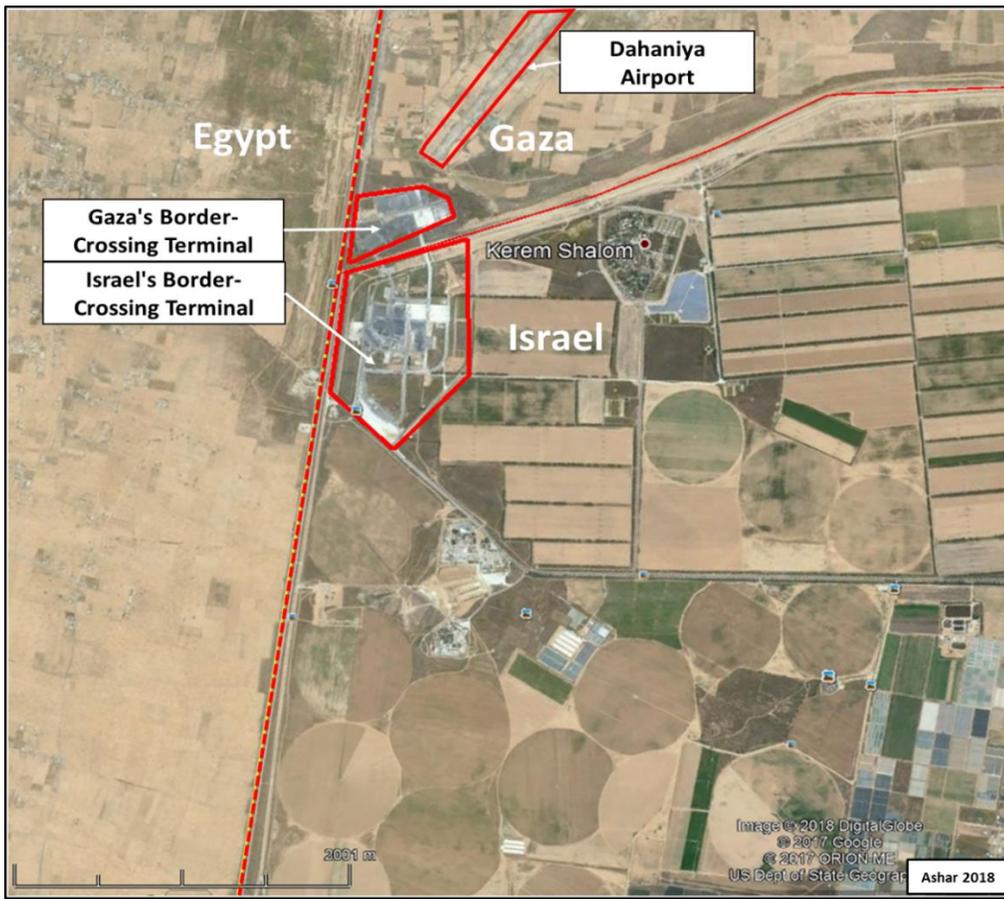
⁷¹ See: <http://www.palestinechronicle.com/rafah-crossing-to-open-is-egypt-changing-the-rules/?print=pdf>

⁷² The concept of landbridge, developed in the 1980s the US, refers to a rail route between the West and the East Coasts as a substitute to a longer sea route through Panama Canal. See: https://en.wikipedia.org/wiki/Land_bridge

⁷³ See: http://www.shaularieli.com/image/users/77951/ftp/my_files/maps/hesderim_mediniim/map30.gif?id=10118316

⁷⁴ See: <http://www.connectedgaza.com/contactus>

Figure 11 Kerem Shalom Surrounding Areas



Kerem Shalom Role in Peacetime

A final peace agreement is likely to diffuse the security concern and enhance Kerem Shalom's FTZ/ECZ industrial activities. In parallel, the peace will increase the Israeli/Palestinian, intra-Palestinian and Egyptian/Palestinian trade and traffic, all of which will be processed through Kerem Shalom. Processing traffic of goods through national borders, even between friendly nations, requires large border-crossing facilities even between friendly countries.⁷⁵ The increase in the import/export activities will also require a respective expansion of the seaport, which could still be fitted within the 1-km shoreline concession.

