FEASIBILITY STUDY FOR THE TRIPOLI SPECIAL ECONOMIC ZONE

PHASE 1 SUMMARY REPORT

USAID TRIPOLI SPECIAL ECONOMIC ZONE FEASIBILITY STUDY PROJECT

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DISCLAIMER:

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TSEZ FEASIBILITY STUDY

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ABBREVIATIONS

BPO	Business process outsourcing
BRHIA	Beirut Rafic Hariri International Airport
CCTV	Closed circuit television
CDR	Council for Development and Reconstruction
EDL	Electricité Du Liban
EELN	Etablissement des Eaux du Liban de Nord
EIA	Environmental impact assessment
ERR	Economic rate of return
EU	European Union
FDI	Foreign direct investment
FEU	Forty-foot equivalent unit
FMCG	Fast-moving consumer goods
GAFTA	Greater Arab Free Trade Area
GoL	Government of Lebanon
Hz	Hertz
IC	Industrial city
ICD	Inland container depot
ICT	Information and communication technology
IDAL	Investment Development Authority of Lebanon
ie.	*Id est* (Latin: “that is to say”)
IRR	Internal rate of return
Km	Kilometer
LBP	Lebanese pound
LLC	Limited liability corporation
m^2	square meters
MPW	Ministry of Public Works
NA	Not applicable
No.	Number
OET	Office des Eaux de Tripoli
PPP	Public-private partnership
RKF	Rachid Karami Fairground
SEZ	Special economic zone
SME	Small and medium-sized enterprise
TEDA	Technological and Economic Development Area
TEU	Twenty-foot equivalent unit
THC	Terminal handling charge
TSEZ	Tripoli Special Economic Zone
UAE	United Arab Emirates
UPVC	Unplasticized polyvinyl chloride
US	United States
US$	United States dollar
USAID	United States Agency for International Development
VOIP	Voice over internet protocol

TRIPOLI SPECIAL ECONOMIC ZONE FEASIBILITY STUDY

EXECUTIVE SUMMARY

The Tripoli Special Economic Zone (TSEZ) is a bold and timely initiative for Lebanon. It is the first project of its kind to develop a multi-use economic zone complete with all required infrastructure and utilities. The Lebanese business community has already demonstrated its ability to design and produce innovative products and services in a variety of industry sectors, ranging from software to electronics. The creation of the TSEZ will attempt to overcome the barriers that have stymied foreign direct investment (FDI) and prevented many local private sector businesses from expanding their current facilities.

Photograph by Andrea Erdmann, Sibley Int'l

Circuit board—designed and manufactured in Lebanon. Lebanese have the ingenuity, talent, and broad business connections. Now, they need the industrial infrastructure.

The government of Lebanon has recognized the important role it plays in ensuring the developmental success of the TSEZ. From coordinating among government ministries to providing support for off-site infrastructure, the government is an important partner and stakeholder in the project. In 2005, Lebanon's parliament passed the TSEZ Law No. 18, which creates the framework for the zone and the Authority that will regulate it. It has now become a policy priority to move ahead with the zone development. At the request of the Presidency of the Council of Ministers, the United States Agency for International Development (USAID) is providing technical assistance to prepare the TSEZ Feasibility Study. The USAID-funded assistance is being implemented by Sibley International LLC, and is expected to run through July 2011.

An important precursor to this feasibility study was the publication of a report entitled "Anchoring the Tripoli Special Economic Zone: Towards Enhancing Backward and Forward Linkages with the Host Economy." This report was completed at the request of the Presidency of the Council of Ministers under the supervision of Dr. Sateh El-Arnaout, Chief Technical Advisor. It provided background information pertaining to the establishment of the TSEZ, and formed the objectives of the TSEZ Feasibility Study.

The TSEZ Fasibility Study is now at a midway stage of completion. This Phase 1 Summary Report provides the government of Lebanon with the initial findings of the TSEZ Feasibility Study, as well as recommendations on the next steps and actions for completing the feasibility study for one of the proposed TSEZ sites—Port Site, North (Al Qleiat) Site, or Rachid Karami Fairground (RKF) Site. This report assesses the infrastructure requirements, as well as environmental protection, transportation, and market analysis, and demand forecasts for each site. It also assesses the institutional structure of the TSEZ Authority, and suggests areas for improving the legal and regulatory environment of the zone. Based on the assessment, the report provides recommendations on best locations, features, and

timeframes for the next steps in the feasibility study and subsequent development of the TSEZ.

The Phase 1 Summary Report was designed to assist the government of Lebanon in discussing the recommendations, and providing subsequent feedback to USAID to verify planned Phase 2 activities under this project, or to prompt USAID to make any needed amendments to the planned tasks. Any such amendments are subject to USAID project resources, and USAID evaluation and approval. Phase 2 activities under the project currently include a concept master plan, financial analysis—including PPP scenario evaluation—and an economic analysis for the Port Site, given that the land is already owned by the government of Lebanon.

The government of Lebanon's feedback at this stage of the project is requested on the following.

1. **What specific site(s) does the government want to develop for the TSEZ?** This will necessarily take into account government financial resources, policy objectives, and envisioned timing for the development of the zone.
2. **What changes to the TSEZ Law and its decrees is the government willing to make in order to address some of their shortcomings?** Some proposed changes are more important than others, but a plan should be made to address the concerns outlined herein.
3. **When is the government willing to move into the implementation phase of the project?** The implementation phase includes institution building as well as the physical construction and operation of the TSEZ. There must naturally be a TSEZ Authority in place for this to occur.
4. **How will the government formulate and coordinate industrial policy to ensure the success of the TSEZ?** A large infrastructure project like the TSEZ requires careful coordination among GoL ministries. Formulation of a national industrial policy is required to avoid situations whereby multiple ministries plan and execute industrial projects with overlapping or conflicting aims and results. Currently, such is the case with the TSEZ and the Ministry of Industry's planned industrial zone in North Lebanon.

E1. MAIN FINDINGS AND CONCLUSIONS

PRIMARY CHALLENGES

TSEZ Project Team identified several challenges that should be addressed by the government of Lebanon to ensure the competitiveness and success of the TSEZ.

- **Land lease length.** The TSEZ Lands Decree No. 1791 requires that the government of Lebanon lease land to CDR on an annual basis, so that CDR can subsequently put the lands under the disposal of the TSEZ Authority. The Authority, in turn, can lease the land to developers for 30 years. The *one-year* lease to CDR will not inspire confidence among developers seeking a long-term investment, and may cause them to not invest in the TSEZ, as the Law and Decree provide no options for grievance or compensation.
- **Multiple public industrial zones in North Lebanon.** The Ministry of Industry has plans to develop an industrial zone in North Lebanon near the border of Syria, and has identified a site for such. There may not be enough demand in Lebanon to sustain two large industrial zones in the same governorate. Each would take demand from the other. Coordination with respect to industrial policy is urged among government ministries.
- **Free trade access to GAFTA countries.** Some GAFTA countries are currently restricting free trade access to such goods manufactured in economic zones. If products manufactured in the TSEZ cannot take advantage of free trade access to Lebanon's main trading partners, many firms will not locate in the zone. This should be addressed through diplomatic and legal channels
- **Voice over internet protocol (VOIP).** It is important that the TSEZ have access to inbound and outbound VOIP. Commercial use of VOIP is currently not allowed in

Lebanon, though exceptions have been made for limited (inbound only) VOIP for selected call centers. Without this type of international connectivity, the attractiveness of an information and communication technology (ICT) center within the TSEZ will be severely curtailed.

SITE DEVELOPMENT

The TSEZ Project Team conducted site assessments and infrastructure reviews on three proposed locations for the Tripoli Special Economic Zone. Two of those locations are suitable for industrial zone development, and one is better utilized as a center for ICT, academia, and creative industries.

Port of Tripoli Site. The 50-hectare site is adjacent to the Port of Tripoli and is currently being reclaimed with dredge material from the expansion of the port. The site has connectivity with multi-modal transportation and can access the large workforce in Tripoli. Several dirty industries adjacent to the site—landfill, slaughterhouse, waste treatment plant—decrease the attractiveness of the site for firms that require a clean operating environment. Industries that would likely locate in the Port Site include metalworking, construction materials, furniture, warehousing, and others. The key benefits of the location is that there is no cost to the government to obtain the land, and the timeframe for development of the TSEZ at this location is the shortest of all three sites. However, because the site sits upon reclaimed land, there is no room for future expansion.

North (Al Qleiat) Site. A specific plot of land has not yet been identified for the North Site. The preferred greenfield site in the general Al Qleiat vicinity would be along the Coastal Highway between the Rene Mouawad Airport and a few kilometers south of the Syrian border. The advantage of the North Site is its potential to attract the most number of companies and generate the greatest amount of employment. It is a flat location devoid of any polluting or dirty industries, and has ample room for expansion. Industries that would likely locate in the North Site include food and beverage processing, plastics, paper, metalworking, furniture, and others. The primary challenge with the site is that the land would need to be acquired by the government of Lebanon at an approximate cost of US$30 to US$40 per square meter. This will potentially cost the government US$15 million to US$20 million for acquisition of 50 hectares, and twice that if 100 hectares are acquired. The time required to expropriate land could result in a longer development execution timeframe than the Port Site.

Rachid Karami Fairground (RKF) Site. The Rachid Karami Fairground sits in the center of Tripoli, and has largely gone unused for much of its history. Developing the RKF as part of the TSEZ in the short to medium term has the potential to bring economic uses to the space, and transform it into an ICT and creative industry center. The first development phase of the RKF Site could be anchored by a branch of a technical university, around which would exist high-tech office space suitable for ICT or data center activities. Future phases of development might include a business hotel, renovation of exhibition space, and amenities for public use. However, there are numerous development challenges, such as the high cost of renovating existing structures, integrating RKF into the urban master development plan of Tripoli, availability of a technical workforce, and attracting ICT and academic industry anchors to locate on the site. The TSEZ Project Team recommends that the government of Lebanon further examine the RKF Site concept in a separate feasibility study in the short to medium term.

POTENTIAL COSTS TO GOVERNMENT

Table E1: Comparison of Three Potential TSEZ Sites

Rough estimates of land, infrastructure, and utility costs

	Port Site[1] 50 ha (Years 1 through 16) (Not expandable)	**North Site**[2] 50 ha—First phase (Years 1 through 8) (Can be expanded)	**RKF Site**[3] First development phase (Years 1 through 5)
Development Timeframe	Immediate	Short term[4]	Medium term
Off-Site Infrastructure[5]	US$6 million	US$7 million	$2.5 million
Landfill (Additional Soil to Top-Up Land)	US$12 million[6]	US$5 million[7]	US$0
Land Purchase	US$0	US$20 million[8]	US$0
On-Site Infrastructure[9]	US$13.4 million	US$17.7 million	US$11.7 million
Direct Employment[10]	2,960 direct jobs	3,990 direct jobs[11]	1,170 direct jobs
Total (*potentially* borne by GoL)[12]	**US$18 million**	**US$32 million**[13]	**US$2.5 million**

[1] The Port Site is 50 hectares, which will likely reach capacity in Year 16. “Year 1” is considered the year that the TSEZ would open for business, normally 1.5 to 3 years after zone development commences.

[2] Fifty hectares in the North Site will likely reach capacity in eight years. “Year 1” is considered the year that the TSEZ would open for business, normally 1.5 to 3 years after zone development commences.

[3] The first development phase of the RKF Site is envisaged to include an ICT and university campus. Figures presented in Table E1 for the RKF Site pertain to only these first five years of development.

[4] Site selection and land acquisition are prerequisites. Land acquisition could take from one to three years, or more.

[5] Off-site infrastructure includes road, water, waste water, power, and telecommunications connections from the TSEZ site to the main grid, highway, etc. It does *not* include projects—such as highway upgrades—that are already funded or planned by the government, or not designed for the sole purpose of the TSEZ. Off-site infrastructure costs are normally borne by the government. Expenditures would be required over the next three years before the TSEZ opens for business.

[6] The Ministry of Public Works and Transport has budgeted for this cost.

[7] The location selected for the North Site may or may not require landfill to raise the level of the soil. Therefore, exact costs cannot be ascertained at this time since a specific site has not been identified.

[8] Cost represents estimate of obtaining 50 hectares of land for a North Site. However, the demand forecast suggests that there could be enough demand to justify future expansions. Therefore, the TSEZ Project Team recommends the total purchase of 100 hectares of land, at a total cost of approximately US$40 million.

[9] On-site infrastructure includes the cost of on-site development of roads, power, water, sewage, and telecommunications networks, and renovation of existing structures and networks in the case of the RKF Site. The cost of on-site infrastructure and utility development is usually borne by the developer.

[10] Direct employment potential includes jobs generated inside the TSEZ in the Base Case Scenario. It does not include indirect employment from economic activities outside the zone. Numbers presented in Table E1 reflect direct jobs generated by Year 16 for the Port Site, Year 8 for the North Site, and Year 5 for the RKF Site.

[11] These employment figures are the result of development on 50 hectares in the North Site. If the GoL were to obtain 100 hectares of land, there could be the total creation of 9,020 jobs in the Base Case Scenario.

Table E1, on the previous page, lists *potential* new costs to the government of Lebanon associated with development of each TSEZ site. The costs are *rough estimations* in the absence of a master plan or design. They reflect costs of development of 50 hectares of land at the Port Site or North Site. Unlike the Port Site—which is limited to 50 hectares—there is room for expansion at the North Site. This would entail the acquisition of an *additional* 50 hectares of land to meet anticipated demand. To enable future expansion at the North Site, the TSEZ Project Team recommends the total acquisition of 100 hectares of land.

In Phase 2 of this project, the TSEZ Project Team will create a master plan for the selected site, and suggest public-private partnership (PPP) scenarios whereby the lowest level of government financial participation yields reasonable possibilities for a positive internal rate of return (IRR) for a private developer.

Figure E2:

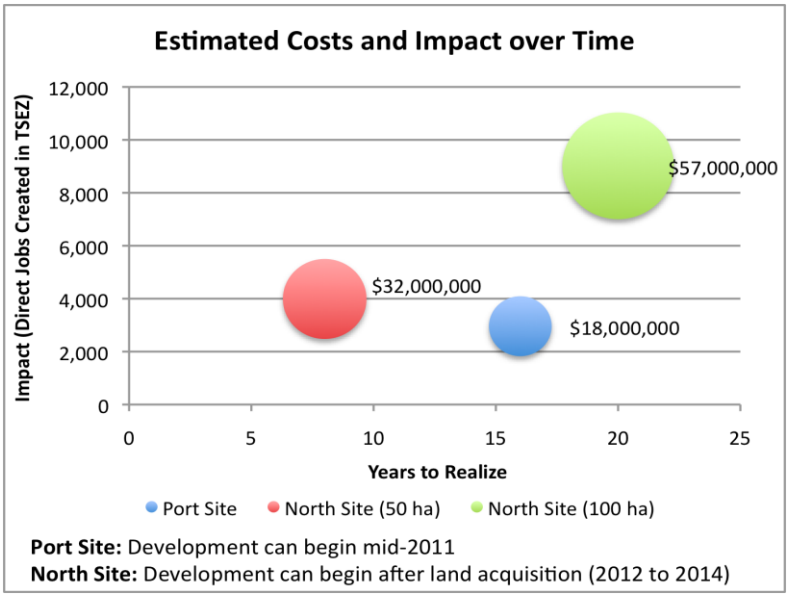


Figure E2 illustrates the estimated number of direct jobs created over time, together with rough indications of costs the government *might* have to bear—land acquisition, off-site infrastructure, landfill—to achieve such employment impacts. It is important to note that the exact level—and specific timing— of government financial contributions to the TSEZ project cannot accurately be gauged until a financial analysis is conducted in Phase 2 of the project.

RECOMMENDED SITES

The TSEZ site that is ideally suited for industrial development—and can generate the most employment—is the North (Al Qleiat) Site. It is in a clean location, and has ample room for future expansion. If the government owned the land, this would be the recommended choice for the TSEZ. If the government of Lebanon cannot—or will not—acquire land at the North Site, then it is recommended that the Port Site be developed as an industrial zone. The Rachid Karami Fairground Site provides a unique opportunity for an urban infill project that would be a highly visible benefit to both Tripoli and the country of Lebanon. It is recommended that the RFK Site be examined in a separate feasibility study by the government of Lebanon in the short or medium term. The RKF Site could be developed in tandem with either the Port Site *or* North Site.

[12] Includes the cost of off-site infrastructure, landfill, and land purchase for the Port Site, first phase of the North Site, and the first phase of the RKF Site.

[13] Total does not cover the recommended purchase of an additional 50 hectares—nor the landfill requirements—to accommodate expansion of the North Site.

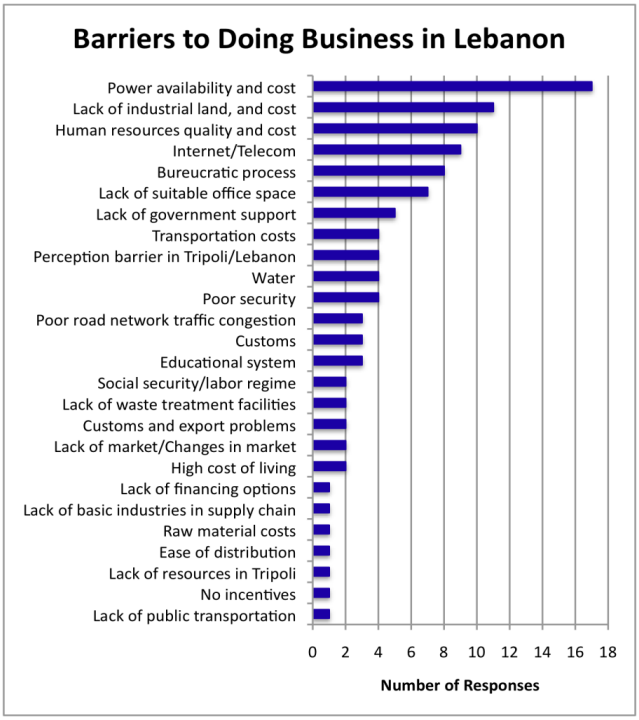
TRANSPORTATION ASSESSMENT

The role of the Port of Tripoli in Lebanon's trade remains limited, and the role that the port plays in the decision of companies to invest in the TSEZ will also likely remain limited in the near and medium terms. The assumption that Tripoli could attract transshipment cargo ignores the fact that shipping lines are unlikely to use an eastern Mediterranean port solely for transshipment. The Ports of Latakia (Syria), Mersin (Turkey), and Port Said (Egypt) are transshipment hubs that Beirut and Tripoli practically cannot compete against. Thus, it is expected that the use of the TSEZ as a logistics staging center for overland transport to Iraq and beyond will not materialize in a significant manner in the near to medium term.

MARKET ASSESSMENT

The TSEZ Project Team interviewed 39 private sector industry leaders to gauge the market conditions they faced throughout Lebanon. Access to affordable serviced industrial land and an uninterrupted power supply represent the two factors industrialists lack the most, as shown in the Figure E3, on the previous page. These problems overshadow the fact that wages in Lebanon are higher than surrounding countries or that companies experience bureaucratic hassles with customs, industrial permitting, and other government agencies. Therein lies attractiveness of the TSEZ—affordable land with an uninterrupted power supply. The TSEZ has the potential to reduce many of these barriers, and thus has the potential to attract investment from throughout Lebanon and abroad.

Figure E3:



DEMAND FORECAST

A 20-year demand forecast was created for the TSEZ based upon trade and investment patterns, market trends, and expanding economic growth and consumption in the region. The forecast estimates the number and types of companies that will likely locate in the zone, as well as the direct employment that those companies will generate. The breakdown of employment types is as follows:

- **Managerial.** Top, mid-, and low-level managerial positions, including owners.
- **Technical.** Engineers, mid- and senior-level software designers, comptrollers, and others with specialty skills
- **Skilled.** Workers with several years experience, machine operators, non-technical call center workers, secretaries.
- **Unskilled.** Entry-level assembly line workers, janitors, custodians, drivers.

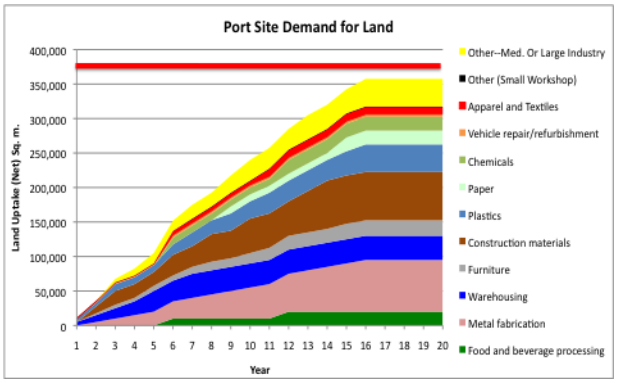
INDUSTRIAL LOCATIONS—PORT SITE AND NORTH (AL QLEIAT) SITE

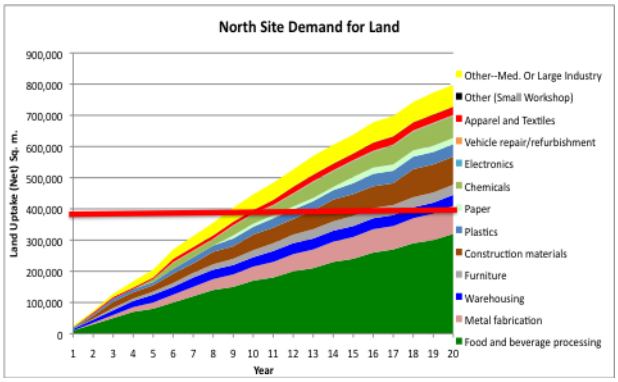
The Port Site and North Site are potential locations for an industrial zone. Figures E4 and E5, on the next page, illustrate that both the Port and North Sites would likely attract a mix of

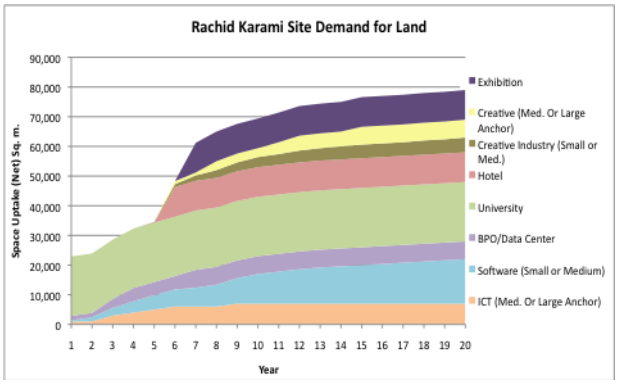
industry sectors ranging from metal fabrication to furniture manufacturing. The North Site, however, could attract more companies that require a cleaner environment, such as food and beverage processing—shown as the green segment in the bottom of Figure E5.

The horizontal red lines across the graphs represent the limit of physical space in the Port Site (Figure E4) and the first phase of development in the North Site (Figure E5). There would be no room for expansion beyond Year 16 at the Port Site, so investment, land uptake, and employment generation would level off. By contrast, the North Site does not have the same size constraints, so demand could continue to be absorbed beyond the initial 50 hectares of development. This would require the total acquisition of 100 hectares of land at the North Site to accommodate future demand.