Long-Term Israeli/Palestinian/Egyptian Regional Port and Transportation System

The main role of Kerem Shalom at the present is security inspection which, as stated at the outset of this report, is the most critical component of all Gaza port plans. Following a final peace agreement, security will be less of a concern and, hopefully, in the long-term, totally dissipated. There will be need only for customs and related examinations common in every port such as health, agricultural, dangerous materials, etc. Ideally, the Kerem Shalom complex also will be jointly managed by Palestine, Israel and Egypt. Eventually, Kerem Shalom will become a large industrial/logistic complex, straddling over three states with close trade relations.

⁷⁵ For example, the Laredo Crossing complex in the border crossings between Mexico and the US.

At his stage, all regional ports, in Israel, Gaza and Egypt, could be used interchangeably, becoming part of a comprehensive network of ports connected by road, rail, and coastal shipping, offering regional shippers a wide selection of routing options. For example, an Israeli farmer located in Southern Israel may prefer using South Gaza for his exports to Europe due to its proximity or, perhaps, availability of special facilities for handling fresh produce; a Palestinian importer of containerized goods located in Gaza City will have the choice of bringing his Asian import through Ashdod or El Arish; a Palestinian exporter of containerized goods to Europe located near Hebron could use either Ashdod or South Gaza; and an Egyptian importer of containerized goods located in North Sinai will have the choice of using Ashdod or El Arish.

Immediate Steps to Enhance Kerem Shalom

The present Ashdod/Kerem Shalom system, although functioning well, is expensive and cumbersome. To improve the present system – and to lay the foundation for future developments -- it is proposed to begin right away the expansion of Kerem Shalom by adding bonded and unbonded storage areas for cargoes. These areas will be given in concession to private operators, desirably joint ventures between Gazans and Israelis. The bonded areas will allow large Gazan importers to bring and store larger volumes of cargo (e.g., steel) in Kerem Shalom. The storage will allow the development of an efficient night-time shuttle system of trucking between Ashdod and Kerem Shalom. Another option is to extend the Israeli rail system to Kerem Shalom and begin a rail shuttle between Kerem Shalom and Ashdod. In addition to savings in storage and transportation costs, the proposed system will relieve the congested roads leading to Kerem Shalom from heavy truck traffic.

South Gaza Port as Part of the US-Sponsored “Deal of the Century”

Recent publications claim that Trump administration’s peace plan, dubbed the “deal of the century”, involves transferring areas from Egypt to the Palestinians in North Sinai, although Egypt vehemently rejects any land transfer to Gaza.⁷⁶ It therefore seems that the “deal” is unlikely to involve transfer of land from Egypt to Gaza, but only the development of an industrial park in North Sinai, whereby Egypt would allow the employment of Gazan labor.⁷⁷ As noted in Section V.1, prior to 2007 there was a similar arrangement with Israel whereby 120,000 Gazans were crossing daily into Israel to find employment in construction, agriculture and services. South Gaza Port and the related development of **Kerem Shalom’s industrial park could serve as the first step of the US-proposed “deal”.**

South Gaza Port vs. a New Palestinian State in North Sinai

Figure 12 presents one version of several past and present plans for creating a new Palestinian state in Northern Sinai, which also includes a port. These plans, the most known of which is sometimes called “Eiland Plan” after its proponent Major-General (ret.) Giora Eiland, involve a circular exchange of lands, in which Egypt grants the Palestinian a large area in North Sinai and, in return, compensated by Israel with a similar area in the Negev (Southern Israel). The New Palestinian State (NPS) is a recent version of this plan, creating the so-called New Gaza on an area roughly similar to that in Figure 12.^{78 79} The area of the expanded Gaza is about 50 x 50 km, five times (!) the area of Gaza Strip. The large area is needed to resettle Palestinian refugees expected to return from the various diasporas, in addition to refugees from overcrowded camps in Gaza and the West Bank. Although not specifically stated, it seems that the intention is for the Sinai-based Palestinian State to substitute for a future Palestinian State in the West Bank.