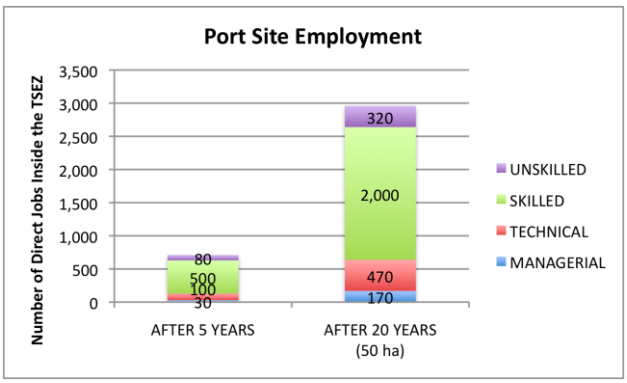
Figures E4, E5, and E6:

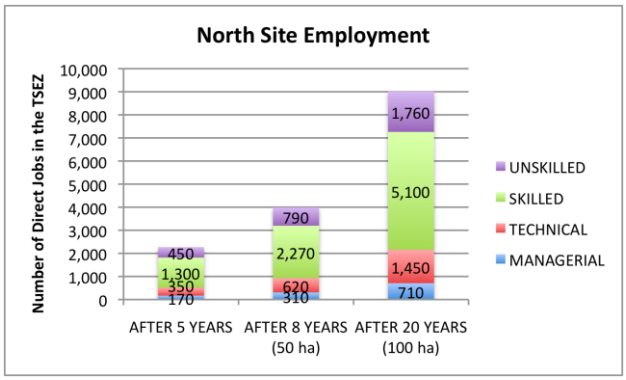


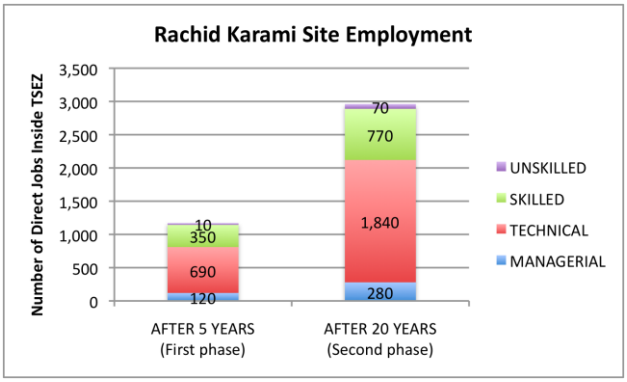




Figures E7, E8, and E9:







The Port and North Sites offer employment opportunities primarily in the “skilled” and “unskilled” segments of the workforce (ie. machine operators, craftsmen, packaging and loading). Figures E7 and E8 illustrate direct employment generation at the Port and North Sites at different periods in time. The Port Site has the potential to generate 2,960 direct jobs

The North Site, on the other hand, could generate 3,990 jobs in the first development phase (Year 8), and 9,020 jobs within 20 years. It is assumed that the first 50 hectares in the North Site will reach capacity in Year 8, noted in middle bar of Figure E8. Employment figures for the North Site (20 years) assume that an additional 50 hectares of land is purchased for a second development phase.

RACHID KARAMI FAIRGROUND SITE

Rachid Karami Fairground offers prospects for a very different type of development and employment creation. Unlike the two potential industrial locations, the RKF Site could potentially act as an urban redevelopment anchor for the City of Tripoli, while providing needed infrastructure for ICT and creative industry sectors in Lebanon. Figure E6 shows two distinct development phases envisaged for the RKF Site. It is recommended that the first phase be anchored by a branch of a technical university, shown as the green band in the middle of the graph in Figure E6. Around that would spring ICT and business process outsourcing (BPO) companies. The second RKF development phase could include a hotel, redevelopment of exhibition spaces, and facilities for creative industries.

Employment in the RKF Site differs from the Port and North Sites in that the majority of jobs are for "technical" workers (ie. software programmers, data center operators) focused almost exclusively in the ICT and creative industry sectors. The RKF Site—in its two phases—could potentially create 2,960 jobs over the course of 20 years. However, this employment assessment represents a rough estimation of job creation. Achieving that level of employment would require full-scale redevelopment of the Rachid Karami Fairground in multiple phases over the medium and long terms. It is recommended that the government of Lebanon undertake a separate specialized study to ascertain the viability of developing the RKF Site, including the feasibility of attracting and *retaining* the type of human resource talent demanded by the site.

E2. SUMMARY RECOMMENDATIONS

All three TSEZ sites provide opportunities for economic development and job creation for Lebanon. However, each site offers a different type and magnitude of anticipated economic impacts and job creation. Each site also necessitates certain prerequisite actions to be taken by the government. Moving forward, development of the TSEZ should address three primary concerns in the immediate term:

- Lebanon lacks serviced industrial land.
- Access to uninterrupted and affordable electricity is a major barrier to doing business for industrialists.
- The greater Tripoli area is in need of employment options for skilled and unskilled workers.

BEST OPTION FOR MAXIMIZING ECONOMIC IMPACT—NORTH SITE

The TSEZ Project Team recommends the North Site as the best option *in terms of economic impacts*. This recommendation is based on the following factors:

- **Physical environment.** The North site would be situated on a flat land in a clean environment away from residential areas.
- **Expansion potential.** There is room for expansion of multiple phases, if necessary.
- **Employment generation.** The site has the ability to attract the largest amount of investment (tenants), and generate the maximum number of direct jobs.

The primary disadvantage of the North Site is that a specific site has not been identified, nor has land been acquired for such. This could pose an impediment to developing the TSEZ in the short term.

BEST OPTION FOR EXPEDIENCY OF DEVELOPMENT—PORT SITE

If political factors and budget considerations preclude the GoL from moving forward with the North Site, the Port Site offers the best option for TSEZ development, *in terms of the expediency of development.* The Port Site has the following advantages:

- **Existing Site.** The site is already owned by the government.
- **Timing.** The site will be reclaimed by July 2011.
- **Project resources.** The current project was designed to conduct the full feasibility study of the Port Site.

There are several disadvantages to developing the Port Site. These include:

- **No expansion.** There is no room for future expansion of the Port Site.
- **Dirty environment.** The Port Site sits adjacent to a cluster of dirty activities—garbage landfill, waste treatment facility, slaughterhouse, etc.
- **Negates future strategic port uses.** The Port Site is strategically located next to the Port of Tripoli. Development of TSEZ at that location would render the site unusable for future uses strategic to the port.

RACHID KARAMI FAIRGROUND—MEDIUM-TERM OPTION

Development of the RKF Site represents an interesting integrated urban development project for Tripoli, which could couple with either the North Site or the Port Site in medium term. Benefits of the RKF development include:

- **Urban development.** Revitalize the urban core of Tripoli.
- **ICT infrastructure.** Provide ICT infrastructure for Lebanon.

Some challenges of developing the RKF Site include:

- **Cost**. Potentially very costly to rehabilitate aging buildings, infrastructure, and architectural features on the site.
- **Employment**. Employment generation primarily limited to workers with university or technical college degrees.

There are merits to GoL conducting a detailed feasibility study for the RKF Site in the short to medium term, to determine if the proposed concept is viable. However, this does not need to be an immediate priority of the GoL, unlike development of one of the two industrial locations. When, or if, the GoL further studies the RKF Site, and finds the concept to be feasible, development could proceed in the short to medium term. Development could coincide in tandem with one of the industrial sites.

FINANCIAL FEASIBILITY

The TSEZ Project Team made the above site recommendations based on the likely economic impacts of each site. Financial analysis of a selected site will be required to gauge the *financial feasibility* of the site. The analysis will be based upon costs associated with a concept master plan, anticipated revenues from TSEZ tenants, and public-private partnership (PPP) options between the GoL and private developer. Various scenarios that deliver acceptable internal rates of return (IRR) to a private zone developer—while minimizing the level of government financing—need to be examined. Based on this, the

TSEZ Project Team can then recommend the most feasible PPP arrangement between the government and private sector developer.

TSEZ DEVELOPMENT RECOMMENDATIONS

Table E10, on the following pages, presents summary recommendations for consideration by the government of Lebanon as it moves forward with institutionalization and development of the TSEZ. Each recommendation is prioritized as follows:

- **Priority 1.** This is the highest-level priority, required before the GoL can engage private developers.
- **Priority 2.** This is a high priority. It should be addressed to make the TSEZ competitive to developers and company investors.
- **Priority 3.** This is an important priority in order to create a TSEZ that is in line with international best practices for special economic zones.

Table E10 also indicates the type of change that is required (law, decree, policy), the specific TSEZ sites that are affected, and a suggested time frame for amendments.

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Table E10: Summary Recommendations

Based upon findings in Phase 1 of the TSEZ Feasibility Study

Topic	Issue and Recommendation	Responsibility	TSEZ Sites Affected	Priority	Timing
Site Selection	**Issue:** The GoL should select a site to proceed with Phase 2 of the TSEZ Feasibility Study. Resources are currently available to complete the study for the Port Site. **Recommendation:** The North Site is the first best option for mixed-use industrial development, clean location, and employment generation. The Port Site is the best option in terms of expediency of development. Political or budget constraints—such as the difficulty in expropriating land for a North Site development—might be reasons to choose the Port Site. The Port Site offers land already owned by the GoL, which would be ready for development in July 2011.	Policy	Port Site North Site	Priority 1	March 2011
Industrial Policy	**Issue:** The Ministry of Industry plans its own industrial zone in the North Lebanon, which will detract from investment in the TSEZ. **Recommendation:** Coordinate development of industrial infrastructure among government agencies to avoid multiple public economic zones erected in the same vicinity.	Policy	Port Site North Site	Priority 1	Apr. – Jul. 2011
CDR Lease Period	**Issue:** One-year lease given to CDR to put lands under disposal of the TSEZ Authority does not invoke confidence in developers who sign 30-year leases with the Authority, with no grievance or recourse allowed. **Recommendation:** Revoke or reissue Lands Decree No. 1791 after amending clauses on the *annual* lease period of the CDR. TSEZ Authority should be given wide array of powers to dispose of lands in any manner deemed appropriate to stimulate investment.	Decree	Port Site	Priority 1	Apr. – Jul. 2011
Minimum Capital Requirement	**Issue:** The minimum capital requirement of US$300,000 will deter ICT companies and SMEs from locating in the TSEZ. **Recommendation:** Revoke the minimum capital requirement of in the TSEZ Law No. 18 required to avail of fiscal incentives.	Law	RKF Site Port Site North Site	Priority 2	Jul. – Dec. 2011
Market Access	**Issue**: Some GAFTA members do not extend free trade to goods produced in economic zones. This deters Lebanese firms from	Policy Law	Port Site North Site	Priority 2	Jul. 2011 – Dec. 2012

Table E10: Summary Recommendations

Based upon findings in Phase 1 of the TSEZ Feasibility Study

Topic	Issue and Recommendation	Responsibility	TSEZ Sites Affected	Priority	Timing
	locating in the TSEZ. **Recommendations:** 1) Engage in diplomatic discussions with trade partners; 2) Amend TSEZ Law so it provides a clear mechanism to give TSEZ projects a "national" certificate of origin; and 3) Amend Customs Decree to give national status to TSEZ products that meet content requirements.	Decree			
Private Utilities	**Issue:** Private developer in TSEZ must generate its own power, which is a costly investment. Private generation would be more attractive to the developer if s/he could sell surplus power to the national grid, currently forbidden by law. **Recommendation:** Amend TSEZ Law No. 18 to allow private utilities in the TSEZ to sell surpluses to the national grid.	Law	Port Site North Site RKF Site	Priority 3	Jul. – Dec. 2011
VOIP	**Issue:** Inbound and outbound commercial use of VOIP is required by ICT and call center industry, but currently not fully allowed in Lebanon, as per Decree No. 16852 and government policy. VOIP is necessary for the success of the TSEZ. **Recommendation:** Amend Decree No. 16852 and draft a circular allowing full commercial use of inbound and outbound VOIP in the TSEZ.	Policy Decree	RKF Site Port Site North Site	Priority 2	Jul. – Dec. 2011
TSEZ Authority	**Issue:** The TSEZ Board of Directors has not been appointed. **Recommendation.** Appoint the Board of Directors	Policy	Port Site North Site RKF Site	Priority 1	Apr. – Dec. 2011
	Issue: The TSEZ Authority structure and personnel policies are currently designed for a large bureaucracy. **Recommendation:** Amend the Organizational Structure Decree No. 2226 and Personnel Decree No. 2283 to slightly reorganize the structure of the TSEZ Authority. This mostly affects the Strategic Planning, Research and Technical Matters Directorate, creation of an Investor Services Center as its own Directorate, and some changes in	Decree	Port Site North Site RKF Site	Priority 3	Jul. 2011 – Jul. 2012

Table E10: Summary Recommendations

Based upon findings in Phase 1 of the TSEZ Feasibility Study

Topic	Issue and Recommendation	Responsibility	TSEZ Sites Affected	Priority	Timing
	personnel policies when the TSEZ Authority is established.				
Customs	**Issue:** TSEZ Law, Customs Decree, and National Customs law are silent on treatment of local versus foreign content of goods produced in the TSEZ and sold domestically. **Recommendations:** 1)Amend Customs Decree No. 2220 to include explicit clause exempting value of local content of goods in TSEZ from paying import duties when sold inside Lebanon; 2) Customs Decree should provide clear procedures to trace foreign content in TSEZ-produced goods to protect against smuggling; and 3) TSEZ Authority should negotiate clear agreement with Customs on how Customs procedures will be carried out in the zone.	Decree	Port Site North Site	Priority 3	Jan. – Dec. 2012

PROJECT BACKGROUND

1.INTRODUCTION

1.1 THE TRIPOLI SPECIAL ECONOMIC ZONE INITIATIVE

The Tripoli Special Economic Zone (TSEZ) represents a bold and timely initiative for Lebanon. The past decade has seen a rapid expansion in the development of international businesses and trading in the Mashreq region, and Lebanon has participated in and benefited from this economic growth. However, the growth in economic prosperity has not been uniform throughout the country. Tripoli, Lebanon's second largest city, has largely missed out on this period of growth—particularly in non-real estate sectors. Poverty levels exceed 30 percent in some areas of the North governorate, and poor indicators in education, agricultural output, employment, and literacy reaffirm the need for greater economic prosperity in Tripoli and Lebanon as a whole.

Past government spending largely focused on Beirut and South Lebanon governorates. To ameliorate this imbalance, and improve the investment climate in Tripoli, the Lebanese parliament approved the Tripoli Special Economic Zone Law No. 18 in 2005. In 2010, the government of Lebanon made enactment of the law a national policy priority. At the request of the Presidency of the Council of Ministers, the United States Agency for International Development (USAID) is providing technical assistance for the development of a TSEZ Feasibility Study aimed at designing the TSEZ as a catalyst for economic development in Tripoli Lebanon.

A precursor to this feasibility study was the publication of a report entitled "Anchoring the Tripoli Special Economic Zone: Towards Enhancing Backward and Forward Linkages with the Host Economy." This report was completed at the request of the Presidency of the Council of Ministers, and under the supervision of Dr. Sateh El-Arnaout, Chief Technical Advisor. It provided background information pertaining to the establishment of a special economic zone in Tripoli, and specifically argued that in order to maximize the welfare effects of the TSEZ on its host economy, a supportive industrial policy was also necessary to link Tripoli and the North to the TSEZ.

1.2 TSEZ PROJECT TEAM

Sibley International LLC, together with its US and international partners—IOS Partners Inc, TCG International, and Associated Consulting Engineers (ACE)—won a one-year contract to undertake the TSEZ Feasibility Study, funded by the USAID. The TSEZ Project Team was led by Barry Condron, Chief of Party, and also consisted of: Andrea Erdmann, Economist/Marketing Specialist; Deborah Porte, Senior Urban Planning and Infrastructure Advisor; Rand Hannun, Legal Advisor; Roger Melki, Senior Economist; John Arnold, Transportation and Port Advisor; Ahmed Al-Azzam, Financial Advisor; Colin Boocock, Environmental Advisor; Kirti Devi, Water Specialist; Robert Hans, Transaction Advisor; Walid Nasser, Legal Advisor, Antoine Abou Samra, Engineer; and Hiba Jardali, Office Administrator. Additional support was provided by David Snelbecker, Engagement Manager, and Upasana Khadka, Research Associate. The Team are international experts in the fields of engineering, law, economics, architecture, transportation, investment promotion, and special economic zone (SEZ) development.

1.3 METHODOLOGY

The TSEZ Feasibility Study commenced in August 2010 and will run until July 2011. The project consists of two phases. In Phase 1 (August 2010 to January 2011), the TSEZ Project Team focuses on the following activities. The structure of this report is similarly organized.

- **Site Assessment.** Examination of the territorial composition of the zone, and identification of the advantages and challenges of three proposed TSEZ sites—Port Site, North (Al Qleiat) Site, and Rachid Karami Fairground Site. Ranking of the development priority of each site, including timeframes for potential development. Creation of value propositions and development strategies for each.
- **Infrastructure Assessment.** Analysis of the quality condition of off-site and potential on-site infrastructure, including initial costings and required financial contribution of the government. Utility infrastructure audit and recommendations, including the cost of power, water, telecommunications and waste water services. Initial estimates of the financial support required of the government of Lebanon to support TSEZ development.
- **Environmental Assessment.** Investigation of applicable environmental laws and regulations in force in Lebanon. Initial investigation of environmental fatal flaws that might alter or disrupt the TSEZ project.
- **Transportation Assessment.** Assessment of port facilities and competition, as well as analysis of airport, road, and rail connectivity to Tripoli.
- **Market Assessment.** Analysis of current market conditions and future trends, competitive benchmarking, trade and investment positions.
- **Demand Forecast.** Estimates of the demand for space in the TSEZ over a period of 20 years. Includes forecasts for power, water, employment, and land take-up in the zone.
- **Institutional Structure.** Assessment and recommended improvements to the organizational structure of the TSEZ Authority, as specified by TSEZ Law and Decrees.
- **Legal and Regulatory Assessment.** Examination of the TSEZ Law and its implementing decrees. Recommendations for regulatory reform based on international best practices in SEZ design, or conflicts with other Lebanese laws or decrees.

In Phase 1, the TSEZ Project Team also explored options and business models for public-private partnerships (PPP) between the government of Lebanon and private developers of the zone. The phase-in of private financing—and *optimal* level of government contribution—will be further defined in Phase 2 of the project through Financial and Economic Analyses based on a physical Master Plan of the chosen site.

Subsequent to the dissemination of this Phase 1 Summary Report, there will be a one-month period of reflection and strategic decision making by the government of Lebanon and USAID, with regard to how they wish to proceed during Phase 2 of the project. The government of Lebanon is expected to indicate which—if any—TSEZ sites it wishes to support and develop. The current project was designed with resources to complete the feasibility study to the Port Site, where land is available for the project. The government discussions are expected to verify the current findings, and confirm the Phase 2 direction, or suggest amendments—subject to project available resources.

1.4 PUBLIC AND PRIVATE SECTOR ENGAGEMENT

To meet the above Phase 1 objectives, the TSEZ Project Team collaborated with numerous public and private sector officials. The TSEZ Project Team participated in over 150 meetings during the past seven months with public and private sector leaders. These included meetings with ministers and their representatives from the Ministries of Economy and Trade, Finance, Labor, Industry, and Telecommunications. A list of persons consulted for this project is contained in Appendix A: Public and Private Stakeholders Consulted.

The Team also engaged in research activities, utilizing published trade, investment, and transportation data from the World Bank, United Nations agencies, Lebanon Department of Statistics, Chambers of Commerce, Industry, and Agriculture in Beirut and Tripoli, and Association of Lebanese Industrialists, among others.

Two workshops were jointly organized between the Presidency of the Council of Ministers, USAID, and Sibley International. (See Appendix C: Agenda for Technical Workshops.) The workshops provided opportunities to outline the benefits of the proposed TSEZ, and seek inputs and advice from public and private sector stakeholders. Both workshops were held in Beirut—the first on September 2, 2010 and the second on December 1, 2010. Approximately 30 participants attended each session. Stakeholders raised important issues during the workshops, bringing the following important inputs for consideration.

Photograph by Hiba Jardali, Sibley Int'l

Public and private sector stakeholders participate in a workshop at the Radisson Blu Hotel in Beirut in September 2010.

- **Primary challenges**. Most stakeholders agreed that the following issues would significantly hamper the success of the TSEZ.
  - **Land lease length.** The TSEZ Lands Decree No. 1791 requires that the government of Lebanon lease land to CDR on an annual basis, so that CDR can subsequently put the lands under the disposal of the TSEZ Authority. The Authority, in turn, can lease the land to developers for 30 years. The *one-year* lease to CDR will not inspire confidence among developers seeking a long-term investment, and may cause them to not invest in the TSEZ, as the Law and Decree provide no options for grievance or compensation.
  - **Multiple public industrial zones in North Lebanon.** The Ministry of Industry has plans to develop an industrial zone in North Lebanon near the border of Syria, and has identified a site for such. The TSEZ Project Team believes that there is not enough demand in Lebanon to sustain two large industrial zones in the same governorate. Each would take demand from the other. Coordination with respect to industrial policy is urged among government ministries.
  - **Free trade access to GAFTA countries.** Some GAFTA countries are currently restricting free trade access to such goods manufactured in economic zones. If products manufactured in the TSEZ cannot take advantage of free trade access to Lebanon's main trading partners, many firms will not locate in the zone. This should be addressed through diplomatic and legal channels
  - **Voice over internet protocol (VOIP).** It is important that the TSEZ have access to inbound and outbound VOIP. Commercial use of VOIP is currently not allowed in Lebanon, though exceptions have been made for limited (inbound only) VOIP for selected call centers. Without this type of international connectivity, the attractiveness of an information and communication technology (ICT) center within the TSEZ will be severely curtailed.
- **Additional Capital requirements.** The US$300,000 capital requirement will exclude many business entities, since most firms in Lebanon are small or medium in size.
- **Comprehensive development strategy.** The success of the TSEZ will be somewhat tied to the development of Tripoli and its surroundings. The Municipality of Tripoli is in

the process of developing a strategy to improve its image and attract FDI. Therefore, the TSEZ project must engage and work with municipal leaders and civil society in Tripoli and the North.

- **Rachid Karami Fairgrounds.** Most are in favor of transforming RFK into something useful for the community of Tripoli. Many favor incorporating the unique architectural elements into the new usage and design. Some stated that the RFK Site would only be successful if it were allowed to have synergies with the local community, including access.
- **Security Concerns.** Stakeholders from outside North Lebanon are concerned about security, the commuting distance, level of human resources, and options for housing, recreation, and entertainment in Tripoli.

1.5 REPORT STRUCTURE

All Phase 1 activities have been completed, and the analysis and recommendations are presented in this Summary Report and the Main Phase 1 TSEZ Feasibility Study Report. This Summary Report is organized according to the tasks performed in the study, and described in the Methodology section, above.

EXAMINATION OF THREE POTENTIAL LOCATIONS

2.SITE ASSESSMENT

Three sites in North Lebanon offer the potential to create the first-of-its-kind special economic zone in Lebanon. The business community throughout the country suffers from a lack of industrial land and expensive and unreliable power supply. Development of the TSEZ will address these issues, and will make the Tripoli Special Economic Zone a “destination” in North Lebanon.

The first step in the TSEZ Feasibility Study was to examine the three locations that have been proposed for the zone. Each offers distinct advantages—and challenges—but *all* promise to deliver economic growth and employment to Lebanon. Two of the proposed TSEZ locations—the Port of Tripoli and North (Al Qleiat) Sites—are suitable for industrial zone development in the immediate or short term. Land for the North Site, however, has not yet been acquired by the government of Lebanon. The third location—the Rachid Karami Fairgrounds—is appropriate for a campus-like environment in the medium term, which would bring information and communication technology (ICT) and creative industries together with the original design and function of the landmark site.

A site assessment evaluated each of the three sites on its location attributes and qualities, taking into consideration: 1) Site context; 2) Land and topography; 3) Potential industrial sectors; 4) Access and proximity to transportation infrastructure; 5) Availability of on-site and off-site infrastructure and utilities; and 6) Environmental and social constraints or challenges. Appendix B of this Summary Report offers a snapshot comparison of the value propositions for each TSEZ site, including development timeframes, potential employment generation, and unique challenges of each location.

The TSEZ Project Team recommends that the government of Lebanon examine very carefully the advantages and challenges of developing the TSEZ at *one* of the two industrial locations—the Port Site *or* the North (Al Qleiat) Site. In the short to medium term, the government should also consider the benefits to Tripoli that would result from re-energizing the Rachid Karami Fairground by placing it under the development umbrella of the TSEZ. It is possible for the RFK Site to be developed in tandem with one of the two proposed industrial zone locations.

2.1 PORT OF TRIPOLI SITE

The Port Site is located adjacent to the Port of Tripoli, and is bounded by the Port, Mediterranean Sea, the Tripoli Landfill, and a slaughterhouse facility. It sits on the Al Mina Road on approximately 50 hectares of land that is being reclaimed with dredge material from the deepening of the channel approach to the Port of Tripoli—under the hospices of the Ministry of Public Works and Transport, Directorate

Photograph by Google Earth

Satellite view of the Port of Tripoli TSEZ Site. The site will be reclaimed by 2011 with dredge material from the port expansion.

General of Land and Maritime Transport.

If developed as a special economic zone, the Port Site will provide industrial employment close to the heart and population center of Tripoli. In this location, the TSEZ will have synergies with multimodal transport options, including the Port of Tripoli, Coastal Highway, and—in the future—rail links to Syria. As with all of the potential TSEZ locations, the Port Site would offer all utilities, and be developed with a private power generation facility on-site, which would provide uninterrupted electricity to all zone tenants. The Port Site has the potential to attract 70 to 80 companies, and create approximately 700 to 1,700 direct jobs within five years, and 3,000 direct jobs within an 8 to 20-year period. If the GoL chooses the Port Site, it should be developed in the immediate term.

Photograph by Andrea Erdmann, Sibley Int'l

Overlooking the TSEZ Port Site, with animal slaughtering facility in the foreground.

ADVANTAGES OF THE PORT SITE

Several factors weigh in favor of developing the TSEZ at the Port Site.

- **Land ownership.** The Port Site is already owned by the government of Lebanon. As a result, there are no costs associated with obtaining the land (other than the foregone cost of not selling the newly reclaimed location)
- **Immediate development potential.** The Port Site could be developed in the near term, with reclamation activities scheduled for completion in June 2011.
- **Good off-site infrastructure.** The government of Lebanon is already committed to upgrading the roads adjacent to the Port. The project will begin in 2011 and is scheduled for completion in 2013. Waste water treatment will be available at the nearby Tripoli Waste Water Treatment Facility, and connections will be made during site construction.
- **Multi-modal transportation.** The site has direct access to bulk cargo shipping and—eventually—a rail link to Syria. The port, however, is not the primary magnet attracting companies to the TSEZ. The TSEZ Project Team does not envision that significant container shipping will be available at the Port of Tripoli in the near and medium terms. Additionally, most companies that would locate in the TSEZ do not require direct port access.

CHALLENGES OF THE PORT SITE

The Port Site presents some issues and challenges. None of these are fatal flaws, but do need to be considered before entering into a public-private partnership with a private zone developer and operator. Some of the challenges decrease the demand for space in the TSEZ, based on feedback received from the Lebanese business community.

- **Surrounding context—cluster of dirty industries.** There are dirty industries clustered next to the Port Site—landfill, sorting plant, batching plant, slaughterhouse, and waste treatment facility. Environmental impacts of these facilities must be vigilantly monitored. The dirty industries will likely impact the ability of the TSEZ to attract certain companies—particularly those in the food and beverage sector—who require a clean operating environment. For this reason, forecasted demand is lower for the Port Site.
- **Reclamation.** It is likely that the dredge materials for the reclamation project will require further landfill top-up, compaction, and treatment, based on discussions with engineers,

contractors, and government officials. Additionally, the stability of concrete slab debris used to infill part of the site requires further study. Bore hole testing will be indispensible to ensure the quality and stability of the soil, particularly since reclaimed soil is at a particular risk for seismic activity.

- **Expansion.** The Port Site offers little prospects for expansion in the event that the TSEZ reaches its leasing capacity—predicted to occur in Year 16 in the Base Case Scenario (See the Demand Forecast Chapter.). This is because any expansion would involve reclaiming additional land from the sea, at a cost of US$40 to 50 million for reclamation of an additional 50 hectares.
- **Strategic location.** Most of the firms that would locate in the TSEZ do not require direct access to port facilities. Thus, the zone would take land of prime strategic importance for the future of the port and utilize it in a manner that does not take advantage of its port adjacency. This is a strategic decision the government of Lebanon needs to consider.

2.2 NORTH (AL QLEIAT) SITE

At present, there is not one specific location identified for the North Site. The preferred site within would be along the Coastal Highway between the Rene Mouawad Airport and a few kilometers south of the Syrian border the Al Qleiat area, in the Mohafaza of Akkar.[14]. This location has been identified by the TSEZ Project Team because the lands are not actively farmed, land is available at reasonable market rates, there is an abundance of land for potential expansion purposes, and there are numerous border crossings with Syria within five to ten kilometers.

Photograph by Google Earth

Satellite view of the Rene Mouawad Airport in Al Qleiat. The TSEZ Project Team recommends a site in this general vicinity.

The North Site represents an ideal location for an economic zone based on its direct access to the Coastal Highway, border crossing to Syria, available labor pool, topography of the land, and potential for future expansion. Of the three potential TSEZ locations, the North Site will attract the widest array of industrial sectors and create the greatest amount of employment. A variety of industry sectors would thrive in this location, including food and beverage processing, metal fabrication, construction materials, furniture, plastics, and fast-moving consumer goods (FMCG). The North Site has the potential to attract 60 to 70 companies in five to eight years, and 120 to 240 companies within 20 years. This would create approximately 2,300 to 4,000 jobs in the zone within five years, and 9,000 to 16,000 jobs within 20 years. If the GoL chooses the North Site, it should be developed in the short term.

ADVANTAGES OF THE NORTH SITE

The potential North Site offers many advantages that make the Al Qleiat area ideally suited for development of the TSEZ.

- **Clean location.** There are no polluting industries or activities in the vicinity of the proposed North Site. This makes the location attractive to the greatest number of

[14] Note that the Demand Forecast for the TSEZ holds true for *whatever* specific location would be chosen in the general vicinity of Al Qleiat.

potential investors. Additionally, the site does not encroach upon residential communities, and there are no resettlement issues associated with developing this location. The site can be developed in a "green" low-carbon manner, particularly since it is situated in a rural area.

Photograph by Deborah Porte, Sibley Int'l

View of undeveloped land in the vicinity of Al Qleiat, North Lebanon.

- **Topography.** The site sits on a coastal plain, and the land is low and flat. There are no hills or trees, nor any protected or sensitive flora or fauna. The flat lands require minimal work to fit the land up for infrastructure, and will keep development costs down.
- **Transportation infrastructure.** The site sits at the northern end of the Coastal Highway just 22 kilometers from the Port of Tripoli, and future rail connection to Syria. The site does provide an excellent gateway to markets in Syria and countries beyond.
- **Future synergies with Rene Mouawad Airport.** In the long term, the North Site could develop synergies with the redevelopment of the airport. This might include a cargo facility with cold storage facilities, warehousing activities, etc. In June 2010, the airport was examined in a study commissioned by the Office of the President of the Council of Ministers, supervised by Dr. Sateh El-Arnaout, entitled, "A second or secondary airport for Lebanon: Potential welfare and air transport security effects of reviving the Rene Mou'awad Airport in Qule'at". However, it is not envisioned that the airport would become viable or operational in the near or medium terms. It should be noted that the airport is *not* a prerequisite for development of the North Site. The Site can generate demand without the presence of an airport.

CHALLENGES OF THE NORTH SITE

Due to its rural location, the North (Al Qleiat) Site has potentially fewer development issues and challenges than the Port Site or RKF Site. There are no foreseen fatal flaws for this location. However, the following issues must be considered by the government of Lebanon.

- **Acquisition of land.** Land at the proposed site has not been acquired by the government of Lebanon. The land is privately owned, and would first require acquisition before an SEZ could be developed. From discussions with a few landowners in the area, the price of land in the vicinity of Al Qleiat is currently US$30 to US$40 per square meter. When reviewed against benchmarked industrial areas in Lebanon, this price is reasonable. In the future, however, the price is likely to rise.
- **Potential flooding.** Though specific lands have not yet been identified for the North Site, it is possible that some areas of the Al Qleiat area suffer from flooding. This could be mitigated during the earthworks stage of the project with the implementation of additional landfill and storm water and drainage systems, depending on the selected site.

2.3 RACHID KARAMI FAIRGROUND SITE

The Rachid Karami Fairground has been proposed as a potential TSEZ location. Unlike the Port and North Sites, however, the RFK Site is an urban infill project, which would utilize new and existing facilities for economic growth. The Fairground site is situated the southern quadrant of the City of Tripoli, bounded by the Al Maarad Road and Coastal Highway. It sits in close proximity to the heart of Tripoli and is 600 meters from the seaside. The site was designed by the acclaimed Brazilian architect, Oscar Niemeyer.

The vision for the RKF Site is to transform it into an innovative ICT and creative industry-based zone for Lebanon. The site would be anchored by a branch of a technical university, and include state-of-the-art facilities for ICT companies, data centers, and creative industry sectors—all designed to stimulate innovation among small and medium-sized businesses. Subsequent phases of development would add upgraded business hotel and commercial activities, including refurbished exhibition spaces. The original design of the Rachid Karami Fairground by Oscar Niemeyer will be respected and homage paid to its original forms in the design guidelines of new facilities. The development would provide access to the site to the general community and better integrate the uses with the local community, thus mitigating the "island within a city" feel that RFK currently has.

Photograph by Google Earth

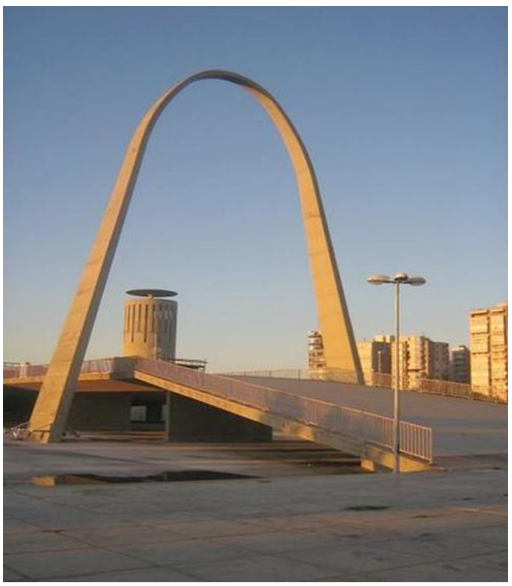
Satellite view of the Rachid Karami Fairgrounds. Half of the site has not been developed, and could be utilized for Phase 1 of a campus-like ICT zone.

The RFK Site has the potential to attract approximately 35 companies within five years, and up to 120 companies within 20 years. This would result in the creation of 1,250 jobs in five years and 3,000 jobs in 20 years. The RKF Site represents an option that the GoL should consider for further study in the short to medium term.

ADVANTAGES OF THE RACHID KARAMI FAIRGROUND SITE

The following are advantages to developing the RKF site as part of the TSEZ.

- **Ownership.** The RKF Site is already owned by the government of Lebanon, and currently under management by the Ministry of Economy and Trade. Because the lands are under public ownership, it may be easy to amend existing legislation governing usage of the site. This is an extremely valuable asset for the City of Tripoli—and for Lebanon—which has largely gone unutilized since it was nearly completed in 1975.
- **Location.** The site is superbly located to attract the types of companies that thrive in an urban environment. It provides fast access to the Coastal Highway, ample parking, and easy access to the city center. This is an ideal environment for a high-tech academic, office, and exhibition facility.
- **Historical and architectural heritage.** In the early 1960s, Oscar Niemeyer accepted the government of Lebanon's commission to design the Rachid Karami Fairground. At that time, Niemeyer had just completed the modernist-style government buildings in



Photograph by Deborah Porte, Sibley Int'l

Unique architectural features of the site could be preserved, with design guidelines governing all new developments in the zone.

Brasilia. Continuing that architectural trend, Niemeyer designed exhibition facilities and 15 minimalist pavilions in a variety of geometric forms constructed out of reinforced concrete. The site is studied by architects from around the world.

- **TSEZ status.** Bringing the Rachid Karami Fairgrounds under the umbrella of the TSEZ regime could provide the incentives and development impetus required to transform the site into a business destination location for Tripoli in ways that, heretofore, have not been realized. The following aspects of the TSEZ regime could stimulate RFK development:
  - Current government interest and momentum to develop Tripoli and the TSEZ
  - Allowance for PPP in aspects of site development and operation
  - Fiscal incentives for companies that locate in RFK
  - Streamlined approach to bureaucracy
  - Potential of promotion of investment by the national government
- **On and off-site infrastructure and utilities.** The site currently has access to water (from bore holes), power, and telecommunications. However, since this is an infill project, all utility systems will have to be properly reviewed, upgraded, and validated. Renovation of systems is costly, but could be done in a "green" manner, reducing costs in the long term.
- **High-bandwidth telecommunications.** Tripoli will serve as a node and landing point for a high-bandwidth fiber optic submarine cable that will come ashore in 2011. This means that Tripoli can be the first location to benefit from high-speed internet connectivity in Lebanon—a potential boost for the ICT sector and RKF Site.

CHALLENGES OF THE RASHID KARAMI SITE

The following are the key development challenges for the RKF Site. Further feasibility work must be undertaken to determine the condition of existing structures on the site, and whether there is profitability and validity to the high-tech value proposition for the RKF Site. The RFK site requires its own separate feasibility study, master plan, and financial and economic analysis.

- **Legislation.** In order for the RKF Site to be adapted for additional uses, the existing legislation governing RKF must be amended. The site only allows for the erection of exhibition and trading spaces on the site. Furthermore, the TSEZ Law No. 18, *forbids* "tourism" activities, which would include exhibitions and hotel facilities.
- **Community support and involvement.** Because the site is located in the heart of Tripoli, it must take the needs and desires of civil society into account. Development should not be undertaken without consultations with local government, business community, citizens, art world, and other interest groups. This can slow down the development process, but is—ultimately—the only way to ensure the success of the development of Rachid Karami Fairground as a TSEZ site.
- **Existing on-site infrastructure and structures.** The existing structures on the site have largely sat unused for several decades. Many have deteriorated and are in disrepair. An inventory of all buildings, pavilions, structures, and surfaces will have to be further evaluated as part of a more detailed feasibility study. The site will have to be checked for environmental hazards such as asbestos, lead pipes and paints, and compliance with modern structural and building standards.
- **Minimum investment requirement.** The TSEZ Law No. 18 only allows companies investing US$300,000 or more to avail of fiscal incentives in the TSEZ. This would largely shut out most of the firms that would locate in the RKF Site. It is thus highly recommended that the law be amended to remove the minimum investment requirement.

2.4 RECOMMENDATIONS FOR TSEZ DEVELOPMENT

All three TSEZ sites provide opportunities for economic development and job creation for Lebanon. However, each site offers a different type and magnitude of anticipated economic

impacts and job creation. It is recommended that the government of Lebanon select and develop one of the two industrial locations in the *immediate term.*

NORTH SITE

The TSEZ Project Team recommends the North Site as the best option *in terms of economic impacts*. This recommendation is based on the following factors:

- **Physical environment.** The North site would be situated on a flat land in a clean environment away from residential areas.
- **Expansion potential.** There is room for expansion of multiple phases, if necessary.
- **Employment generation.** The site has the ability to attract the largest amount of investment (tenants), and generate the maximum number of direct jobs.

The primary disadvantage of the North Site is that a specific site has not been identified, nor has land been acquired for such. This could pose an impediment to developing the TSEZ in the short term.

PORT SITE

If political factors and budget considerations preclude the GoL from moving forward with the North Site, the Port Site offers the best option for TSEZ development, *in terms of the expediency of development.* The Port Site has the following advantages:

- **Existing Site.** The site is already owned by the government.
- **Timing.** The site will be reclaimed by July 2011.
- **Project resources.** The current project was designed to conduct the full feasibility study of the Port Site.

There are several disadvantages to developing the Port Site. These include:

- **No expansion.** There is no room for future expansion of the Port Site.
- **Dirty environment.** The Port Site sits adjacent to a cluster of dirty activities—garbage landfill, waste treatment facility, slaughterhouse, etc.
- **Negates future strategic port uses.** The Port Site is strategically located next to the Port of Tripoli. Development of TSEZ at that location would render the site unusable for future uses strategic to the port.

In the event that the Port Site reaches its capacity, another zone location—such as the North Site—would have to be selected and developed to meet additional demand. While this is possible, it would likely entail greater costs to the GoL than if the North Site had initially been selected for the first phase of development. The additional costs associated with expansion to a *new* location include:

- **Cost of additional feasibility study.** A feasibility study would need to be conducted for the expansion location.
- **Cost of land (inflation).** Land prices are increasing throughout Lebanon. Future acquisition of land for expansion beyond the Port Site is likely to be more costly in the future.
- **Cost of off-site infrastructure.** Off-site infrastructure costs such as roads, power, water, and telecommunications will need to be duplicated at the chosen site of expansion.

RACHID KARAMI FAIRGROUND

There are merits to GoL conducting a detailed feasibility study for the RKF Site in the short to medium term, to determine if the proposed concept is viable. However, this does not need to be an immediate priority of the GoL, unlike development of one of the two industrial

locations. When, or if, the GoL further studies the RKF Site, and finds the concept to be feasible, development could proceed in the short to medium term. Development could coincide in tandem with one of the industrial sites.

EVALUATION OF OFF-SITE AND ON-SITE INFRASTRUCTURE, UTILITIES, AND FACILITIES

3.INFRASTRUCTURE ASSESSMENT

This chapter assesses and evaluates key off- and on-site infrastructure for the three potential TSEZ sites. It provides a review of off-site infrastructure and utilities, and proposes an initial on-site facility program for each site. It should be noted that all cost figures provided herein are rough estimates. During Phase 2 of this project, the required infrastructure and utilities for one site will be properly designed and costed based on a concept master plan.

3.1 OFF-SITE INFRASTRUCTURE AND UTILITIES

The TSEZ Project Team evaluated off-site infrastructure and utilities to determine the required upgrades or improvements needed to support the day-to-day activities of the TSEZ, identify timeframes for upgrades, provide preliminary costs for improvements, and identify which entities have responsibility for the work.

- **Roads.** Each site will require construction of an access road. The quality of the main roads adjacent to the sites varies from poor to good, with upgrades currently underway.
- **Power.** Power is by far, the key infrastructure to make the TSEZ a success. It is anticipated that the TSEZ will have to provide its own power source. The Port Site will require approximately 5 million kilowatt hours (kwh) per month, and the North Site requires around 6 million kwh per month, based on 50 hectares of site development. If the North Site is expanded to capture all of the projected demand, the power requirements increase to 13 million kwh per month. The RKF Site will require 217,000 kwh per month for the first anticipated development phase, and 850,000 kwh per month, or 10.2 million kwh per year, after full development of the site in Year 20. Costs for off-site connections to the national electrical grid are provided because the TSEZ Project Team is recommends that developers will be allowed to sell surplus power to the grid.
- **Water.** Water will also be important to the SEZ. The water requirement for the Port Site is approximately 19,000m^3 per month. The North Site will require 26,700 m^3 per month, or 57,600m^3 per month if the site is expanded. The RKF Site will require 1,370m^3 per month in the first development phase, and 6,000m^3 per month after all development phases. Costs are provided for connections to the main water lines, except in the case of the North Site, which will require its own bore well.
- **Telecommunications**. All three sites require the full range of telecommunication services and networks—landlines, mobile telephone networks, fax, broadband/high-speed internet, satellite, and voice over internet protocol (VOIP). For the RKF Site, the ICT systems are critical to the success of the facility. Off-site utility costs include connections to the national telecommunications system.
- **Waste Water Treatment Plant.** The Port Site and RKF Sites will have access to the off-site Tripoli Waste Water Treatment Facility, located next to the port. The treatment plant is operational, and connections will be made to the Port Site and RKF Sites during zone development. Off-site utility costs provided in the following tables include connections to the municipal sewer system for the Port and RKF Sites.

Tables 3-1, 3-2, and 3-3, on the next three pages, assess *off-site* infrastructure and utility requirements specific to each TSEZ site. Infrastructure and utility costs described therein include only *new* costs directly associated with TSEZ development, not costs associated with other planned projects or projects that would serve areas larger than zone itself.