⁷⁶ See: <https://www.middleeasteye.net/news/us-donald-trump-deal-of-century-middle-east-peace-plan-already-happening-israel-palestine-1066744202>

⁷⁷ See: <https://www.alaraby.co.uk/english>

⁷⁸ Giora Eiland, Regional Alternatives to the Two-State Solution, BESA, 2010 includes a comprehensive discussion of this and other options.

⁷⁹ See: <https://newstatesolution.org/>

The various plans for transferring areas in Sinai to the Palestinians are in direct contrast with the recently-announced Egyptian plan to invest \$15 billion in developing North Sinai. The plan calls for increasing the current population of about 0.5 million by moving and settling there 8 million Egyptians from the congested Delta Region.⁸⁰ The center of this Egyptian development seems to be El-Arish and its future port. Interestingly, both Eiland and NPS land-transfer plans for the North Sinai Palestinian State also include a development of a major port in Sinai, presumably at El-Arish.

Eiland and NPS plans are totally different from South Gaza Port plan, which involves no transfer of Egyptian land to Palestinians and only involves a development of a relatively-small port on about 1 km of leased shoreline adjacent to the border to a Global Port Operator. To re-state, in the South Gaza Port Plan the Egyptian border with Gaza remains unchanged.

Figure 12 Palestinian State in North Sinai and Gaza



VII.2 Assessment

Israel's Security

The security system in South Gaza Port, based on processing all the port traffic through Kerem Shalom, is similar to the current one.

⁸⁰ See: <https://www.al-monitor.com/pulse/originals/2018/09/egypt-development-plan-sinai-terrorism.html>

Palestinian National Aspirations

The South Gaza Plan should be much more appealing to the Palestinians than the El-Arish one because of the proximity to Gaza and the lesser involvement and dependency on Egypt.

Economic Feasibility

Constructing a standalone port in South Gaza, even with only basic marine facilities, would be more expensive than being a part of a larger port complex in the El-Arish plan. It could well be, however, that the difference in investment costs will be more than offset by savings in trucking costs to Kerem Shalom (10 km vs. 45 km) and the higher operational efficiency resulting from the better integration between the sea and inland ports.

Economic Impact

There is no difference in the economic impact between South Gaza and El-Arish, since both involve the development of the Kerem Shalom complex. However, because of its location on the Gazan border, the impact of South Gaza port on Egypt's Northern Sinai will be more limited than that of El-Arish Port. Still, Egyptian labor is expected to be involved in construction and operation of this port and, in the longer future, the tri-state Free Trade Zone in Kerem Shalom. In addition, Egypt will benefit from concession fees and rental payments.

Political Acceptance

Much like the El-Arish plan, South Gaza plan depends on Egypt's consent. But, unlike El-Arish, the **Egyptian involvement here is minimal** -- leasing out a small sliver of shoreline in a remote, unhabitated corner of Northern Sinai. To avoid the perception of Egyptian land given to Palestinians, the actual port concession and land lease could be with a Global Port Operator perhaps, one already involved with Egyptian ports. Moreover, since the seaport connection to Kerem Shalom inland port is via a dedicated, secured road, there will be **total separation between the Palestinian traffic and the Egyptian territory**. In comparison, in the El-Arish plan, whereby the Palestinian terminal is located well inside Egyptian territory, Palestinian trucks with Palestinian cargo will have to travel a long way on public Egyptian roads. Hence, the South Gaza plan may better suit the Egyptian desire to limit its involvement with the Palestinians while still retaining control over them. Egyptian refusal to participate in this minimum-involvement plan, is likely to erode Egypt's standing vis-à-vis the Israeli/Palestinian conflict and its overall leadership stature in the Arab world.