Table 3-1: Off-Site Infrastructure and Utility Assessment (Rough Estimates)

Port Site

Infrastructure	Existing Conditions	Issues and Recommendations	Cost Implications	Timeframe for Improvements	Jurisdictional Responsibilities
Roads Adjacent to the Port	Existing Condition: Poor	Al Mina Highway is currently being upgraded by the contractor "GENECO" to a three-lane, dual carriage road with a median, able to handle 7,000 vehicles per hour. The required length of the upgrade is 6.0 kilometers. In the future, it will be linked with the planned North Lebanon Expressway as part of the Pan-Arab Motorway, with bridges at Al-Mina, the Port of Tripoli, Abou Ali River, and Beddawi, thus facilitating easier access to and from the Port of Tripoli and the TSEZ. This road upgrade project is already funded. A connection to the Coastal Road will be required.	US$ 0.5 million For access road to connect the site to the Coastal Highway.	To be completed by 2013	Ministry of Public Works and CDR
Utilities					
Water and Waste Water	Existing Condition: Fair	Water for industrial use is currently available for the Port Site via the municipal water network which is supplied by one of three sources: i) Rashaen Springs, ii) Haab Springs, and iii) Abu Halka Springs. The water supply fee charged to the Port is the same as that for domestic households and is LBP 182,500 per year. Currently, water quality from water extracted from wells may be unsuitable for some proposed industries as the water may be too salty or alkaline. The site will utilize the Tripoli Waste Water Treatment facility.	US$160,000 For connecting the site to the municipal water and waste water network.	3 to 6 months	OET Tripoli Municipality
Power	Existing Condition: Poor	A consistent, stable, and reliable power supply is not available. Therefore, the site must generate its own power. There are future plans for EDL to construct a sub-station that would serve the port and surrounding areas in Tripoli. The cost of such a sub-station and cabling would cost approximately US$15 million. The TSEZ will require medium-voltage power such as 220/380 volts, 50Hz, and a main distribution network should consist of heavy gauged UPVC duct banks.	US$4.5 million To connect the site to the proposed power sub-station.[15] Recommended, so that on-site power generator can sell surplus power to the grid.[16]	2 to 3 years	EDL or Private Developer
Telecom	Existing Condition: Good	Telecommunication networks are presently in the vicinity of the site, and a new fiber optics system is coming to Tripoli in 2011. OGERO, the utility provider will bring all landlines. The private developer must work with OGERO to create an on-site telecom system.	US$ 800,000 To connect the site to the local and national telephone network	6 months to 1 year	OGERO

[15] Cost does not include the price of a sub-station, which would serve the port and surrounding area in Tripoli.

[16] Under current laws, the private developer is not allowed to sell surplus power to the national grid. The TSEZ Project Team recommends that the law be changed to allow this.

Table 3-2: Off-Site Infrastructure and Utility Assessment (Rough Estimates)

North (Al Qleiat) Site

Infrastructure	Existing Conditions	Issues and Recommendations	Cost Implications	Timeframe for Improvements	Jurisdictional Responsibilities
Coastal Highway Adjacent Al Qleiat	Existing Condition: Fair	All access to the proposed Al Qleiat-Tripoli North SEZ site is provided via the existing Coastal Highway. The first section from Beddawi to Aabdeh is currently undergoing an upgrade. The second section from Aabdeh to the Syrian border was upgraded five years ago. However, these upgrades are not sufficient to manage the new traffic proposed for the TSEZ North Site. As such, further upgrades and improvements will be needed along this corridor in the medium term. A connection between the Coastal Highway and the TSEZ Site will be required in the short term.	US$ 0.5 million For access road to connect the site to the Coastal Highway.	1 year	MPW
Utilities					
Water and Waste Water	Existing Condition: Fair	The Al Qleiat area does not have access to a potable water network. Therefore, North Site requires its own bore wells. The water may require testing and pre-treatment, especially if it is used for food and beverage production. The current level of ground water abstraction in the area has not been measured. A geologist's assessment needs to be undertaken to ensure safe yields and sustainable levels of abstraction in the area at and around the site. A wastewater treatment plant is required for this location.	US$0 Site does not require connection to municipal water system, because no such system will exist in the short to medium term.	2 to 5 years	OET
Power	Existing Condition: Poor	The North Site also has a problem obtaining consistent, stable, and reliable power. The power requirement for the North Site is the same as the Port Site, and will need a new substation (220V/20kv) or the site must provide its own power. The SEZ will need medium voltage power such as 220/380 volts, 50Hz, and a main distribution network should consist of heavy gauged UPVC duct banks.	US$ 5.5 million To connect the site to the Deir A'amar power station. Recommended, so that surplus power can be sold to the grid.[17]	2 to 5 years	EDL or Private Developer
Telecom	Existing Condition: Fair	Telecom is available in the area. Existing lines will need to be brought to the site by OGERO. It will be the developer's responsibility to work with OGERO to implement a TSEZ-wide telecommunications system within the zone.	US$ 1 million For connecting the site to the local and national telephone network.	6 months to 1 year	OGERO

[17] Under current laws, the private developer is not allowed to sell surplus power to the national grid. The TSEZ Project Team recommends that the law be changed to allow this.

Table 3-3: Off-Site Infrastructure and Utility Assessment (Rough Estimates)

Rachid Karami Site

Infrastructure	Existing Conditions	Issues and Recommendations	Cost Implications	Timeframe for Improvements	Jurisdictional Responsibilities
Local Roads Connecting to the Highway	Existing Condition: Good	Site is surrounded by the Al Maarad Road, which is a dual carriage system with sidewalks and a planted median. The road's sidewalks, lighting, and street planting has deteriorated and is in need of an upgrade and ongoing maintenance. The road itself and its connection into the Coastal Highway, and is in good shape and is sufficient size to manage potential traffic stemming from the new ICT uses on the site. Because site itself is in poor condition, it will be important to upgrade the access points and the existing roads into the site and the parking areas. In addition, new roads may also need to be developed depending on the location of the access point for the ICT buildings proposed in the TSEZ.	US$ 0.5 million To construct new access points to the site.	18 months to 2 years	MPW
Utilities					
Water, Waste Water, and Drainage	Existing Condition: Good	The Site currently has access to the city's water and wastewater network. It is assumed that the water supply fee charged to this site will be the same as for other city subscribers at LBP 182,500 per year. There are four existing bore-wells on site (not all are operational) that can be used to augment the water supply if required. The bore-wells are best utilized for maintaining landscaping etc. An independent waste water treatment plant will not be required on this site.	US$25,000 To connect the site to the municipal water and waste water networks.	3 to 6 months	OET
Power	Existing Condition: Poor	Currently there is a power shortage in the City of Tripoli. On-site power generation is required to allow site to run on uninterrupted electricity 24/7.	US$1 million To upgrade connections to the municipal power supply.	2 years	EDL or Private Developer
Telecom	Existing Condition: Fair	Since this site is devoted to ICT, it is imperative that it be designed and set up with dynamic, state of the art, telecommunications systems. The site's success will depend upon its ability to support and supply these various telecom networks to its client. This will include, at minimum, landlines, strong mobile signal, fax lines, broadband internet, fiber optics, satellite connectivity, and VOIP. To date, only some of these systems are available in the City of Tripoli and in Lebanon. VOIP will need to be legalized by the Lebanese government and wide width broadband will need to be installed and available in the City of Tripoli. OGERO plans to have fiber optics will be in Tripoli by mid 2011.	US$1 million To enhance connectivity required for the ICT sector, including fiber optics.	1 to 1.5 years	OGERO

3.2 ON-SITE INFRASTRUCTURE AND UTILITIES

Table 3-4: On-Site Infrastructure and Utilities (Rough Estimates)

Preliminary estimates made in absence of a design and master plan

	Port Site		North (Al Qleiat) Site		Rachid Karami Site	
Net Land Total (Leasable)	**40 ha**		**40 ha**		**20 ha**	
Road and Utility Area (ha)	**10 ha**		**10 ha**		**3 ha, plus renovating existing**	
	Cost (US$)	**$/m^2**	**Cost (US$)**	**$/m^2**	**Cost (US$)**	**$/m^2**
Internal Roads	4,500,000	9.0	4,500,000	9.0	1,800,000	7.8
Storm Water Collection	300,000	0.6	1,150,000	2.3	625,000	2.7
Water Network	1,330,000[18]	2.7	2,000,000[19]	4.0	665,000[20]	2.9
Waste water Treatment	1,525,000[21]	3.0	3,570,000[22]	7.1	615,000[23]	2.7
Power Generation[24]	5,000,000	10	5,500,000	11.0	1,000,000	4.3
Site Renovation[25]	Not applicable	NA	Not applicable	NA	5,000,000	21.7
Telecom[26]	800,000	1.6	1,000,000	2.0	2,000,000	8.7
Landfill[27]	12,000,000	24	5,000,000	10	0	0
Total[28]	**$13.4 million**	**27**	**$17.7 million**	**35**	**$11.7 million**	**51**

[18] Port Site Water: Includes on-site water distribution network, utilizing municipal water sources.

[19] North Site Water: Includes construction of on-site bore well and water distribution network. The North Site will not have access to municipal water in the foreseeable future.

[20] RKF Site Water: Includes on-site water distribution network, utilizing municipal water sources.

[21] Port Site Wastewater Treatment: Includes on-site sewer network. Treatment will be handled off-site by Tripoli Wastewater Treatment Plant.

[22] North Site Wastewater Treatment: Includes construction of an on-site wastewater treatment plant using either stabilization ponds or electromechanical treatment, as well as an on-site sewer network.

[23] RKF Site Wastewater Treatment: Includes on-site sewer network. Treatment will be handled off-site by Tripoli Wastewater Treatment Plant.

[24]Power Generation: Includes cost of installing private power plant on-site, calculated based on the estimated power demand for 40 hectares of leased land. It is also possible to build a smaller, modular power plant, and expand as the zone develops.

[25] Site renovation is only applicable to the RKF Site, as it is an urban infill project. It is a rough estimate that includes the rehabilitation of existing on-site utilities, buildings, and landscaping utilized for the university and ICT campus. Additional study is required to determine what infrastructure exists, its conditions, and the extent to which it requires rehabilitation.

[26] Telecommunications: Includes cost of laying telephone lines on the site. In the case of the RKF Site, includes advanced telecommunications systems necessary for the ICT sector. The cost is slightly higher in the North Site because the site is anticipated to require more phone lines to accommodate more industries.

[27] Landfill: Landfill is a cost that is often borne by the on-site developer, but sometimes borne by the government. Phase 2 of the TSEZ Feasibility Study will include a financial analysis that determines the optimal level of contribution by the government of Lebanon based on different PPP business models with a private developer. The cost of landfill is, therefore, not calculated in the totals in Table 3-4. For the Port Site, money exists in the budget of the Ministry of Public Works and Transport to undertake the additional landfill and soil treatment. For the North Site, actual landfill requirements will be based on the particular site chosen.

The TSEZ Project Team estimated the necessary on-site infrastructure and utilities for the three TSEZ sites. This includes land infill, internal roads, water network, wastewater treatment plant, power generators and network, site renovation, telecommunications, and landscaping. *These are normally only costed after a master plan and design have been completed.* However, the TSEZ Project Team has investigated some *initial general costs* that could apply to the development of the TSEZ. These on-site costs, presented in Table 3-4 on the previous page, pertain to the development of 50 hectares in the Port and North Sites[29], and the first development phase (university and ICT campus) of the RKF Site. Phase 2 of this Feasibility Study will provide more specific and more accurate costs of both off-site and on-site infrastructure for the site selected by the government of Lebanon. Costs depicted in Table 3-4 should not be widely quoted, as they are not based upon a specific design or master plan. Table 3-4 does not include buildings and facilities, which are separately costed in the "Initial Facility Program" in Section 3.3.

3.3 INITIAL FACILITY PROGRAM

The TSEZ Project Team developed a preliminary On-Site Facility Program for each TSEZ site, which is a necessary precursor to the conceptual master plan that will be developed in Phase 2 of this feasibility study. The Facility Program includes the buildings and structures that the private developer will need to initially construct in the TSEZ. These will be incorporated into the design and master plan. The Facility Program includes estimated costs[30] for each facility. However, because there do not yet exist detailed designs for these structures, the estimated costs presented in Tables 3-5 and 3-6, on the next two pages, are only rough estimates.

[28] Totals represent only approximations of on-site infrastructure and utility costs, and do not include the cost of landfill. The TSEZ Project Team will further refine these costs in Phase 2 of the Feasibility Study, based on a concept master plan for the site selected by the government of Lebanon. Phase 2 will also determine the optimal level of government funding for TSEZ development based on various PPP business models.

[29] The North Site differs from the Port Site in that it has expansion potential beyond the initial 50 hectares. The on-site development costs expressed in Table 3-4 do not reflect the costs of expansion at the North Site.

[30] Cost sources: Associated Consulting Engineers (ACE), Boyadjian and Associates, and Berytech, Beirut.

Table 3-5: Initial On-Site Facility Program (Rough Estimates)

Preliminary estimates made in absence of a design and master plan

Type of Facility		Port Site	North Site
Administration Building	Description	A key structure in the TSEZ. Should be located near the entrance and house important functions such as Investor Services Center, offices for TSEZ Authority and private developer, banking institutions, cafeteria, and social functions such as prayer room and medical facilities. Because the North Site may handle a greater range of industries, the Administration Building may be larger in scale.	
	Size	700 to 1,000 m^2	1,000 to 1,500 m^2
	Estimated Cost	US$1,000/$m^2$	US$1,000 m^2
	Timeframe	Constructed in first development phase.	Constructed in first development phase.
Customs Checkpoint	Description	Customs officers will monitor vehicular and passenger movements in and out of the TSEZ. Often the Customs Checkpoint is a covered area, including a Customs booth. The gateway should make an architectural statement, denoting the ceremonial entrance to the SEZ facilities, inclusive of lighting.	
	Size	The Checkpoint will span the entrance/ exit road. Small rooms of 10 m^2 may be provided for the Customs Officers.	The Checkpoint will span the entrance/ exit road. Small rooms of 10 m^2 may be provided for the Customs Officers.
	Estimated Cost	US$1,000/$m^2$	US$1,000/$m^2$
	Timeframe	Constructed in first development phase.	Constructed in first development phase.
Customs Building	Description	Building must be located at entrance to TSEZ site, in close proximity to the Customs Checkpoint. It houses Customs officers and facilities. Paperwork is processed in the Customs Building, and often cargo is checked in and out of there as well. Adjacent to the Customs Building should be a paved waiting station for trucks	
	Size	100 to 150 m^2	100 to 200 m^2
	Estimated Cost	US$1,000/$m^2$	US$1,000/$m^2$
	Timeframe	Constructed in first development phase.	Constructed in first development phase.
Pre-Built Facilities	Description	Building shells—often slab concrete—for use as warehouses or factories, which the developer constructs and leases to tenants on a monthly or yearly basis. Spaces are often used by small and medium-sized enterprises (SMEs) and start-up companies that do not have the capital to construct their own facilities.	
	Size	Approximately 500 m^2, with facilities potentially combined to yield 3,000 to 5,000 m^2, if required by tenant.	Approximately 500 m^2, with facilities potentially combined to yield 3,000 to 5,000 m^{w2}, if required by tenant.
	Estimated Cost	US$600/$m^2$	US$600/$m^2$

Table 3-5: Initial On-Site Facility Program (Rough Estimates)

Preliminary estimates made in absence of a design and master plan

Type of Facility		Port Site	North Site
	Timeframe	Several Pre-Built Facilities constructed in the first phase of development, and thereafter based on demand.	Several Pre-Built Facilities constructed in the first phase of development, and thereafter based on demand.

Table 3-6: Initial On-Site Facility Program—Rachid Karami Site (Rough Estimates)

Preliminary estimates made in absence of a design and master plan

Type of Facility		Rachid Karami Site
Office Building	Description	A high-tech office building will be constructed containing numerous floors of leasable office space suitable for the ICT sector. The building will have state-of-the-art construction and wired for advanced technologies. It should have high-quality finishing's, elevator, space for administrative offices, retail, cafeteria, and financial institutions.
	Size	3,000 to 4,000 m^2
	Estimated Cost	US$ 1,300/m^2
	Timeframe	Constructed in the first phase of development of the RKF Site.
Educational Building	Description	A branch of a technical university will anchor the first development phase of the RKF Site. It will have good quality finishing's, elevators, and maximum of five stories tall.
	Size	2,000 m^2
	Estimated Cost	US$2,000/$m^2$, based on the need for high-tech telecommunication equipment and installations.
	Timeframe	Constructed in the first phase of development of the RKF Site.
Entry Gate	Description	The entry point(s) to the RKF Site will be celebrated with an architectural feature that denotes its purpose and importance of the site., and which also facilitates public access to the site.
	Size	Not applicable
	Estimated Cost	US$1,000/$m^2$
	Timeframe	Constructed during the first development phase of the RKF Site.

3.4 GOVERNMENT CONTRIBUTION TO INFRASTRUCTUE AND UTILITIES

Off-site infrastructure for special economic zones is normally the responsibility of the government or public utilities. Development of *on-site* infrastructure, on the other hand, is undertaken by the *developer* of a special economic zone. The TSEZ Project Team also recommends that the GoL bear the cost of necessary on-site landfill and treatment for the Port or North Sites. The GoL can then use this as equity in a PPP arrangement.

In some cases, such as the Adra Industrial City in Syria, the government acts as the developer. However, the TSEZ will likely be developed and operated through a PPP arrangement with a private developer, who may bear some—or all—development costs, depending on the details of the PPP arrangement. Phase 2 of the TSEZ Feasibility Study will find the optimal development scenario where the lowest level of government financial participation yields attractive internal rates of return (IRR) for a private developer.

The off-site and on-site infrastructure, utility, and facility costs represented in Tables 3-1 through 3-6 on the previous pages are only *initial* costs. More accurate costs *for one selected site* will be determined during Phase 2 of the TSEZ Feasibility Study, when a concept master plan is produced.

During Phase 2 of the project, the TSEZ Project Team will conduct a financial analysis to gauge the internal rate of return (IRR) on investment to the zone developer. We will also prepare an economic model that shows the economic rate of return (ERR) to the government of Lebanon, based on its financial contributions to the project. The economic analysis will show the returns that the government will receive in terms of taxation of corporate profits and personal income from *indirect* business growth and employment generated as a result of the TSEZ development. The economic analysis will also examine qualitative contributions the TSEZ will make to society.

IMPACTS OF THE LEBANESE ENVIRONMENTAL FRAMEWORK ON THE TSEZ

4.ENVIRONMENTAL ASESSMENT

The TSEZ Project Team overviewed the legal and institutional framework for environmental protection, occupational health and safety, and solid waste management in Lebanon, particularly as they pertain to the development of the TSEZ. The Team also identified the key environmental issues for each of the three TSEZ sites, and for transportation infrastructure in the country.

For any or all sites developed for a SEZ, an Environmental Impact Assessment (EIA) must be undertaken. The timeframe for an EIA is four to eight months, depending upon the size of the site, the types of industries proposed, and the breadth of scope of the final project.

4.1 PORT OF TRIPOLI SITE

Under the current long-term expansion plans for the Port of Tripoli, the TSEZ lands are reclaimed from the sea and will be bounded by port storage facilities and a reclaimed area for dock and container facilities. To the northeast of the site, the TSEZ is bordered by the Tripoli landfill. There is also an oil storage farm to the southeast of the site. Approximately 100 meters north of the Port of Tripoli SEZ location is the new domestic wastewater treatment plant, which has yet to be fully connected to the Tripoli sewer network. It is anticipated that sewer connections to the Port Site will be made at the time of zone construction. Any industrial effluent from the TSEZ Port Site would require pre-treatment prior to being pumped to this wastewater treatment plant.

A Solid Waste Sorting Plant adjacent to the landfill, which commenced in August 2009 and should be completed by 2011. The CDR is planning to construct a new slaughterhouse adjacent to the TSEZ site. The existing slaughterhouse adjacent to the Port Site had been dumping waste into the site, though this has now ceased. The slaughterhouse will be demolished and possibly replaced by a Composting Plant. A new sorting plant for solid waste is being constructed adjacent the site. A concrete batching plant has also dumped waste on the Port Site, in the past. The city sewer had also discharged directly into the Port Site. However, since the summer of 2010 it has been rerouted to discharge north of the site. Finally, there is possibly a pipeline from the water to the oil farm tanks to carry petrol from ships to the tanks that may run under the area proposed for the TSEZ. The oil company is no longer functional. Information on the real existence and exact location of the pipeline or its past and current condition is not available

4.2 NORTH (AL QLEIAT) SITE

A greenfield location in the vicinity of Al Qleiat has not yet been identified, so it is difficult at this juncture to identify all of the environmental issues with a TSEZ North Site. The area generally identified for the North Site is along the eastern side of the Coastal Highway away from the Mediterranean Sea and between the Rene Mouawad Airport and the Syrian border. This northern portion of Lebanon is within a Coastal Management Plan, which aims to promote the biodiversity of the region as well as increase economic growth and

development. As such, any development in this region should be done in a sensitive manner, using green technology and following all the rules and regulations under the Ministry of the Environment.

4.3 RACHID KARAMI FAIRGROUND SITE

The Rachid Karami Site is a 100-hectare site situated in the southern quadrant of the City of Tripoli. Any TSEZ development project at this location would be considered an infill project—defined by new construction as well as the renovation and upgrade of existing buildings, structures, and landscaping on the lands. At this time, it is unclear where on the Rachid Karami site the proposed "ICT campus" might be located, or how best to incorporate the new uses into the existing project. However, it will be necessary to undertake a full assessment of all buildings, infrastructure, and utilities on the site to ensure that there are no hazardous materials present such as asbestos, lead pipes or paints, or any failing engineered structures. Any new construction on the site would have to be monitored and undertaken with an environmental mitigation and health and safety plan in place. Because the site is to be used for non-industrial facilities such as ICT, academia, and commercial uses, there will be minimal environmental impact on the surrounding residential neighborhoods, except for the influx of automobiles to the site.

4.4 POTENTIAL ENVIRONMENTAL ISSUES IN TRIPOLI AND ITS ENVIRONS

The following key issues need to be addressed in the development of the TSEZ.

QUALITY AND QUANTITY OF WATER

The water utility, Etablissement des Eaux du Liban du Nord (EELN), is currently unable to ensure a sufficient and reliable supply of water.[31] Therefore both the Port Site and the North (Al Qleiat) Site will have to ensure an independent water supply. One option would be to obtain water from a borehole in the highlands east of Tripoli, sourcing deep aquifers, where water quality is unlikely to be compromised by the presence of pollutants, which is the case in the Al Fayhaa area. It should be noted that under the Land Use Master Plan for Lebanon, the intention is to improve the ability of the four regional water utilities in the domain of water supply so as to meet the projected 2030 water demand. However, there is no detailed schedule available to indicate whether EELN would be able to meet demand in Al Fayhaa and the TSEZ in the near future. The water availability issue is not considered to present a fatal flaw, as it is possible to develop an alternative source. Nevertheless, this would have cost implications for the development of the TSEZ.

SOLID WASTE

The only landfills in the area are designed for disposal of household waste only. Industries are encouraged to recycle on-site or return used materials (ie. oils) to the supplier for treatment and/or disposal. Although the Ministry of Environment is currently developing plans for Integrated Solid Waste Management in Lebanon, there is no indication as to when waste treatment plants or disposal sites for industrial waste would become available. While this is not a fatal flaw, it will likely limit the types of activities that could be carried out in the TSEZ. An active landfill immediately borders the TSEZ Port Site. Available information indicates that the landfill is near capacity. In the event that the landfill or planned composting

[31] Sources: Interviews with the Director of Parks and Environment of Al Fayhaa and Jamal Krayyem, Director of EELN.

plant is poorly managed, they could be a source of nuisance odors. This will decrease demand for space in the TSEZ.

WASTEWATER TREATMENT

There is a new domestic wastewater treatment plant approximately 100 meters north of the Port Site, although it has yet to be fully connected to the sewer network. Industrial effluent would require pre-treatment prior to being pumped to this wastewater treatment plant.