The PA is likely to support the plan, extending its control from the existing Kerem Shalom inland port to South Gaza seaport, as well as including the future, expanded Kerem Shalom industrial park. Moreover, South Gaza Port could allow PA to demonstrate to Gazans its valuable role. Hamas may initially object to the South Gaza plan, viewing it as a death blow to its aspiration for a Gaza City Port. However, realizing that reviving the "historical" plan for Gaza City Port in the small area available at Nuseirat is technically impractical and will never be accepted by Israel and Egypt, Hamas may begrudgingly consent to it. It should be noted, again, that Hamas implicitly cooperate with the existing system through Ashdod and Kerem Shalom, which is similar operationally to South Gaza and Kerem Shalom.

As is the case with El-Arish, Israel has no political reasons to oppose to the South Gaza Plan.

VIII North Gaza / Zikim

VIII.1 Description

The North Gaza Port Plan is a mirror image of the South Gaza Port Plan, except for its location on the northern border of Gaza with Israel. **Figure 13** shows the two plans, both are based on locating the marine and inspection facilities **adjacent, but outside Gaza**. As seen in this figure, in South Gaza the marine facilities are located in Egypt while the cargo storage and inspection in Israel; In North Gaza the marine and inspection facilities are in Israel and cargo storage in Gaza.

Figure 13 North vs. South Gaza Plans



Because of the similarity between North and South Gaza plans, the following sections is brief and the comparison of the North Gaza Plan is mainly with South Gaza Plan. **Figure 14 North Gaza Port Plan** illustrates the envisioned seaport and adjacent border-crossing terminal hereafter defined **Zikim Border-Crossing Terminal**, due to its proximity to the nearby kibbutz with the same name. As seen in this figure, the seaport is located on a short stretch of shoreline, not far away from the existing coal dock of Ashkelon’s power station. The planned Zikim Crossing occupies about 40 hectares (400 dunams) of the uninhabited sand dunes bordering the partially-occupied military base in Zikim. The area is currently declared a closed military zone due to its proximity to the border.

Figure 14 North Gaza / Zikim Plan



The envisioned operating system of North Gaza is similar to that of South Gaza, except that the inspection facilities are located at the back of the marine facilities vs. 10-km away in South Gaza, resulting in savings in transport costs. The inspection system in North Gaza is similar to that in South Gaza, involving grounding the Gazan cargo in cells and using “sterile” trucks to move the cleared cargo to a similar facility across the border, marked in Figure 14 as Jabalia Crossing. The Jabalia Crossing is located in the so-called Northern No-Go Zone and therefore, does not require relocation of Gazan inhabitants.

The main advantage of North Gaza Plan is political since, unlike South Gaza, Israel can implement it on its own without Egyptian consent. However, because of the port's location on Israeli land, the Palestinians may view it as a variation on the already-rejected Ashdod Dedicated-Pier Plan. The main disadvantage is the lack of developable land on the Israeli and, especially, on the Gazan side, as can be seen in the previous Figure 5. The site on the Gaza side is nearby the sprawling refugee camp of Jabalia and the nearby Beit Lahia, to be used for future expansion. It is unlikely that the small Zikim Crossing will be capable of handling all the international, Israeli and intra-Palestinian traffic presently processed in Kerem Shalom and certainly not any significant traffic growth. Due the shortage in land, the port-related facilities inside Gaza (Inland Port, see section on South Gaza) would be limited. Likewise, there is no land in the region between Gaza City and the Israeli border for a large-scale, port-related industrial park. The lack of developable land in North Gaza Plan should be contrasted with the ample land available in South Gaza Plan as seen in Figure 10 showing the Kerem Shalom vicinity.

VIII.2 Assessment

Israel's Security

The security system in North Gaza Port, with all the port Gazan cargo inspected in Zikim, is similar to the current one based on Ashdod and Kerem Shalom.

Palestinian National Aspirations

The North Gaza Plan is less appealing to the Palestinians than the South Gaza Plan, preferring Egyptian control over an Israeli one.

Economic Feasibility

As is the case with South Gaza, constructing a regional (meaning small) port with only basic marine facilities, enjoying a monopoly for handling Gazan cargo, should be economically viable. North Gaza has a better location than South Gaza due to its closer proximity to the West Bank and Israel.

Economic Impact

The economic impact is limited, since there are no areas for significant industrial development such as those available in South Gaza (Kerem Shalom). Likewise, there will be no economic impact on Egypt.

Political Acceptance

The plan may appeal to the Palestinians because of the possibility for immediate implementation and, perhaps, an expectation that the Israeli area adjacent to the border will be eventually annexed to Gaza as part of the land exchange.

From Israel's standpoint, there is no difference between this plan and the already proposed Ashdod dedicated pier one. Still, Israel may vehemently object to it because of the perceived transfer of Israeli areas to Palestine.

IX Summary Comparison and Preliminary Selection

Figure 15 Summary Comparison of Gaza Port Plans presents a table, rating the five alternative plans according to the criteria discussed before, excluding the criterion Political Acceptance. The rating of plans in Figure 15 by the number of stars is admittedly crude and solely reflects the opinion of this author, pretending to play the role of a neutral observer. Note that, intentionally, no valuation (relative weight) is assigned to the criteria. Naturally, each of the four parties, Israel, PA, Hamas and Egypt will assign different weights to each criterion. For example,

the most important criterion for Israel is Israel’s Security, while National Aspirations is the most important one for the Palestinian factions. Unfortunately, the two criteria are poised in opposite directions with higher Israel’s Security achieved at the expense of lower level of Palestinian Nationality. It could well be that the Palestinians may be willing to compromise on Nationality in return for better Economic Feasibility and/or higher Economic Impact. Indeed, the intention in the rating is not to identify the “best plan” by counting and aggregating the stars compiled by each plan, but to **illustrate the tradeoffs** between the various criteria within and between plans. Figure 15 only includes the criteria considered as most relevant; many more could be unraveled during an in-depth study. Moreover, the basic assumption underlying the political assessment may change if, for example, the PA and Hamas rejoin forces.

This report is based on a preliminary study which has to be expanded prior to undertaking any decision. Still, even at this early stage, it seems that **the preferred alternative is South Gaza Plan**. This plan seems to be the only one which fully satisfies Israel Security requirement while fulfilling most, but not all, the Palestinians National Aspirations. South Gaza port plans can be **implemented even in the unfavorable, present political situation**; it is not contingent on fulfilling Israel’s demand to disarm Hamas or on PA’s gaining military control over the Gaza strip. South Gaza plan is, in essence, a “marine extension” of the present Kerem Shalom system. Moreover, since the envisioned South Gaza Port itself is a common, relatively simple port with standard facilities, construction could begin even before finalizing the design and environmental assessment, including mining and transporting rocks for breakwaters, developing a concrete plant, assembling materials for the intra-port road, etc. Accordingly, acceptance of the plan will immediately create jobs and income for Gazans and Egyptians. Still, South Gaza main advantage is its **long-term prospects** -- the transformation of Kerem Shalom from a border-crossing terminal into an inland port and, eventually, a large complex of FTZ, SCZ and industrial park straddling Gaza, Israel and Egypt.

Altogether, the immediate purpose of the report, as noted at the outset, is to serve as an agenda for a special conference on Gaza Port. The hope is that a successfully dealing with a tractable issue, Gaza Port, will pave the way for coping with the seemingly-intractable core issues of the Israeli/Palestinian conflict.