SEISMIC ACTIVITY

Seismic hazards are omnipresent in Lebanon, due to the country's position straddling two tectonic plates. Study of the global seismic hazard map indicates ground motion in the immediate vicinity of Tripoli. This is characterized by a peak ground acceleration of between 2.4 m/s^2 and 3.2 m/s^2, expected at 10 percent probability of exceeding in 50 years. This is indicative of "medium" seismic hazard. Because it sits on reclaimed land, the Port Site, in particular, may be susceptible to soil liquefaction. Liquefaction occurs when the soil substantially loses strength and stiffness in response to an applied stress such as an earthquake. The phenomenon is often observed in loose sandy soils such as those used in land infill projects. The Port Site will require additional landfill and compaction treatments, which should take the risk of liquefaction into consideration. The costs of infrastructure presented in this feasibility study take seismic activity into account. Furthermore, the Order of Engineers and Architects requires that all building designs include seismic and earthquake-proof designs before a Building Permit is issued.

SLAUGHTERHOUSE

Plans exist for a new slaughterhouse adjacent to the TSEZ Port Site. This could be a significant source of nuisance odors, which would discourage potential investors in the TSEZ. While it is understood that this slaughterhouse is considered a national priority, it is recommended that discussions be held with CDR to explore the possibility of an alternative site for the slaughterhouse.

PALM ISLAND MARINE RESERVE

The Palm Island marine reserve is situated approximately 12 kilometers offshore from Tripoli. There is concern that storage of large volumes of hydrocarbons or chemicals in the TSEZ Port Site could present a risk to this reserve.

SOIL CONTAMINATION

A full EIA will be required to determine whether there has been any leakage of and soil contamination by hydrocarbons from the fuel storage tanks immediately to the southeast of the Port Site. The study should determine whether there is an oil pipeline under Port Site, and whether there has been any hydrocarbon leakage and soil contamination. Dumping from the concrete batching plant, discharge from the sewer, and leachate seepage from the solid landfill may also have caused soil contamination, and the EIA should investigate this as well.

EXAMINATION OF CARGO TRANSPORTATION

5.TRANSPORTATION ASSESSMENT

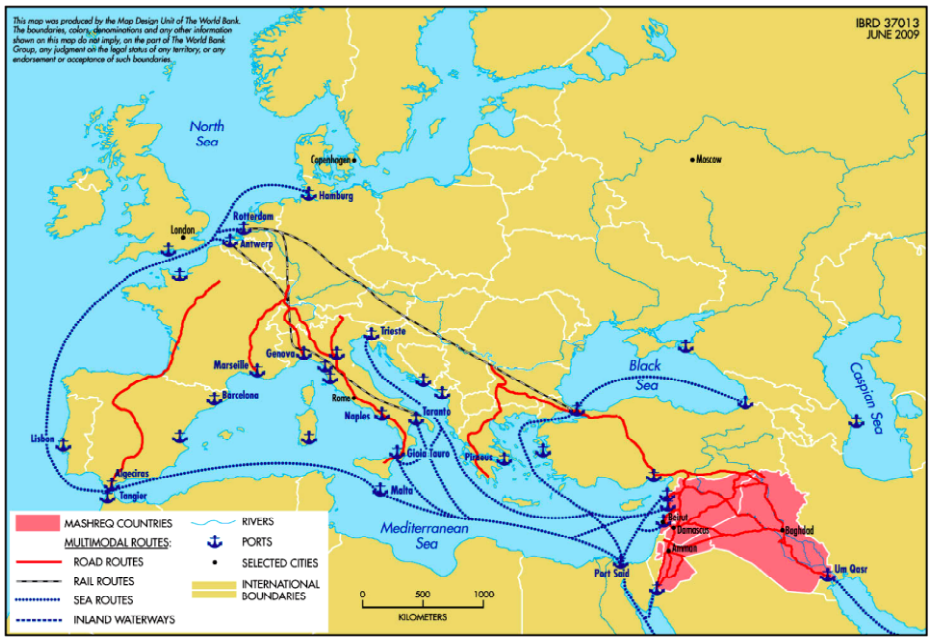
The success of the Tripoli Special Economic Zone will partially hinge on the transportation options available to companies that locate in the zone. While there are plans to expand and enhance both the Ports of Beirut and Tripoli, the role of Lebanon as a regional transshipment center is likely to be eclipsed by competition from Egyptian, Turkish, and Syrian ports. The TSEZ Project Team examined this, as well as the state of air, road, and rail cargo transportation options in Lebanon.

The role of the Port of Tripoli in Lebanon's trade remains limited, and the role that the port plays in the decision of companies to invest in the TSEZ will also likely remain limited in the near and medium terms. The Ports of Latakia (Syria), Mersin (Turkey), and Port Said (Egypt) are transshipment hubs that Beirut and Tripoli practically cannot compete against. Thus, it is expected that the use of the TSEZ as a logistics staging center for overland transport to Iraq and beyond will not materialize in a significant manner in the near to medium term.

5.1 CARGO FLOWS

TRADE VOLUME AND ROUTES

Figure 5-1: Mediterranean Trade Routes[32]



The current volume of trade in Lebanon is approximately 12 million tonnes, excluding petroleum products. In 2009, land borders handled approximately 1.2 million tonnes, the Port of Beirut 6.3 million tonnes of general cargo, and the Port of Tripoli 1.1 million tonnes. The remaining non-petroleum cargo—approximately 3 million tonnes, was primarily bulk exports handled at various dedicated private terminals along the coast of Lebanon.

[32] Source: *Mashreq Trade and Transport Facilitation Assessment*, World Bank, 2009.

The majority of Lebanon's imports are shipped by ocean via two primary trade routes: 1) Northern Europe through the Mediterranean; and 2) Asia through the Suez Canal. Secondary routes, which carry cargo overland from Europe through Turkey, or from Asia through Saudi Arabia, handle relatively little traffic because of high transport costs and difficulty crossing international borders. The Port of Beirut handles nearly all container traffic shipped into and out of Lebanon. Nearly half of this traffic is transported in feeder ships from transshipment hubs on the northern end of the Suez Canal.

The majority of exports are shipped to other Mediterranean countries by water, or to neighboring countries and the Gulf by land—or, in the case of jewelry, by air freight to Europe. Overland transportation is hampered by various non-tariff barriers. Jordan, for instance, requires that containerized imports move through the Port of Aqaba, even when Lebanon offers a more efficient route. Shipments from Lebanon must be transferred to Jordanian trucks at the border, and undergo lengthy inspections. Syria has similar restrictions on imports unless the goods are destined for one of their free zones.

The role of the Port of Tripoli in Lebanon's trade remains limited. The port handles non-containerized goods destined for the Tripoli metropolitan area. Scrap metal constitutes most exports. Transit cargo includes steel and timber, which takes advantage of the low cost of storage available in the Tripoli Free Zone adjacent to the port. The ability of the Port of Tripoli to capture a larger portion of Lebanon's trade is limited by a number of factors:

- A concentration of origin and destination of products in the Beirut metropolitan area, which is well served by the Port of Beirut.
- Transit trade through Tripoli is constrained by the policies of neighboring countries and competition for ports along the eastern Mediterranean.

REGIONAL TRANSSHIPMENT HUBS

A global system of regional transshipment hubs and national gateways has occurred due to economies of scale associated with larger vessels operating on the main routes, higher frequency of vessel calls, improved logistics support, decreased connection time between feeders and mainline vessels, and the development of larger container terminals. These factors have allowed feeders to compete with direct carriers, and have led to the consolidation of container traffic in the Mediterranean.

The largest Mediterranean ports are transshipment hubs. Beirut's role as a regional transshipment center is likely to decline because of increased competition from Egyptian, Turkish, and Syrian ports. This trend will accelerate if Beirut Port management fails to address problems of high port tariffs, congestion in storage areas, and failure to make timely investments in expanded port capacity.

5.2 TRANSPORTATION INFRASTRUCTURE

PORT OF BEIRUT

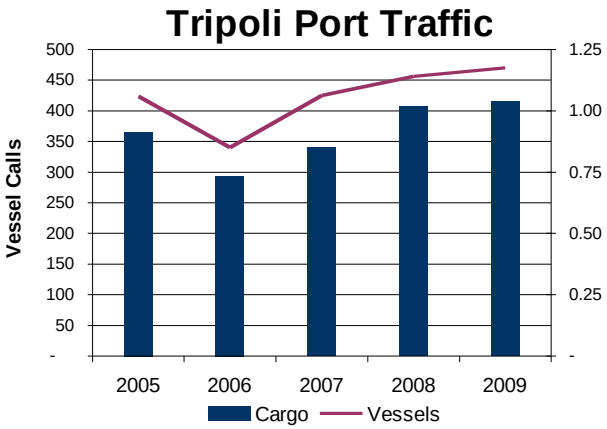
The Port of Beirut has a 1,654-meter wharf for general cargo use with depths between 8 and 10.5 meters. It has approximately 24 hectares of back-up area and six ship-to-shore gantry cranes. Import and export container traffic has grown steadily, with an average annual increment of 9.5 percent over the last decade. The port experiences a capacity shortage, due to a limited amount of facilities. Congestion in the storage area limits overall throughput. The port experiences long dwell times of 10 to 14 days, along with a policy of allowing empties and long-stay containers to remain in the port area. As a result, the Port of Beirut is losing its competitive advantage relative to Latakia, Mersin, and Egyptian ports.

The Port of Beirut is planning a two-phased expansion, including a 600-meter expansion of the container wharf (operational in 2012). This will double the nominal port capacity to 2 million TEU per year. The Port of Beirut will have sufficient capacity for handling the anticipated increase in containers for the next 15 to 20 years.

PORT OF TRIPOLI

The Port of Tripoli currently only handles general cargo—primarily neo-bulk cargoes such as grains, sugar, steel, timber, scrap metal, and some vehicles. The existing L-shaped wharf is 1,000 meters in length, with a draft that varies from 8 to 10 meters. The back-up area includes 14 transit sheds and open storage. In addition, there is a 15-hectare free zone that includes several sheds and a large amount of yard space used for long-term storage of goods. In addition to general cargo facilities, there is a bulk oil terminal north of the port with five offshore loading points, connected by a pipeline to the onshore tank farm.

Figure 5-2:



Cargo volumes in Tripoli have been stagnant for several decades due to a decline in the regional economy since 1975, and competition from private bulk cargo terminals. Despite significant growth since 2006, as shown in Figure 5-2, the volume in 2009 was only about 50 percent above that in the early 1980s. The Port of Tripoli has a low level of productivity that is due to the practice of direct loading and unloading of vessels, rather than moving cargo through transit sheds. In the future, there should be little difficulty doubling throughput of existing facilities, with an eventual throughput of 2.25 million tonnes. With the current growth rate of about 8 percent, the Port of Tripoli has sufficient capacity to handle the expected growth in general cargo until 2020.

The port is currently undergoing a large-scale expansion to attract new cargo—including containers—with Phase 1 currently under construction.[33] The assumption that Tripoli could attract transshipment cargo ignores the fact that shipping lines are unlikely to use an eastern Mediterranean port solely for transshipment. Instead, they prefer to call at a port that has a substantial base load of domestic cargo—which will likely remain Beirut—and the US$200 cost to move 40-foot containers between Tripoli and Beirut is too great for shipping lines to absorb.

Under the existing sets of tariffs, the savings in port charges in Tripoli are not sufficient to offset the higher cost for land transportation to and from Beirut. The higher cargo fees and terminal handling charges (THCs) in Beirut reflect that the port has excessive overheads, labor costs, and profits, which more than offset the efficiency of its container terminal operations. Tripoli *could* offer a THC comparable to that in Gulf countries. This would provide shipping lines a savings of more than US$100 per TEU. If the Port of Tripoli were to replace cargo fees with a THC based on the size of container—and to equate this with a value that,

[33] Dredge material from channel construction is being used to infill the area that has been designated as the Port Site for the TSEZ.

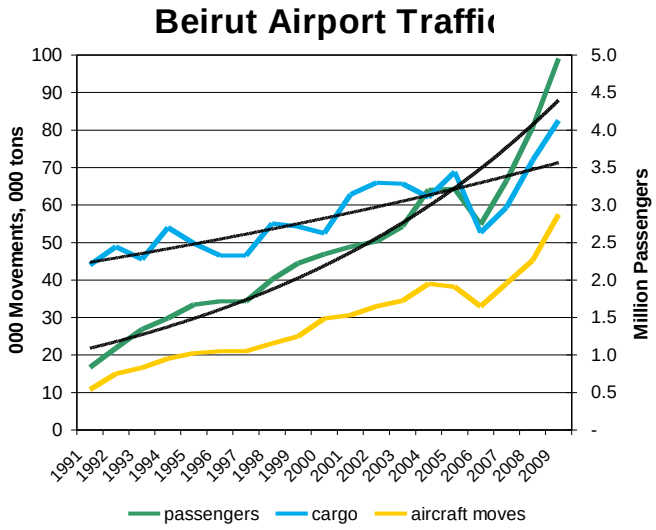
on average, was US$100 less per FEU than in Beirut—it would provide a combined savings to offset inland transport. In addition, the Port of Tripoli could increase their incentives by offering storage space at reasonable rates. Tripoli would then be in a position to capture a significant percentage of container traffic. This assumes, however, that the Port of Beirut does *not* adjust its prices in retaliation.

The expectation of large amounts of Iraq-bound transit traffic passing through the Port of Tripoli is unlikely to be met because shipments of construction materials and consumer goods will likely be sourced from Asia and will move through the Gulf. European construction materials and consumer goods will move through East Mediterranean ports, but these are likely to diminish in importance and Tripoli will face strong competition from the ports in Syria and Turkey. Any shipments to Iraq will require improved access to inland transit routes in Syria and Jordan, which currently impose numerous tariff and non-tariff barriers to transit trade.

BEIRUT INTERNATIONAL AIRPORT

Beirut's Rafic Hariri International Airport (BRHIA) has upgraded its airside and landside facilities in the past ten years. The total area occupied by the airport is 700 hectares, and its operations are limited by the build-up of the City of Beirut to the north. The design capacity of the airport is 6 million passengers, but an expansion is planned that would increase this to 16 million.

Figure 5-3:[34]



The airport has experienced a relatively steady growth in traffic over the last two decades, consistent with the rate of growth in the region. BRHIA should have sufficient capacity for the next ten years. Air freight is a relatively important mode of transportation in terms of the value of Lebanese export, but not in terms of volume. Most air cargo is carried in the belly of passenger aircraft, which allows for greater frequency and connectivity. Since air passenger traffic is expected to grow faster than air freight, BRHIA should be able to accommodate this increase. This will require the upgrading of cargo handling facilities, but not necessarily an increase in the area dedicated to cargo handling.

RENE MOUAWAD AIRPORT

Various proposals exist for developing a second passenger airport at the existing Rene Mouawad Airport near Tripoli. In June 2010, for instance, the Office of the President of the Council of Ministers commissioned the report "A second or secondary airport for Lebanon? Potential Welfare and air transport security effects of reviving the Rene Mou'awad Airport in

[34] Source: Beirut Airport statistics

Quley'at".[35] The report proposed scenarios aimed at leveraging the airport as a public asset to maximize welfare returns to the North Lebanon governorate.

The airport has a single 3,000-meter runway, but no instrument landing system. It has a small terminal that would require significant investment to upgrade for modern operations. The airport would also encounter limited air traffic and high operating and maintenance costs. Most international air traffic to western Syria will continue to be handled from Damascus or Latakia. The Beirut Airport has enough capacity to handle all expected air traffic from Tripoli and North Lebanon.

It would also be difficult for Rene Mouawad Airport to attract air cargo. Beirut currently handles only about two percent of the region's air freight. A second airport would be unlikely to attract sufficient frequency of flights to attract passengers and cargo destined beyond the local market. This problem would be true whether the airport focuses on traditional carriers or low-cost operators.

ROAD TRANSPORTATION

All of Lebanon's three major road corridors have been widened over the last decade, but they are experiencing increased congestion with few options for renewed widening due to terrain and property development adjoining the right of way. Regional road haulage involves trips ranging from 100 to 3,000 kilometers, and involves one to five border crossings. Lebanese transporters are at a disadvantage relative to Syrian competitors due to higher costs of labor, fuel, registration, and additional costs for visas and transit fees. For regional transport, half the time is spent in transit, and the rest is spent waiting at borders. The average time for border crossings is approximately one day. Clearance procedures at borders have improved in recent years due to better procedures and a more benign trading environment.

The two greatest threats to the development of traffic in the Port of Tripoli are the growing congestion of the Coastal Highway connecting Beirut to Tripoli, and the potential for restrictions of cross-border traffic and fees by Syrian authorities. While the costs for road transport is relatively competitive, the costs for border crossings and transit fees increase the trip costs substantially. It is anticipated that there will be more joint ventures between Syrian and Lebanese companies in the future, which will allow better access to Lebanese road transport, and for movement of goods to neighboring countries and the Gulf.

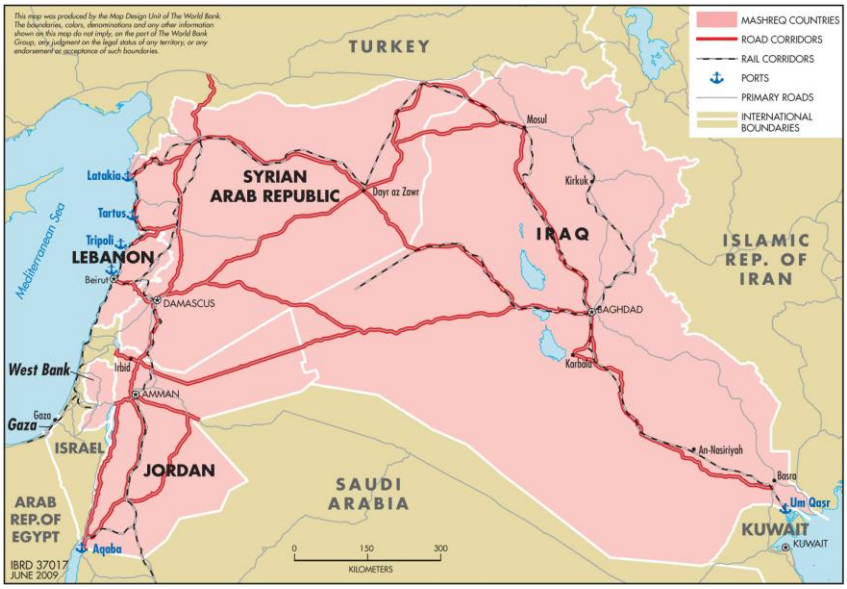
RAIL TRANSPORTATION

The Lebanese Railways has two standard-gauge lines from Syria—one down the coast through Tripoli to Al Zahrani, and the other through the Bekaa Valley to Riyaq. This 470-kilometer single-tracked system has not operated since the 1970s. The track has deteriorated, and sections are missing. Syria has a much larger system used to transport freight, shown in Figure 5.4[36], on the next page. The standard 1.4-meter gauge network is 1,496 kilometers long, including the 757-kilometer Northern Railway from the Port of Latakia to the northeast corner of Syria and Iraq. The railway passes through the Adra Industrial City northeast of Damascus, which provides excellent port and Iraqi market connections for manufacturers in Adra.

[35] Edited by Sateh Arnaout, Phd, Chief Technical Advisor to the Office of the President of the Council of Ministers

[36] Source: *Mashreq Trade and Transport Facilitation Assessment*, World Bank, 2009.

Figure 5-4: Syrian Rail Network



The reconstruction of the rail link between Tripoli and the Syrian border has been agreed upon with the government of Syria. This would allow freight to move inland from the Port of Tripoli over the Syrian rail network. The rehabilitation of the 35-kilometer line was originally to be funded by the Kuwait Fund, but there have been difficulties tendering the project, and there is still no firm date for project start or completion.

Even when the line is completed, a number of issues need to be resolved in order for the establishment of an effective freight service. These include: 1) Establish a concession for private operation of the freight service on both the Lebanon and Syrian networks; 2) Reach an agreement with Syrian Customs for expanding the movement of rail cargo across the border for transit to Syrian inland container depots (ICDs) or third countries; and 3) Develop a policy for allowing competition between Tripoli and Syrian ports for shipments to destinations in Syria and Iraq. These issues are expected to delay effective rail service between Tripoli and Syria for several years after the construction is completed.

The restoration of rail service between Tripoli and Beirut is not realistic. The right of way has been compromised by encroachment as a result of coastal development, and there is no room for realignment. If scheduled freight service were initiated, it is unclear how much demand there would be because of the short distance, and additional cost for trucks between the rail depot and destination or origin.

INDUSTRY COMPETITIVENESS IN THE TSEZ

6.MARKET ANALYSIS

An analysis of the market conditions under which companies operate is necessary to understand the competitive position and attractiveness of the TSEZ. The TSEZ Project Team analyzed the cost and quality conditions that existing companies face in Lebanon—and Tripoli in particular. The Team also examined industry trends and trade and investment flows in Lebanon, and how those might be altered by development of the TSEZ. The purpose of the Market Assessment is, ultimately, to inform the creation of the demand forecast, which follows in the next chapter.

Access to affordable industrial land and an uninterrupted power supply represent the two factors industrialist lack the most in Lebanon. These problems overshadow the fact that wages in Lebanon are higher than surrounding countries or that companies experience bureaucratic hassles with customs, industrial permitting, and other government agencies. Therein lies attractiveness of the TSEZ—affordable land with an uninterrupted power supply.

6.1 COMPARATIVE BENCHMARKING

Unlike most other countries in the Middle East, Lebanon does not have economic zones with serviced industrial infrastructure. This puts Lebanese industrialists at an extreme disadvantage, since they must purchase private land and build their own factory, office, and warehouse facilities. The purchased plots of land rarely have power, water, or sewer connections. The following are the *unserviced* land prices typically faced by Lebanese industrialists.[37]

- **Tripoli Industrial Area.** US$500 to US$1,000 per square meter
- **Fanar Industrial Area.** US$400 to US$800 per square meter
- **Zakroun Industrial Area.** US$40 to US$120 per square meter
- **Jieh Chouf.** US$300 to US$800 per square meter

Table 6-1: Cost of Serviced Industrial Land
In Free Zones, Industrial Estates, and SEZs

Economic Zone	Cost of Land	
Aegean Free Zone Izmir, Turkey	**Land lease:** $3.67/m^2/yr	
Aqaba International Industrial Estate Aqaba, Jordan	**Land sale:** $56 – 59/m^2	
Saudi Industrial Cities Saudi Arabia	**Land Lease:** $0.25/m^2/yr	
Adra Industrial City Adra, Syria	**Land Sale:** $42/m^2	
Port Said Free Zone Port Said, Egypt	**Land Lease:** $3.50/m^2/yr	
Jebel Ali Free Zone Dubai, UAE	**Land Lease:** $5.45/m^2/yr	**Land Sale:** $220/m^2
Tianjin Economic-Tech Dev Area (TEDA), China	**Land Lease:** $3.15/m^2/yr	**Land Sale:** $77/m^2

By contrast, economic zones throughout the Middle East offer *serviced* land at much more affordable prices, as shown in Table 6-1.

[37] Prices are based on sales within the past two years, as stated by industrialists interviewed for this feasibility study.