Figure 15 Summary Comparison of Gaza Port Plans

Port Plan	Criterion				
	Israel's Security	Palestinian National Aspirations	Economic Feasibility	Economic Impact Gaza	Economic Impact Egypt
Ashdod/Kerem Shalom (Present)	★★★	---	★	★★	---
Gaza City (Hamas)	---	★★★	★★	★★	---
Gasa Island (Katz)	★	★	★	★	---
El-Arish/Kerem Shalom	★★★	★	★★★	★★★	★★★
South Gaza/Kerem Shalom	★★★	★★	★★	★★★	★
North Gaza/Zikim	★★★	★	★★	★★	---

X Long-Term Regional Port and Transportation Plan

The proposed South Gaza Palestinian Port is expected to serve both Gaza and West Bank. To facilitate the connection between the two, Kerem Shalom should be connected via rail to the West Bank. An inland port, similar to that in Kerem Shalom, could be constructed at the border crossing. Once the connection established,

the PA will encourage and, perhaps, enforce all the Palestinian importers and exporters to use its seaport in South Gaza.

However, in the longer future, when the Israeli/Palestinian relation stabilizes, a **competitive port and transportation system transcending national borders** will emerge in the region, as common in many regions worldwide.⁸¹ For example, it could well be, that despite having their own autonomous port, some Gazan shippers will still prefer using Ashdod, since major shipping services such as those to Asia and the US, will only stop there. Likewise, due to geographical proximity, Palestinian shippers located in the northern part of the West Bank will prefer using Haifa Port, while Israeli shippers located in the southern part of Israel prefer using Kerem Shalom and South Gaza Port. Another future development could include extending the Israeli rail system into the West Bank, providing landbridge services to intermodal yards and logistic centers located at the population centers there. In the far future, the rail service could be extended south into Egypt, utilizing part of the pre-1967 trackage. Altogether, the future port and transportation system will enhance regional competition and coordination to the benefit of both Palestinians, Israelis and Egyptians. **Figure 16 Long-Term Regional Port and Transportation Plan** illustrates the various port and routing options that Palestinians – and Israelis -- could have in the future

Figure 16 Long-Term Regional Port and Transportation System



⁸¹ German shippers use Dutch and Italian ports; US shippers use Canadian ports, etc.

XI Appendix A: Gaza Seaport Group of Experts

The Gaza Port Group of Experts is an Israeli/American/U.K. think tank of individuals with expertise in the areas of ports, shipping, logistics, marine engineering, security and Middle East affairs. The Group is a-political and organized on a voluntary basis. The Group intends to provide professional advice and support in the planning and development of a Gazan seaport, satisfying both Palestinian national aspirations and Israel's security concerns. Presently, the group has 11 members, alphabetically listed below:

Asaf Ashar, Ph.D., Professor-Research (emeritus), National Ports & Waterways Institute, UNO/LSU, USA. Previously, Senior Planner, Port of Seattle, USA and Advisor, Israel Port Authority. More than 40-year of worldwide experience in planning of ports, shipping and intermodal transportation systems among them: Panama Canal expansion, Chili's national port masterplan, China's Yangshan Port Complex (Shanghai), US Pacific/Atlantic/Gulf Coast Ports, Africa's East/South/West ports and others. **Group organizer**, together with Nachum Ganzarski.

Joseph Bassan, B.Sc., M.Sc., Industrial Engineering (Technion, Israel) – Previously, Acting CEO, VP Operation and VP Engineering & Logistics of Ashdod Port. Past Chairperson, IAPH (International Association of Ports & Harbors) Committee for Cargo Operations and Handling. Independent Consultant, port planning and operations. Lecturer, ports and marine logistics, Haifa University, Israel.

Raphael Danziger, Ph.D., History (Near Eastern Studies), Princeton University, USA. Previously, Research Director of AIPAC, Editor of the Near East Report, and in charge of relations with the diplomatic community in Washington DC. Had many contacts with the Palestinian Authority, especially with former Prime Minister Salam Fayyad. Taught at Haifa University and the University of Washington, USA. Currently, a part-time research consultant to AIPAC and contributor to the Near East Report.