For the Lebanese or foreign company that wants to establish a regional manufacturing, warehouse, or distribution facility, Lebanon is at a distinct disadvantage to its competitors. Not only is the land more expensive, it does not even contain infrastructure such as power, water, waste treatment, and connections to main roads. This stands in contrast to the zones featured in Table 6-1 on the previous page.

Table 6-2: Cost of Utilities

Power and Water Tariffs, Industrial Usage

Location	Power Tariffs	Water Tariffs
Lebanon	**Energy Use:** $0.13 – 0.22/kwh	**Water Use:** $0.38/$m^3$
Syria	**Energy Use:** $0.0834/kwh	**Water Use:** $0.458/$m^3$
Jordan	**Day Energy Use:** $0.065/kwh	**Water Use:** $2.19/$m^3$
Turkey	**Day Energy Use:** $0.101/kwh	**Water Use:** $2.25/$m^3$
United Arab Emirates	**Energy Use:** $0.090/kwh (For use of >10,000 kwh/mo.)	**Water Use:** $2.88/$m^3$ (For use of >77m^3/mo.)
Saudi Arabia	**Energy Use:** $0.032/kwh	**Water Use:** $1.60/$m^3$ (For use of >300m^3/mo.)
China	**Energy Use:** $0.091/kwh	**Water Use:** $1.022/$m^3$

Lebanon's electricity sector has been unable to adequately supply the necessary power for residences, industries, and agricultural ventures. As a result, private generators add to power tariffs that are already higher than competitors in the region (See Table 6-2, above.)

According to some industrial firms interviewed for this feasibility study, 80 percent of the cost of power goes toward fuel for electrical generators. The remaining 20 percent goes toward the purchase of power from the grid—when it is available. On the other hand, Lebanese industrialists with water-intensive manufacturing processes are better situated than others in the region, since water tariffs for high-volume users are significantly less in Lebanon.

Table 6-3: Cost of Labor

Monthly Fully Burdened Salaries in Four Labor Categories

Location	Unskilled	Skilled	Technical	Managerial
Lebanon	$470	$755	$1,880	$3,250
Syria	$285	$684	$1,250	$2,000
Jordan	$200	$390	$1,590	$2,325
Turkey	$470	$900	$2,450	$3,350
UAE	$285	$815	$2,725	4,765
Saudi Arabia	$530	$1,500	$2,445	$4,000
Iraq (Kurdistan)	$400	$850	$1,600	$1,250
China	$156	$295	$650	$2,400

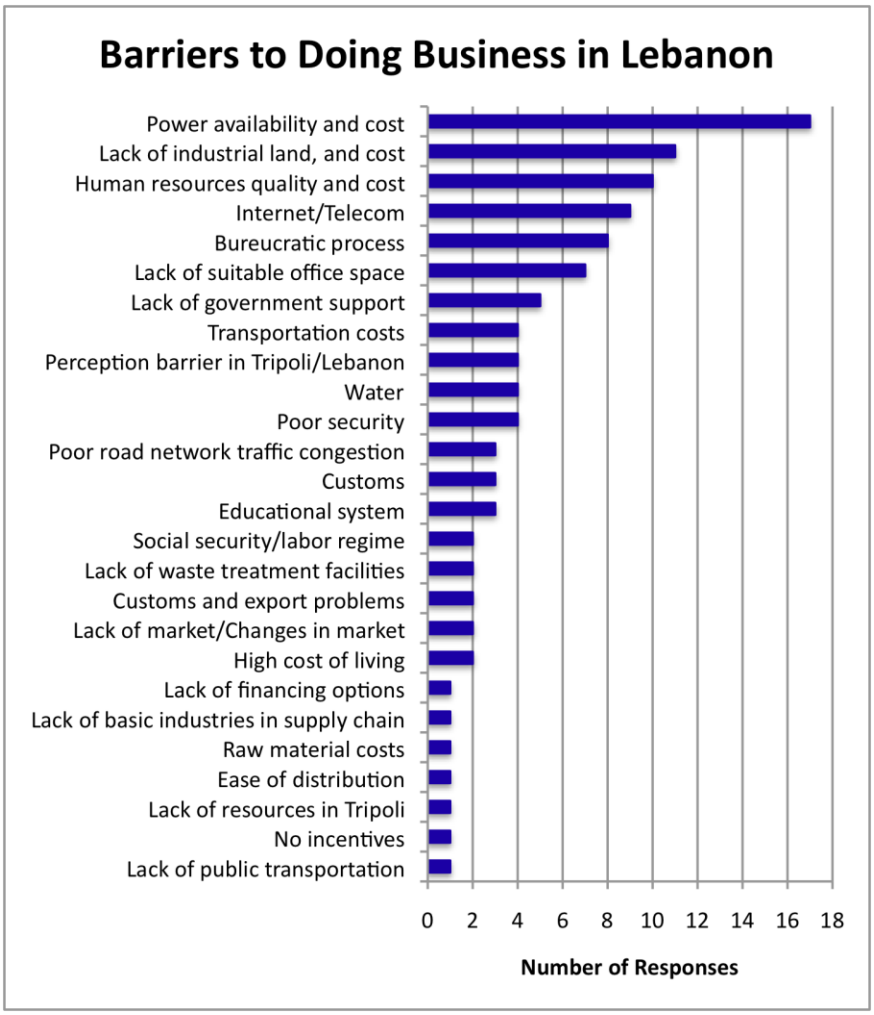
Table 6-3, above, lists the fully burdened salaries—inclusive of benefits and social security contributions—faced in competitor locations. Wages are predictably the lowest in China, which is a primary driver behind the labor-intensive industries such as garments that thrive there. Within the Middle East region, Lebanese wages are similar to those in Turkey, and

slightly higher than Syria. Lebanon offers lower wages than Saudi Arabia and UAE, however, as well as a better educated and more creative and versatile workforce.

The Lebanese workforce enjoys a positive reputation throughout the Middle East. Lebanese workers are known for their creativity, open-mindedness, education, confidence, and multilingual abilities. Since the Civil War, there has been a steady drain of technical and skilled workers from Tripoli to Beirut. Many computer programmers in Beirut, for instance, come from Tripoli. Though there are some differences in wages between Tripoli and Beirut, they are not enough to impact investment decisions.

6.2 BARRIERS TO DOING BUSINESS

Figure 6-4:



The TSEZ Project Team interviewed 39 industrial, ICT, and educational firms, asking the following: "What are the top five barriers to doing business *in this location*?" The responses—shown in Figure 6-4—reflect barriers experienced by firms in their *existing* locations in Lebanon. These barriers represent the TSEZ *status quo ante*. The development of the TSEZ is expected to ameliorate many of the problems described by interviewed businesses. The zone will have the biggest positive effects on the largest barriers to doing business—namely access to land, uninterrupted power, telecommunications (high bandwidth internet and VOIP service), and easing the bureaucratic regulations.

- **Perception barrier.** Tripoli suffers from a "perception barrier" among the business community in Lebanon, and overcoming negative perceptions is paramount to the success of the TSEZ. Negative *perceptions* include:
- **Security concerns.** An image of Tripoli as a region more prone to instabilities and conflicts.
- **Remoteness.** Tripoli seems "remote" to many in the Beirut and Mount Lebanon area. This is both a physical and psychological barrier that needs to be overcome.
- **Provincialism.** Lack of sophistication, with few entertainment and recreation options.

- **Human resources.** Educated workforce from North lives abroad or in Beirut. Inconsistent quality of public primary and secondary education in the North.
- **Third-party services.** Few firms to contract for ICT support, accounting, or other support services.
- **Failed undertakings.** Reputation for building infrastructure—stadium, Rachid Karami Fairground—that largely remains unused.

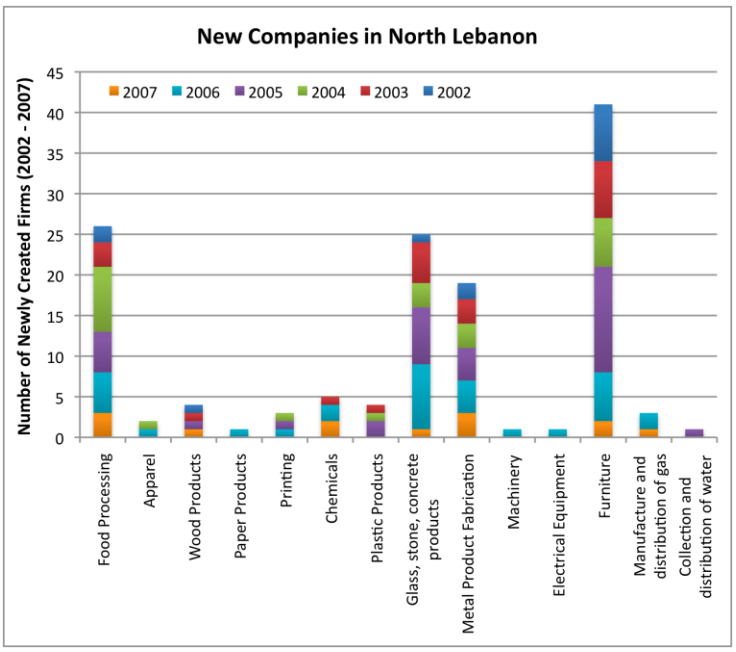
The TSEZ will undoubtedly attract businesses from North Lebanon, as well as North Lebanese expatriates. However, the stated government goal of the TSEZ is to establish a special economic zone for the benefit of the *entire country* of Lebanon. The government of Lebanon—as well as the TSEZ Authority and zone operators—must, therefore, take active steps to overcome Tripoli's perception barrier, in order to attract the maximum number of tenants to the TSEZ from both inside and outside the North Lebanon region.

6.3 TRADE AND INVESTMENT TRENDS

Trade and investment trends provide useful information on the types of industry sectors that are growing or declining in various locations around Lebanon. These trends were useful for the demand forecast.

Yearly foreign direct investment (FDI) flows to Lebanon have increased fourfold since 2002. In 2003, Lebanon was the second largest recipient of FDI flows to the Middle East, attracting 28 percent of all inflows. FDI flows plateaued during politically destabilizing events between 2004 and 2007, but has since risen to about US$5 billion. FDI is mainly concentrated in real estate and financial services, with Lebanese expatriates and Gulf investors accounting for 56 percent of annual inflows. FDI from non-Arab sources accounts for less than 3 percent of inflows. According to IDAL, manufacturing accounts for just 2.8 percent of FDI.

Figure 6-5:



The TSEZ Project Team queried data and information from the Lebanese Association of Industrialists to understand the types of investments occurring throughout Lebanon's five governorates. This helped establish regional trends, as well as the numbers of new investments—foreign and domestic—occurring on an annual basis. Figure 6-5, at left, shows the growth of industry among firms that employ at least five workers. Food and beverage processing is one of the most important industrial sectors in North Lebanon. Between 2002 and 2007, an average of four new food and beverage ventures were formed in North Lebanon each year. Other important sectors include: Furniture (seven new ventures per year); Stone and concrete (four new ventures per year); and Metal Fabrication (three new ventures per year). In the future, investments in these sectors will form the likely anchors of the TSEZ. In 2009, just one new industrial project in

North Lebanon—a food and beverage processing venture—qualified for IDAL incentives. The remaining ventures were small or medium-sized ventures.

Examination of Lebanon's trade flows reveals the target export markets for Lebanese products, as well as specific industry sectors that are thriving. Lebanon's healthy export sectors are the ones that are most likely to lease land in a well-run economic zone like the TSEZ. Table 6.6, below, lists Lebanon's top export markets. In the left column are Lebanon's largest export partners, along with the amount of exports sold to each country.

Table 6-6: Lebanon's Primary Trading Partners

Exports (2005-2009)

		Commodity checked (√) if it is one of the top five (5) products exported to trading partner.															
	Export Amount (2005-2009)	Jewelry and Precious Stones	Electrical Equipment	Machinery	Iron and Steel	Paper	Clocks and Watches	Tobacco	Printed Books	Beverages	Oils and Perfumes	Apparel	Cement, Salts, and Sulfur	Wood	Plastics	Fruits and vegetables	Furniture	Fertilizer
Switzerland	$2,176,542,547	√					√	√	√	√								
UAE	$1,389,113,137	√	√	√							√	√						
Iraq	$1,257,425,896		√	√									√	√	√			
Syria	$1,167,289,831			√		√							√		√	√		
Saudi Arabia	$1,037,766,332			√		√						√			√		√	
Other (Next 5 largest: Turkey, Jordan, Kuwait, Egypt, Qatar, Belgium)	$8,657,126,906	√	√	√	√													√

The examination of Lebanon's trade flows underscores the importance of providing serviced industrial infrastructure, which export-oriented firms can utilize as a competitive production platform. The sectors in which Lebanon has a high volume of exports should be targeted for promotion in the TSEZ.

6.4 MOST PROMISING INDUSTRIES

Table 6-7, on the next two pages, summarizes the industry sectors most likely to locate in the TSEZ, based on data and information gathered for this Market Assessment. These industries comprise the sectors featured in the Demand Forecast of this TSEZ Feasibility Study. The industry sectors that will thrive in the TSEZ have several characteristics:

- Strong export potential
- Niche products, with Lebanese value-added in design, product development, and innovative style
- Complementary to construction industry, and the expansion of purchasing power in Lebanon.

Table 6-7: Industry Summary

Assessment of Potential for Industry Expansion and Investment into the TSEZ

	Sub-Sectors Likely to Invest in the TSEZ	Notes
Food and beverage processing	Soft drinks, fruit juices, canned fruits and vegetables, jams and jellies, prepared fruits and nuts, spices, confectionary, bread and pastry products, snack foods, frozen foods	Food and beverage processing requires clean surroundings away from heavy industry, moisture, and pollutants. Most interviewed firms stated they would not locate at the TSEZ Port Site. The sector faces strong competition from imports, but Lebanese quality brand sell well in export markets. Primary competitors are Egypt, Turkey, UAE, and Saudi Arabia.
Metal fabrication	Construction materials, concrete-reinforced bars, window frames, window grates, fences, gates, playground equipment, hand tools, metal sanitary ware for home	Metal fabricators in Lebanon are dong good business due to the construction boom. North Lebanon is known for good metal fabrication, with a potential for greater export-oriented ventures. The metals sector is facing threats from imports of extruded products from Gulf countries.
Warehousing	Open storage, private warehouses, shared warehouses, refrigerated warehouses, logistics operations, product distribution	The largest market within Lebanon is in the Beirut area. As a result, many companies prefer to put product distribution warehouses in Beirut. However, other firms place distribution points throughout the country, including in the North. Some Tripoli-based companies import goods to the North, and distribute from there. Open or covered storage of automobiles is also an option for the TSEZ, which would require cooperation with the Port of Tripoli in setting charges equal to or better than those offered by the Port of Beirut.
Furniture	Traditional wood-carved furniture, modern partially assembled flat-pack furniture made of particle board, mattresses, upholstered furniture, showrooms	Furniture producers indicated that they need a clean area in which to work. In general, firms did not like the industrial area near the Port of Tripoli. Many furniture companies are currently located in the center of the city of Tripoli, and there is a good chance some of these may relocate to the TSEZ. Growth in the furniture sector is minimal to moderate, and several older firms have shut down. Firms are facing cost pressures, particularly from cheap Asian imports.
Construction materials	Plaster, cut and worked stone, ceramic tiles, glass fixtures and windows, cement, articles of cast concrete, prefabricated buildings	Demand for cement products hit a high during reconstruction activities, and still remains strong. Domestic demand for quarried stone products was generated during reconstruction activities. Cut and worked stone is not exported to Europe and the Gulf.
Plastics	Plastic containers, plastic household goods, plastics for use in electronics and machinery, plastic film, sheets, and pipes plastic furniture	The plastics sector complements the food and beverage processing industry, as it supplies necessary packaging materials. Plastics are a strong export sector for Lebanon. Some Lebanese plastics factories have been very successful and competitive, and have established production units outside Lebanon.
Paper products	Toilet paper, towels, tissue, diapers, writing paper, cardboard, coated paperboard for food service, notebooks, packaging material	The paper industry is competitive in Lebanon, and has invested heavily in modernizing machinery and tools. Some paper companies operate on about a 50:50 split between domestic consumption and exports. Paper constitutes Lebanon's top five exported commodities to Syria, Saudi Arabia, Egypt, Morocco, and Yemen. It is Lebanon's top exported commodity to Jordan and Bahrain. The sector is energy-intensive, and could benefit from uninterrupted power in the TSEZ.
Chemicals	Paint, resins, dyes, shampoo, soap, lotions,	Fast-moving consumer goods such as soaps, toiletries, and household cleansers occupy a large part of

Table 6-7: Industry Summary

Assessment of Potential for Industry Expansion and Investment into the TSEZ

	Sub-Sectors Likely to Invest in the TSEZ	Notes
	creams and toilet preparations, make-up, perfumes, household cleansing products, industrial chemicals	the chemicals sector in Lebanon. Export markets are primarily in the Middle East, Africa, and to ethnic stores in Europe and North America. Some firms have studied expanding their operations to North Lebanon, and the TSEZ would help in this regard. The Port Site was described as "unattractive" to some firms in the FMCG chemical sector.
Electronics	Electrical motors and parts, AC generators, electrical transformers, electrical switches, semiconductor design and testing, generator controllers, electrical panel boards	Electronics constitutes the second fastest growing manufacturing sector in Lebanon. Most products require multi-disciplinary integration, and are heavily invested by repatriated Lebanese. An SEZ in Tripoli would be attractive to firms in the electronics sector because it would allow them to hire foreign workers with the skills to train a local workforce. Markets for electronic products are largely outside Lebanon.
Vehicle storage repairs	Vehicle repair, refurbishment of imported automobiles. Covered and open storage of imported new and used vehicles.	In Tripoli, there are 1,800 small businesses dealing with cars and spare parts (out of 15,000 businesses). This business could expand if the Port of Tripoli attracts a greater number of automobile imports, with subsequent storage in the TSEZ.
Apparel	Branded casual and semi-formal apparel, uniforms	Lebanon's apparel sector is largely export-oriented, with over 50 percent of production sold abroad. Lebanon has a comparative advantage in producing short-series, low-volume, original value-added designs. Cost of land and labor are important variables for the apparel sector. Top export markets for Lebanese-made apparel are UAE, Saudi Arabia, Kuwait, Bahrain, Libya, and EU.
ICT	Custom software, website development, intranet development, ICT support services, telecommunication network design, systems, and services, wireless financial services, e-government applications	Much of the software sector investment in Tripoli is driven by repatriated Lebanese. Many computer programmers currently working in Beirut come from Tripoli. There is a small, but active, ICT Association in Tripoli, and the sector has about one new small entrant every few months. Export markets for Lebanese ICT products and services are the US, EU, Gulf, and Africa. Bandwidth and legality of VOIP must be addressed in the TSEZ if the sector is to flourish. Syria, Egypt, and Jordan all offer lower costs for ICT businesses, but Lebanon is known for its superior education.
BPO	Call center, data center, telesales,	The business process outsourcing (BPO) sector in Lebanon is in its nascent stages. It is severely hampered by lack of access to inbound and outbound VOIP. One call center has scouted locations in and around Tripoli for expansion of their business.
Educational institution	Branch of a technical university	Technical universities have expressed an interest in locating on the premises of the TSEZ Rachid Karami site, or providing training services to firms located in the TSEZ.
Hotel	Business hotel	The Rachid Karami Site is envisioned to include a business quality hotel on-site.
Creative industries	Media, handicrafts, graphic design, publishing and print media, jewelry and fashion design	These industries would likely locate in the Rachid Karami Site, if converted to part of the TSEZ.

20-YEAR PROJECTIONS

7.DEMAND FORECAST

It is imperative that a large infrastructure project such as the TSEZ be based upon a sound demand forecast that examines the future usage patterns of the zone, and the infrastructure required to properly service the anticipated users. A demand forecast is not a scientific undertaking. Rather, it is an *informed judgment* based on data and observations. The TSEZ Project Team took care to share many of the data and trends used to create the demand forecast. Based on research and the findings presented in the Chapter 6: Market Analysis, the TSEZ Project Team estimated the numbers and types of companies that would locate in the zone over a period of 20 years. This forecast will be utilized in the physical master plan, financial analysis, and economic analysis in Phase 2 of the project.

The demand forecast may vary based on political, economic, and situational factors. For instance, if the Ministry of Industry proceeds with a planned industrial estate in North Lebanon, this will compete directly with the TSEZ, and dilute demand for both projects. Coordination and cooperation are required among government entities to create a unified industrial policy so that situations like this can be avoided.

7.1 PURPOSE OF DEMAND FORECAST

The demand forecast forms a crucial nexus between many elements of the TSEZ Feasibility Study. It estimates the number of companies that will locate in the TSEZ, and allows for appropriate sizing of the zone, creation of a phased master plan, and estimations of the internal rate of return to private developers. In particular, the demand forecast serves the following purposes:

Photograph by Andrea Erdmann, Sibley Int'l

Rachid Karami Fairground. The demand forecast will help determine how much land to develop at one time at each proposed TSEZ site, thus preventing valuable infrastructure from sitting unused.

- **Estimation of number of tenants in each industry.** The forecast estimates the number of companies likely to establish themselves over 20 years. It also estimates the *types* of industries most likely to locate in the TSEZ, as different sectors demand distinct types of infrastructure. It is essential that the TSEZ offer space, infrastructure, and amenities commensurate with what is most likely demanded by potential tenants.
- **Basis of physical master plan.** The TSEZ Master Plan will match the supply of land with that demanded by potential tenants, as estimated in the demand forecast. The forecast will also estimate the demand for utilities such as power and water, which will be used by the engineering team to design the zone in a phased manner.
- **Inputs to the financial analysis.** A financial analysis will estimate the internal rate of return (IRR) to the TSEZ developer and operator. The demand forecast provides data central to the financial examination, including estimates of revenue from leases, which contribute to the operational income of the developer.

- **Inputs to the economic analysis.** An economic analysis will show the economic rate of return (ERR) to the government of Lebanon, based on its financial and in-kind contributions, foregone revenues, and returns in the form of taxation. The demand forecast provides inputs to the economic analysis in terms of employment, taxation potential, value-added, and other variables tied to the demand forecast.

7.2 DEMAND FORECAST METHODOLOGY

Estimating the demand for land, infrastructure, and employment for an SEZ is not a scientific undertaking. Rather, it is a skillful calculation based on established data and informed assumptions. A variety of standard forecasting techniques were utilized to create the demand estimations for the TSEZ. These are highlighted in Table 7-1.

Table 7-1: Demand Forecast Methodology
Forecasting Techniques

Technique	Description
1. Historical Demand	Examined historical data pertaining to the formation of companies throughout Lebanon. This provided a baseline idea of industrial investment to date.
2. Trend Extrapolation	Identified changing trends over the past five years, utilizing data on company formation, trade, and trends described by interviewed firms. The TSEZ provides "game changing" alteration to historical trends.
3. Conjoint Analysis	Interviewed firms revealed the importance of various aspects of the TSEZ, and how that might affect their investment decisions. This allowed for an understanding of how demand might change with TSEZ infrastructure and amenities
4. Scenario Creation	Three scenarios for each TSEZ site were created, to reflect possible development alternatives, and their corresponding demand.
5. Intentions Survey	Existing firms were queried on their intentions or interest to expand operations to the TSEZ. Though relocations will be rare, it provided an insight into the conditions that might make company expansion possible.
6. Rules-Based Forecasting	Techniques 3, 4, and 5 allowed The TSEZ Project Team to create and apply new "rules" that would alter the historical trends. The demand forecast as depicted in this feasibility study is a reflection of new trends created when discernable investment priorities are applied to historical investment trends.