Nachum Ganzarski, B.Sc., Industrial Engineering (Technion, Israel), Senior Executive Program, Northwestern University, USA. Former president of Israel Chamber of Shipping, VP Planning and Business Strategy and President, Asia & Australia Region, Zim Integrated Shipping Inc. A shipping executive with more than 40-year experience in planning, management and leadership positions, in shipping, global logistics and supply chain. Lecturer, MBA program, shipping & logistics, Haifa University, Israel. **Group organizer**, together with Asaf Ashar.

Arie Gavish, BA, MA, Political Science and History (Haifa & Tel Aviv Universities). Previously, CEO, Ashdod Port, during the construction of a major container terminal; Manager, Haifa Port at the Israeli Port Authority, during the reform of the Israeli port system involving transition to “landlord”, focusing on a new regulatory system. Navy Captain (Ret.) Israeli Navy, commanded ships, the Head of Red Sea Command and the Navy Attaché to the US. Senior Researcher, Center for Maritime Policy & Strategy, Haifa University, Israel.

Ben Hackett, BA, MA, Economic Integration, co-owner of Hackett Associates LLC. Previously, Executive Managing Director, HIS Global Insight, Inc., a world-leading consulting firm specializing in planning and forecasting, working for the World Bank, IMF, EU, NATO, governments, port authorities and shipping lines, among them Zim. More than 40-year experience in the maritime and transportation industry. Lecturer, MA Logistics, Transportation Institute, University of Denver, USA. A columnist for Port Strategy Journal and the founder of the Global Port Trackers newsletter (jointly with ISL of the University of Bremen, Germany), providing trade forecasts to many North America and North Europe ports.

Pinhas Inbari, Senior Analyst on Palestinian and Middle-East Affairs, the Jerusalem Center for Public Policy (JCP). A veteran researcher, correspondent and commentator, who formerly reported for Israel Public Radio and *Al Hamishmar* newspaper, and currently reports for several foreign media outlets. The author of several books, among them *The Palestinians Between Terrorism Statehood*. Conducted the last interview with Arafat before he fell ill and the first with Hanniya after being elected as Hamas' head in Gaza. His blog: pinhasinbariblog.net

Steven (Zvi) Karni, Ph.D., Naval Architecture and Marine Engineering (University of Michigan, USA). VP Business Development, Alion Science & Technology, USA. Navy Captain (Ret.), Israeli Navy, the commander of the Navy's shipyard and the Navy's Ship Procurement Division.

Michael Ratner, Architect and Urban Planner. More than 40 years of experience in urban planning, seaport and airport master-planning, navy base master-planning, industrial parks development, re-zoning and regional expansion. Most recently, developed a regional plan for a new seaport and international airport for Haifa.

Rami Raviv, B.Sc., M.Sc. Marine Structures, TU Delft, Netherland. President, Rami Raviv Eng., Ltd., Israel. Projects of interest: LNG Port, Nigeria; General Cargo Port, Angola; several Marines and Coastal Zone development projects, Israel; Advisor to Israel's Interior Ministry Committee for Coastal Zone. Previously, naval officer with the Israeli Navy.

Leonard Sugin, PE, BCE, MCE, Dipl. Port Engineer, F. ASCE. Previously, president, Soros Associates Inc., USA, an international consulting engineering firm specializing in ports and material handling. More than 50 years of worldwide experience in the planning, operational analysis, engineering, design, construction, and operations of ports, harbors, marine facilities, container terminals, infrastructure, cargo handling equipment, and transportation systems. Recent projects: Independent Engineer Caldera Port Expansion, Costa Rica; Concession Monitoring Puerto Cortes, Honduras; Independent Engineer TCBuen Phase I & II, Colombia.