7.3 DEMAND FORECAST

The number of companies that actually locate in the TSEZ is likely to vary based on a number of factors and decisions. To capture this variance, the TSEZ Project Team created three demand forecast scenarios. These scenarios are based on realities that could potentially occur in Lebanon—multiple industrial zones in North Lebanon, political instability, access to power, etc. *The scenarios are not development recommendations*. Rather, they are assessments of what demand would be *if* certain conditions occur.

BASE CASE SCENARIO

The Base Case Scenario represents the most likely course of events for the TSEZ. The Scenario assumes that the government of Lebanon coordinates industrial development efforts to avoid situations where competing industrial zones dilute demand in North Lebanon, and elsewhere in the country. (See textbox, on the next page.) The Base Case also assumes that the minimum capital investment requirement of US$300,000—as currently stated in the TSEZ Law—will be removed. This will allow for a greater number of companies to enjoy the TSEZ's fiscal benefits, and locate in the zone—thus resulting in higher demand.

In the Base Case, the TSEZ will be designed and operated as planned, with all required infrastructure and utilities. Uninterrupted power will be privately generated on-site. Water and waste treatment hook-ups will be available on each plot of land, and high-bandwidth telecommunications will be installed in the zone.

AGGRESSIVE SCENARIO

The TSEZ Project Team recognizes that demand for land and buildings in the TSEZ could exceed the Base Case estimates. As a result, an Aggressive Scenario was developed to reflect a situation where conditions in the TSEZ and Lebanon were more conducive to attracting companies to the Tripoli Special Economic Zone. In addition to the factors and conditions presented in the Base Case, the Aggressive Scenario assumes the following:

- **Aggressive marketing.** The TSEZ is aggressively marketed to foreign investors, expatriate Lebanese, and local businesspersons. The zone is promoted jointly by IDAL, TSEZ Authority, and the private operator. The government of Lebanon actively works to steer large industrial and ICT investments to the TSEZ.
- **Best practice design, development, and operation.** The TSEZ master plan includes architectural design guidelines, and the TSEZ Law is amended to allow the Authority to develop zoning and building standards that are in line with international best practices. The zone is developed and operated in an efficient manner, and infrastructure constructed maintained in a pristine manner. The TSEZ Authority institutional structure is amended to allow for an Investor Services Directorate to handle all investor licenses and permits.
- **Tourism activities allowed.** The TSEZ Law is amended to allow tourism activities, where appropriate—such as the Rashid Karami Site.
- **VOIP allowed.** National legislation amended to allow inbound and outbound VOIP in the TSEZ.
- **Political stability.** The political situation in Lebanon and the Mashreq region stabilizes, and remains without unrest in the near and medium term—particularly during the two-year construction period of the TSEZ.

CONSERVATIVE SCENARIO

It is recognized that—while not planned—pessimistic circumstances *could* influence demand for space in the TSEZ. Therefore, a Conservative Scenario was created to demonstrate what demand *might* look like under the following conditions. (It should be noted that the Conservative Scenario is not a *prescription* for development. Rather, it is a realistic reflection of what demand *could* look like if certain development conditions are not realized.)

- **Minimum capital investment requirement.** The minimum US$300,000 stipulated in the TSEZ Law remains. This disadvantages small and medium-sized businesses, as well as many ICT firms.
- **Competing zones.** Another serviced industrial zone is located in North Lebanon in the near to medium term by the Ministry of Industry or other

Competing Industrial Zones

The Ministry of Industry, in cooperation with the Association of Lebanese Industrialists, has identified land for an industrial zone in North Lebanon near the border with Syria. Decree No. 14283 (2005), Decree No. 1660 (1979), and Decree No. 642 (1997) grant the Ministry of Industry the right to establish and operate public “industrial centers” throughout Lebanon. Such a zone would directly compete with the TSEZ.

The TSEZ Project Team does not believe there to be enough demand to sustain two competing zones in the North in the near and medium terms. Successful industrial development in the North—and throughout Lebanon—will require concerted coordination among government ministries, local government entities, and the private sector.

public developer. In the near term, another public industrial zone is located elsewhere in Lebanon.

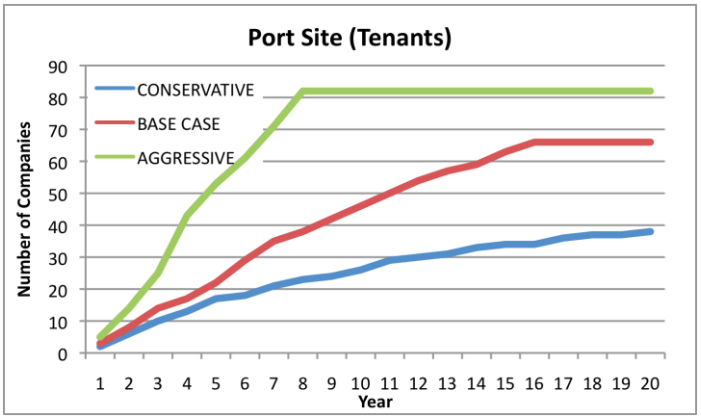
- **Power.** Power is not generated by a private developer in the TSEZ. This leaves tenants to operate their own generators and puts companies in no better situation vis-à-vis electricity than firms outside the TSEZ. Electrical power was the feature that the business community most wanted to see in the TSEZ. If this is not provided, it will have a negative impact on demand.

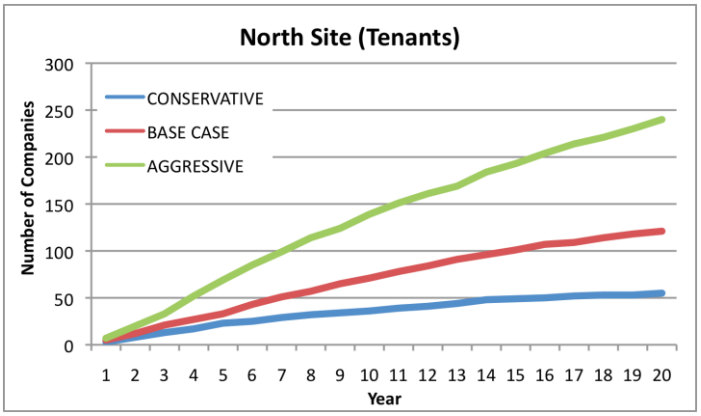
7.4 DEMAND FORECAST

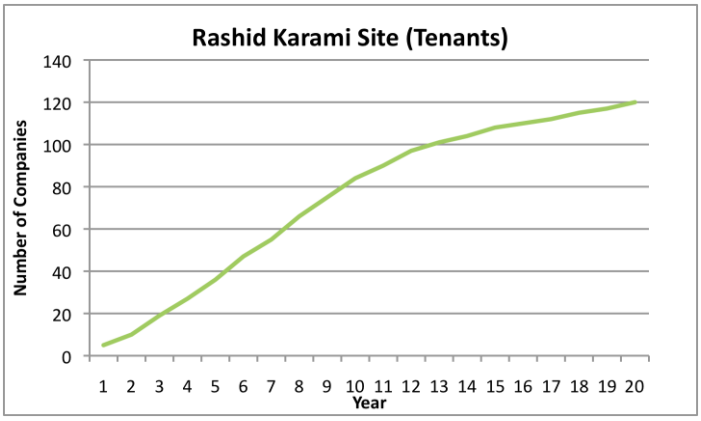
TENANTS

Utilizing the methodology and demand scenarios described in the previous sections, the TSEZ Project Team forecasted the number of tenants in each industry that were likely to locate in the TSEZ. The long-term 20-year horizon of the forecast will allow it to be seamlessly applied to the master plan, financial analysis, and economic analysis in Phase 2 of the project.

Figures 7-2, 7-3, and 7-4:







The forecasts were created for each proposed TSEZ site—Port Site, North (Al Qleiat) Site, and RKF Site. It is assumed that *either* the Port Site or North Site will be developed, but not both. The RKF Site, however, is of a different character, and could be developed in tandem with either the Port Site or North Site.

Figures 7-2 and 7-3 illustrate the number of tenants that will likely locate in the Port Site and North Site. Demand for the two sites differs in several respects. First, the North site would be a greenfield development, with adequate land for required expansions. The Port Site, by contrast, is limited to 50 hectares, and expansion would require prohibitively costly reclamation of land. (Note that the number of tenants at the Port Site levels off in the Base Case and Aggressive Scenarios due to a lack of space to accommodate additional companies.) Second, the North Site is anticipated to be a cleaner environment than the Port site, attracting firms in sectors such as food processing, which have indicated they would not locate at the port due to its proximity of solid waste and slaughterhouse facilities.

Demand for tenants in the RKF Site, shown in Figure 7-4, cannot be directly compared to the Port and North Sites. By contrast, the RKF Site will attract a very different type of tenant, notably in the ICT and creative industries.

EMPLOYMENT

The demand forecast includes an estimate of the numbers and types of workers that will likely be hired by tenants in the TSEZ. Figures 7-5 through 7-10 list the expected levels of employment at each TSEZ site according to different demand scenarios. The breakdown of employment types is as follows:

- **Managerial.** Top, mid-, and low-level managerial positions, including owners.
- **Technical.** Engineers, mid- and senior-level software designers, comptrollers, and others with specialty skills
- **Skilled.** Workers with several years experience, machine operators, non-technical call center workers, secretaries.
- **Unskilled.** Entry-level assembly line workers, janitors, custodians, drivers.

Figure 7-5:

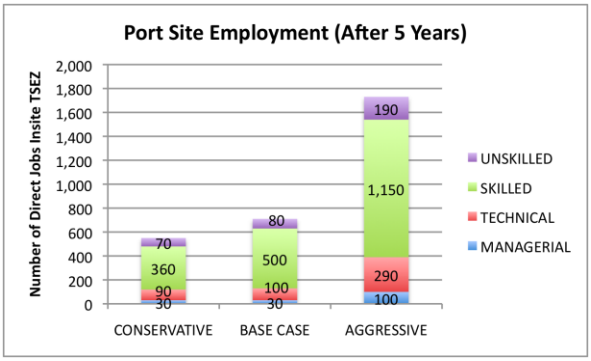
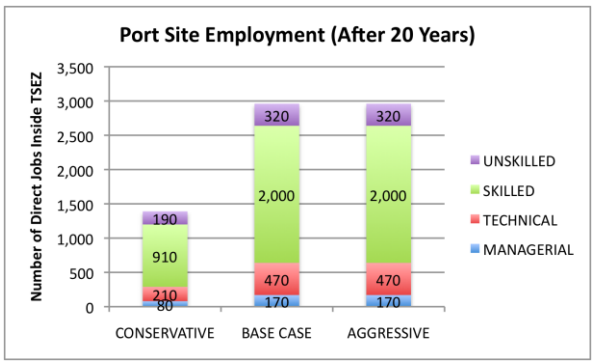


Figure 7-6:



Of the three potential TSEZ sites examined, the North Site offers the greatest potential for employment creation. Over the course of 20 years, in the Base Case Scenario, the North Site could generate approximately 9,000 direct, versus only 3,000 jobs at the Port Site. That assumes that enough land is acquired at the North Site to accommodate zone expansion. At both the North and Port Sites, over half jobs are expected to be in the “skilled” category. Ten to 20 percent of job creation will be for “unskilled” jobs, and 17 percent for “technical” positions. Of greatest concern to potential investors is the forecasted demand for managerial talent (6 to 8 percent of new job creation), which they say is largely lacking in the greater Tripoli area.

Figure 7-7:

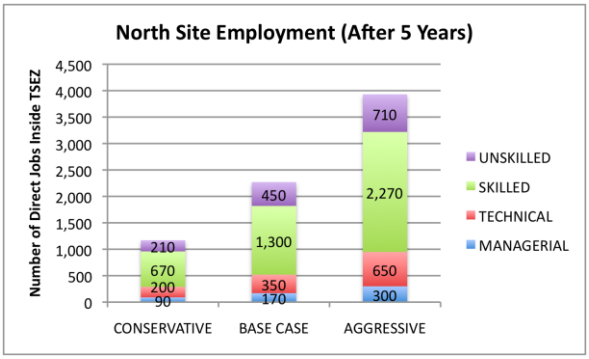
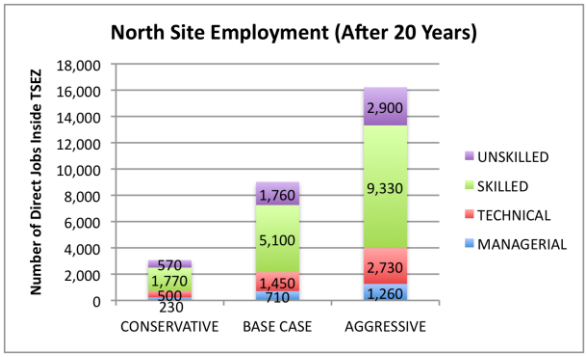


Figure 7-8:



The RKF Site will create a different mix of employment opportunities than the Port or North sites. Most jobs (62 percent) will be in “technical” fields such as software programming, teaching positions, or research and development. Ten percent of employment is likely to be in “manager” positions; 26 percent in “skilled” jobs; and just 2 percent in “unskilled” jobs.

Figure 7-9:

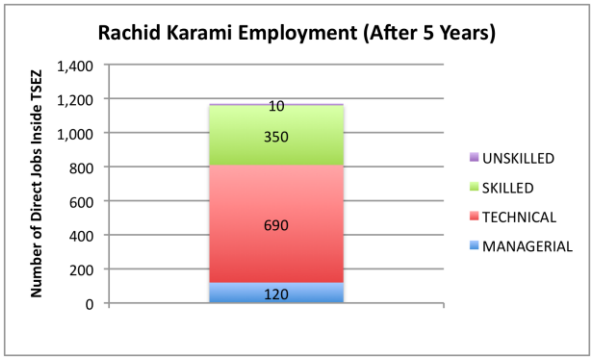
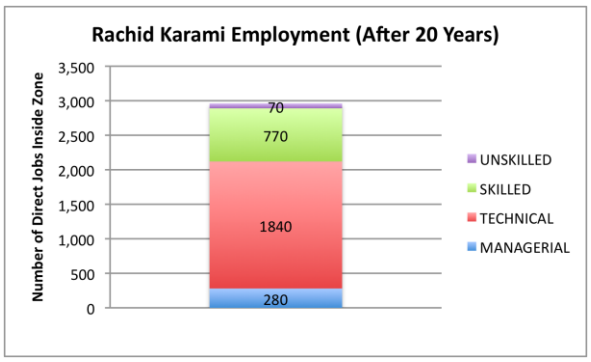
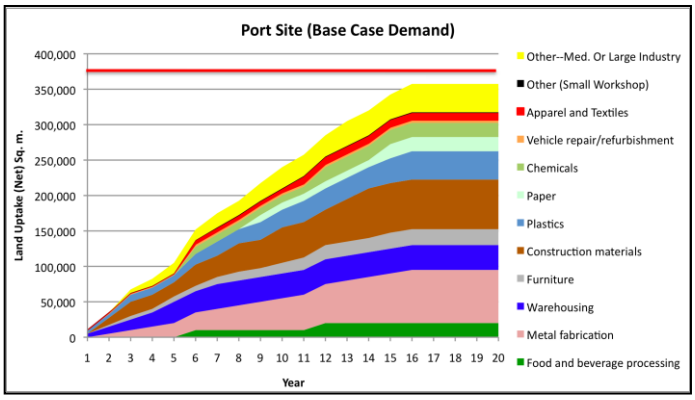
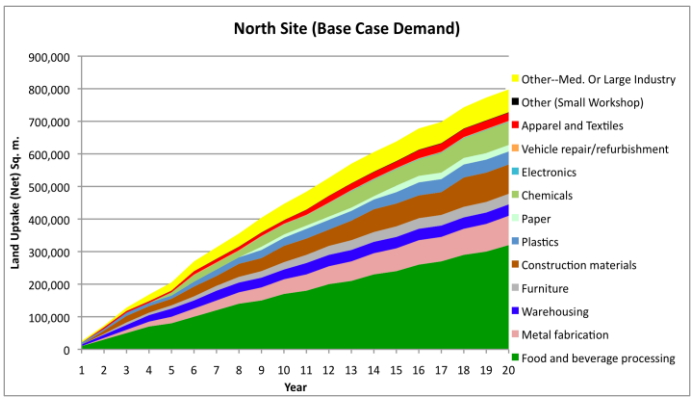


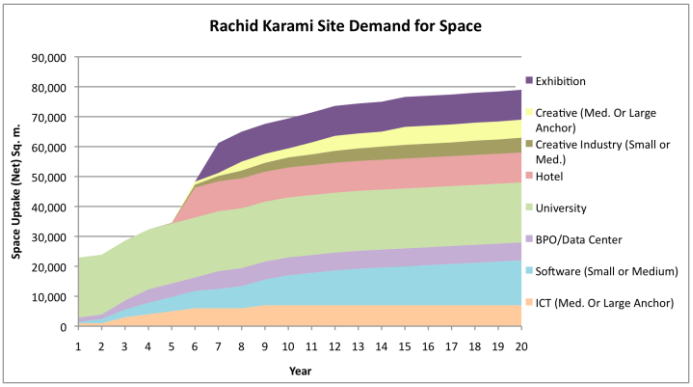
Figure 7-10:



Figures 7-11, 7-12, and 7-13







LAND

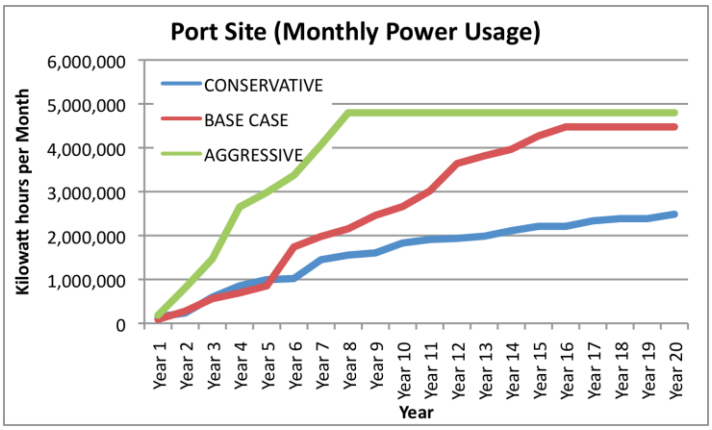
The TSEZ Project Team estimated the amount of land that would be leased by tenants in the TSEZ over the 20-year period of the forecast. The land forecasts for the Port Site and North Site represent *net land* (ie. land that is leased by tenants). Forecasts for the RKF Site represent *density* (ie. building floor space).

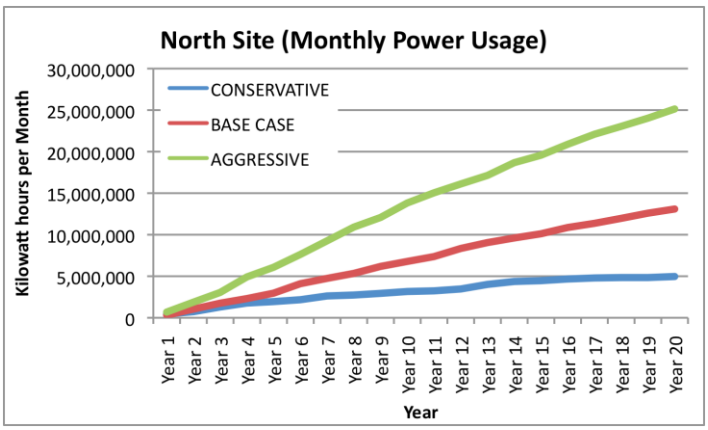
The forecasts shown in Figures 7-11, 7-12, and 7-13 represent the *Base Case Scenario* for the three TSEZ sites. The colored bands correspond to the amount of cumulative net land taken up by the most likely industries to locate in the TSEZ. The red line across the top of the Port Site graph (Figure 7-11) shows the physical limits of the site—approximately 38 net hectares (50 gross hectares). In the Base Case Scenario, the TSEZ will likely reach capacity in Year 15, after which there will be no room for on-site expansion. By contrast, in Year 15, the North Site would reach approximately 65 net hectares, with room for additional expansion.

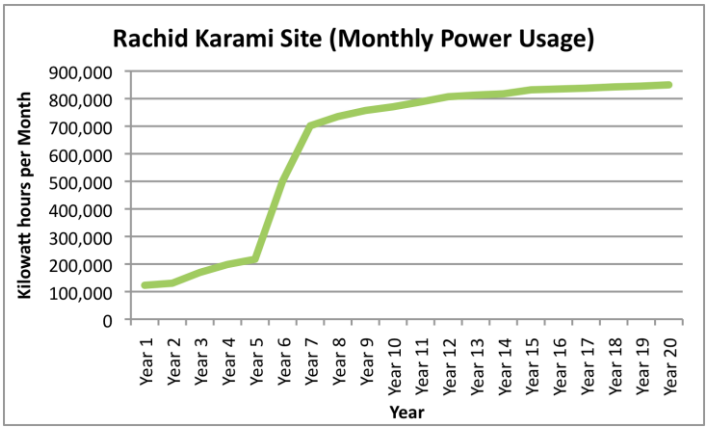
As a complex *urban infill* project, the Rachid Karami Site ultimately will require its own comprehensive feasibility study and development plan. The demand for space as *initially* envisioned for the RKF Site is shown in Figure 7-13, at on the previous page. The TSEZ Project Team anticipates that the RKF Site would be developed in at least two phases, which can be seen in Figure 7-13. The first phase would be anchored by a branch of a technical university, depicted as the light green band in the middle of the graph. The ICT *campus environment* would attract small, medium, and large-sized ICT firms and business process outsourcing (BPO) and data centers. The second phase of the RKF Site development would add a hotel and exhibition space, along with facilities for creative industries.

POWER

Figures 7-14, 7-15, and 7-16:







To forecast electricity usage in the TSEZ, the number of anticipated tenants in each industry was multiplied by a typical power usage profile for companies in that sector. The results are illustrated in Figures 7-14, 7-15, and 7-16. These estimations are crucial for meeting the future power needs of the TSEZ. They must be factored in when designing the on-site power station in the zone.

At the Port Site, demand for electricity will range from 1 million to 3 million kilowatt hours per month by Year 5, and 2.5 million to 4.8 million kilowatt hours by Year 20—depending on the demand scenario. The power requirements for the North Site are more substantial due to the greater number of anticipated tenants. As shown in Figure 7-15, at left, monthly power usage at the North Site would range from 2.5 million to 7.5 million kilowatt hours by Year 5. By Year 20, demand would increase to between 5 million and 25.1 million kilowatt hours per month—depending on the demand scenario.

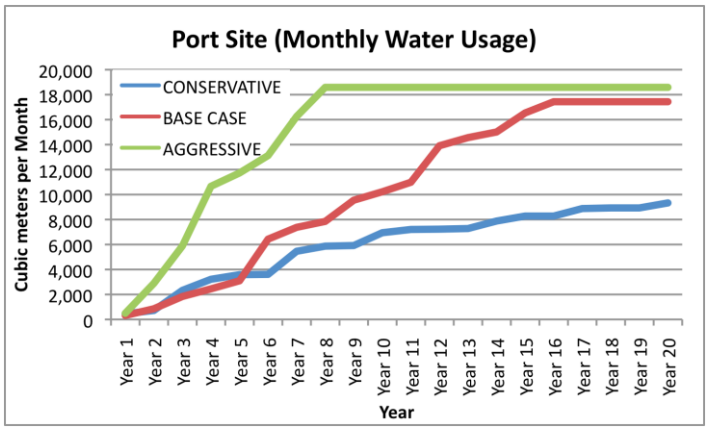
The monthly power requirements for the RKF Site are estimated to be approximately 850,000 kilowatt hours after 20 years. The addition of hotel and exhibition facilities

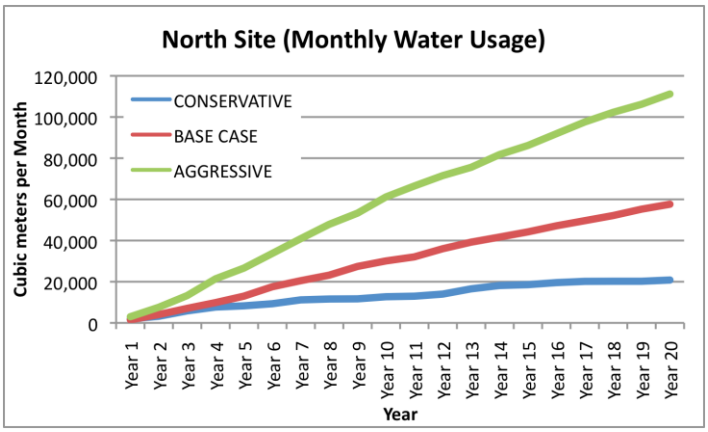
between Years 5 and 6 are expected to significantly increase power demand at that site, as illustrated in Figure 7-16.

WATER

The water forecast depicts the amount of water demanded each month by tenants in the TSEZ. The forecasts do not depict the additional water that might be demanded for irrigation and maintenance of common areas, or water consumed by the TSEZ Authority, operator, or Customs—which is expected to be negligible. The consumption figures do reflect water for both industrial processing *and* human consumption by tenants in the zone.

Figures 7-17, 7-18, and 7-19:





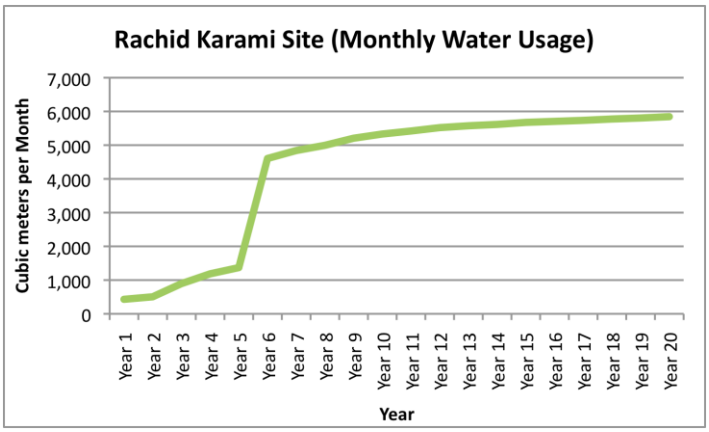


Figure 7-17, at left, depicts the amount of water demanded each month at the Port Site. Monthly consumption in Year 20 averages approximately 17,500 cubic meters in Year 20 in the Base Case Scenario. Water requirements in the North Site would be two to six times greater. As depicted in Figure 7-18, water consumption will likely reach 58,000 cubic meters per month. The Infrastructure Assessment chapter of this feasibility study examined the water resources necessary to meet these levels of demand.

In the first phase of development, it is estimated that the RKF Site will consume just over 1,000 cubic meters of water per month. (See Figure 7-19.) This grows to approximately 6,000 cubic meters monthly after construction of hotel and exhibition facilities at the site.

If the government of Lebanon chooses to develop the Rachid Karami Fairground as part of the TSEZ, additional study is required to further refine the utility demand for the RKF Site. Please note, however, that resources do not exist as part of this current project to undertake a more in-depth study of the RKF Site.

RECOMMENDATIONS FOR THE TSEZ AUTHORITY

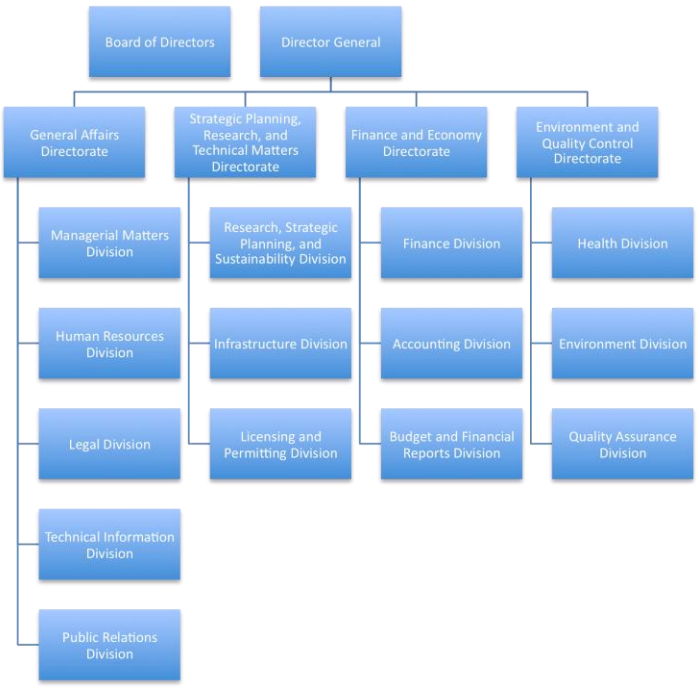
8.INSTITUTIONAL STRUCTURE

The TSEZ Law No. 18 specifies the establishment of the Public Authority of the Tripoli Special Economic Zone. Pursuant to the Law, in 2009 the Lebanese Cabinet passed the TSEZ Organizational Decree No. 2226. The Decree specifies the institutional structure of the TSEZ Authority, including the duties of each of its directorates. Furthermore, the Personnel Decree No. 2283 details the appointment, qualifications, duties, responsibilities, and financial remuneration of TSEZ Authority employees.

8.1 COMMENTARY ON THE INSTITUTIONAL STRUCTURE, AS SPECIFIED BY DECREE

Figure 8-1 depicts the institutional structure as stipulated by the TSEZ Organizational Decree. The Authority is to have four directorates that answer to a Director General, or CEO, of the Authority. The Director General also sits as the President of the Board of Directors.

Figure 8-1: TSEZ Institutional Structure As Specified by Decree



The TSEZ Project Team recommends the following improvements in the structure of the TSEZ Authority.

REGULATORY ROLE NEGLECTED

The regulatory functions of licensing, compliance monitoring, regulatory oversight to private developers, and strategic planning are the core "business" of the TSEZ Authority. As such, it is best that they be given prominence within the institutional structure of the TSEZ. This is not necessarily the case in the organizational plan as set forth in Decree No. 2226 (shown in Figure 8-2). The TSEZ Law allows for the Authority to contract private entities to develop and/or operate the zone. This would allow the Authority to retain its primary role as "regulator" and cede all management functions of the TSEZ to a professional operating enterprise. The law leaves open the specific public-private partnership (PPP) vehicle by which this would be accomplished. The TSEZ Project Team will explore the best PPP option for the TSEZ in Phase 2 of the project.

ONE-STOP INVESTOR SERVICE CENTER NEGLECTED

One of the primary regulatory functions of the TSEZ Authority is to issue licenses, permits, work authorizations, and ensure the continued compliance of tenants in the zone. This is best accomplished through a one-stop Investor Services Center in the zone, which the TSEZ Law authorizes in Article (9). The TSEZ Project Team highly recommends that the Investor Services functions of the TSEZ Authority stand alone in their own Directorate, led by a Director who answers directly to the Director General.

STRATEGIC PLANNING, RESEARCH, AND TECHNICAL MATTERS DIRECTORATE

The TSEZ Project Team recommends a reorganization of the functions of this directorate from those mandated by the Organizational Decree. The infrastructure functions of the TSEZ should be headed by a civil engineer or urban planner who can assemble and supervise a staff capable in these fields. The same director should not also oversee the Investor Services functions of licensing. Strategic planning is an exercise that is best managed by the Director General, with participation by all directorates. The Decree states that the Directorate is to develop program plans, estimate financial expenditures, and suggest sources of income. These are functions, however, that are best undertaken by the Finance and Economy Directorate. Finally, licensing and permitting functions of the Authority should be undertaken within an Investor Services Directorate.

BOARD OF DIRECTORS CONFLICT OF INTEREST

The Director General of the Authority *also* serves as the President of the Board of Directors. Therein lies a potential conflict of interest. Best practice in SEZ regimes suggests that the Board of Directors *not* include a sitting Director General. Thus, the TSEZ Project Team recommends revisiting this provision.

LARGE BUREAUCRATIC ESTABLISHMENT

SEZ authorities in some countries oversee numerous economic zones throughout the country. This is not the case of the TSEZ Authority, which will assume regulatory functions over one moderately sized industrial zone. The Organizational Decree specifies 14 *divisions*. The actual functions of the TSEZ could likely be carried out by as many *individuals*, let alone whole divisions. For a moderately sized zone such as that planned in Tripoli, the proposed organizational structure is excessive, and may not lead to an efficient organization.

PERSONNEL POLICIES

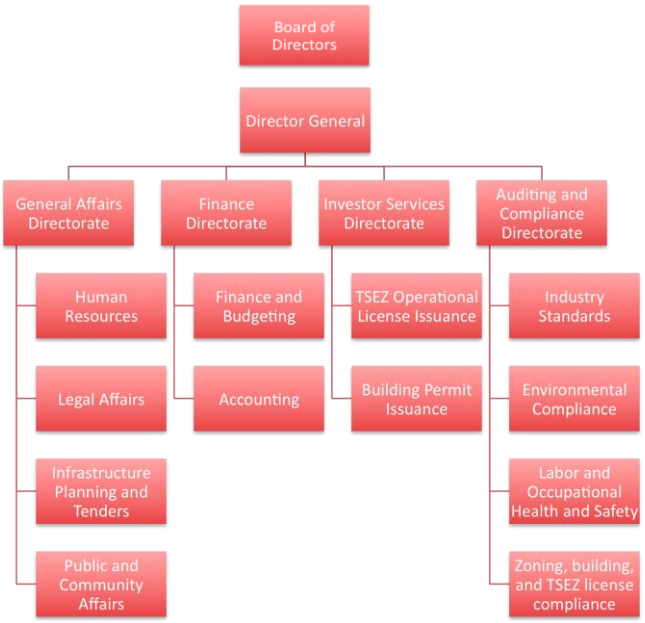
The TSEZ Authority employs personnel practices similar to those in other government bureaucracies (ie. requiring entrance examinations, assignment of jobs based on test scores, Director General determining hiring of all employees), based on Articles (6) and (7) of the TSEZ Personnel Decree No. 2283. The TSEZ Project Team recommends that the Authority *not* emulate a large bureaucracy, but rather, provide flexible personnel policies that give directors leeway in hiring the best employees in the most efficient manner.

8.2 RECOMMENDED INSTITUTIONAL STRUCTURE FOR THE TSEZ AUTHORITY

The TSEZ Project Team proposes an alternative institutional structures to that specified in the Organizational Decree No. 2226. This alternative, shown in Figure 8-2, provides for “directorates” headed by Directors. However, unlike the structure presented in Figure 8-1, the boxes under each directorate illustrate *functions*, rather than Divisions. It is possible that

a function could constitute an entire division. However, some functions might best be undertaken by a single person.

Figure 8-2: Recommended TSEZ Institutional Structure



BOARD OF DIRECTORS

The Board of Directors should provide oversight and guidance to the strategic direction and operation of the TSEZ Authority. The TSEZ Project Team recommends that the Director General of the Authority *not* sit on the Board in order to avoid conflicts of interest.

DIRECTOR GENERAL

In the TSEZ Project Team's proposed structure, the position of Director General remains as it is specified in Decree No. 2226.

GENERAL AFFAIRS DIRECTORATE

The General Affairs Directorate includes the functions of human resources and legal counsel, public relations, and any other function germane to the day-to-day operation of the zone. If a private developer designs, constructs, and maintains all physical zone infrastructure, there is little need for the Authority to maintain its own staff with these capabilities. The alternative institutional structure presented in Figure 8-2 shows a scaled-down infrastructure function housed within the General Affairs Directorate.

FINANCE DIRECTORATE

The Finance Directorate should oversee all accounting, budgeting, financial planning, investing, economic research, and reporting requirements of the TSEZ Authority.

INVESTOR SERVICES DIRECTORATE

The TSEZ Authority should maintain a separate Investor Services Directorate charged with acting as the One-Stop Investor Services Center for the zone. This is an important regulatory function of the Authority, and it is crucial to give it prominence within the institutional structure.

AUDITING AND COMPLIANCE DIRECTORATE

The Investor Services Directorate handles the issuance of all licenses and permits. After a zone tenant is operational, however, it must obey all laws, regulations, and TSEZ rules. It is thus the job of the Auditing and Compliance Directorate to ensure just that. The Directorate will assume the functions of environmental monitoring, labor, occupational safety, and health compliance, zoning, building, and construction compliance, and monitoring the quality standards of products as per the Lebanese Standards Institution.

BEST PRACTICES FOR REGULATING AND OPERATING THE TSEZ

9.LEGAL ASSESSMENT

The TSEZ Project Team conducted a thorough legal review of the TSEZ Law No. 18, its Decrees, and Lebanon's relevant international trade treaty obligations. Through this analysis, the Project Team identified areas of good SEZ practices, as well as legal and regulatory barriers to zone development and competitiveness. Numerous changes in the TSEZ Law and its Decrees are recommended to ensure the attractiveness and competitiveness of the Tripoli Special Economic Zone to domestic and international developers and investors.

9.1 BEST PRACTICES IN THE TSEZ LAW

The TSEZ represents the first attempt to establish a special economic zone in Lebanon. The SEZ program, as codified in the Law and Decrees, includes many of the elements that are typically associated with SEZ best practices around the world. This includes:

- Creation of a one-stop center for investor services such as permits and licenses
- Customs presence inside the SEZ
- A simplified tax regime, and ease of doing business
- Separation of the regulatory and operational roles in the TSEZ
- Allowance of private sector participation in zone development and operation
- Privatization of utilities

If the Rachid Karami Fairgrounds is brought under the TSEZ regime, the Law should be amended to allow for "tourism" activities. This will allow RKF to continue to have a hotel, exhibitions, concerts, and other public events.

Photograph by Andrea Erdmann, Sibley Int'l

9.2 WEAKNESSES IN THE TSEZ LAW AND REGULATORY FRAMEWORK

Despite the comprehensive reach of the TSEZ Law, the level of detailed coverage of the above areas is not in line with international best practices. In fact, the law is considered ambiguous in comparison to other national laws. Generally, SEZ laws are drafted in a manner that thoroughly explains the features of their respective zones. The TSEZ Law, on the other hand, lacks important details in some areas, while providing some details that are incompatible with international best practices in other areas. Many of the legal provisions require redrafting to provide better clarity required to attract a private developer, and foreign and domestic investors.

Article (38) of the TSEZ Law prevents Decrees from being issued that are not explicitly mentioned in the Law. This relegates important functions—such as licensing procedures—to Board Decisions. Decisions, which can relatively easily be altered, provide less comfort and

long-term stability to investors in an SEZ. Thus, the TSEZ Project Team recommends the TSEZ Law be amended to allow for additional Decrees.

PRIORITY CONCERNS AND RECOMMENDED CHANGES

The TSEZ Project Team recommends changes to the TSEZ Law, its Decrees, and subsequent issuance of Board Decisions. Table 9-1 on the following pages lists and prioritizes the recommended alterations to TSEZ legislation. The following five legal issues, in particular, are of priority concern because the current provisions in the Law and Decrees significantly undermine the attractiveness and competitiveness of the TSEZ. They should be immediately addressed. Development of the TSEZ can take place in parallel with these legal and regulatory amendments.

REVOKE ONE-YEAR LEASE PERIOD FOR CDR

The TSEZ Lands Decree No. 1791 should be revoked or amended to remove the *annual* lease of lands to the CDR. The Decree allows the State to give an annual lease to the CDR to put the lands under the disposal of the TSEZ Authority. The Authority, in turn, can sign 30-year investment contracts with zone developers. Legally, however, the State can reclaim the land on a year-to-year basis, with no ability of the CDR or others to object or claim damages. This does not provide the necessary investment assurance that private developers seek, and may stymie the ability of the Authority to attract a private developer.

REVOKE MINIMUM CAPITAL IN TSEZ

Article (33) of the TSEZ Law states that companies located in the TSEZ must have fixed assets or a minimum capital investment of US$300,000 in order to obtain fiscal incentives. This requirement puts investment in the TSEZ out of reach for most small and medium-sized companies, particularly in the ICT sector. The minimum requirement should thus be revoked, thus providing access to TSEZ infrastructure and benefits for a wider range of firms.

NEGOTIATE FREE TRADE ACCESS FOR GOODS PRODUCED IN TSEZ

Some GAFTA countries do not give national origin status to goods produced in “free zones”. Many firms interviewed for this feasibility study indicated they would *not* locate in the TSEZ if they could not take advantage of the free trade benefits of GAFTA. Thus, it is highly recommended that the government of Lebanon a) amend the TSEZ Law No. 18 with clear provisions to give “national” certificates of origin to goods produced in the TSEZ, provide the goods meet content and other criteria; b) Amend Article (8) of the Customs Decree to give national status to goods produced in SEZs; and c) Engage in diplomatic discussions with trade partners to mutually recognize goods produced in free zones and SEZs, provided they abide by applicable national content rules.

ALLOW PRIVATE UTILITIES TO SELL SURPLUS TO THE NATIONAL GRID

The TSEZ Law No. 18 allows for private generation of power in the TSEZ. However, surplus power cannot be sold to the national grid. It is anticipated that a private developer of the zone will also be required to generate the zone’s own power supply—a very costly investment. If the developer is forbidden to sell surplus power to the national grid, it could significantly undermine the ability to attract a private supplier of power to the TSEZ.

REFINE CUSTOMS TREATMENT OF GOODS IN TSEZ

The Customs Decree No. 2220 should be amended to include a specific clause exempting the value of local content from incurring duties when a product is sold into the Lebanese Customs Territory. This is in line with international best practices in SEZ regulation.

Table 9-1: Concerns with the Legal and Regulatory Framework of the TSEZ

Priority Issues Arising from the TSEZ Law No. 18, Its Decrees, and Proposed Board Decisions

Topic	Pertinent Law, Decree, or Treaty	Challenges	Recommendation
Legal Issues of Priority Concern These legal provisions are not in line with international best practices, and undermine the competitiveness and attractiveness of the TSEZ, and should immediately be addressed.			
TSEZ Lands	Decree No. 1791	1. Decree specifies coordinates for TSEZ, which currently only includes the Port Site. 2. Decree allows the GoL to give the CDR a *one-year* license to put TSEZ lands under the disposal of the TSEZ Authority. Although the Authority can sign 30-year investment contracts with developers, the land can legally be reclaimed by the State on an annual basis, with no ability of the CDR or others to object or claim damages. Threat of "expropriation" poses a serious deterrent to investment in the TSEZ.	Revoke Decree No. 1791, or at least reissue it after amending clauses on the *annual* lease period of the CDR. The TSEZ Authority should be given a wide array of powers to dispose of lands in any manner deemed appropriate to stimulating investment.
Minimum Capital Requirement	TSEZ Law No. 18	Article (33) of the TSEZ Law states that investments in the TSEZ must have fixed assets or capital of at least US$300,000 in order to benefit from fiscal incentives. This is a deterrent that could prevent SMEs and companies in the ICT sector from locating in the zone.	Amend Article (33) of the TSEZ Law to remove minimum capital requirement of US$300,000.
Market Access	GAFTA TSEZ Law No. 18 Customs Decree	1. Some GAFTA members do not extend free trade status to goods produced in "free zones". Potential TSEZ investors indicated they would not locate in the TSEZ if they could not take advantage of free trade to the region under GAFTA. 2. No specific provisions in the TSEZ Law No. 18 for national certificate of origin for TSEZ products. 3. Article (8) of the Customs Decree considers TSEZ products as "foreign" and puts them under temporary admission rules.	1. Amend TSEZ Law so it provides a clear mechanism to give free zone and SEZ products a "national" certificate of origin if they satisfy local content, TBT, SPS, and other requirements. 2. Amend Article (8) of Customs Decree to give national status to SEZ products that meet domestic requirements and pay applicable duties on foreign content. 3. Engage in diplomatic discussions with trade partners to mutually recognize free zone and SEZ products that meet specified content requirements and carry partners' certificates of origin.
Private Operation of Utilities	TSEZ Law No. 18 Privatization Law	1. The private management and operation of utilities comes under the auspices of the TSEZ Authority. It is unclear whether the national Privatization Law is applicable to private utility operation in the TSEZ. 2. Private utility operators in the zone are forbidden to sell surplus	1. Amend TSEZ Law to allow clearer provisions for allowing participation of private sector in delivery of public utilities. 2. Amend TSEZ Law to allow for private utilities to sell surplus power, water, waste treatment capacity to the national grid or

Table 9-1: Concerns with the Legal and Regulatory Framework of the TSEZ

Priority Issues Arising from the TSEZ Law No. 18, Its Decrees, and Proposed Board Decisions

Topic	Pertinent Law, Decree, or Treaty	Challenges	Recommendation
		power to the national grid. This significantly decreases the attractiveness for a private TSEZ operator to generate its own power for the zone, which in turn, will decrease the attractiveness of the TSEZ to investors.	water/sewer network.
Customs	TSEZ Law No. 19 Customs Decree No. 2220 National Customs Law	1. The TSEZ Law, Customs Decree, and National Customs Law are silent on treatment of local versus foreign content of products produced in the TSEZ and sold in the domestic customs territory. Article (8.6) of the Customs Decree is not clear on whether duties are to be levied on the *entire* product, or just the value of the foreign content. 2. Coordination between the TSEZ Authority and national Customs could be a challenge.	1. Amend the TSEZ Customs Decree No. 2220 to include an explicit clause exempting the value of local content of goods produced in the TSEZ from paying import duties when sold into the Lebanese Customs Territory. This is in line with international best practices in SEZ legislation. 2. TSEZ Customs Decree No. 2220 and Board Decisions should provide clear procedures for tracing foreign content in TSEZ-produced products. 3. The Authority should negotiate a clear agreement with national Customs on how procedures will be carried out in the zone.
VOIP	Decree No. 16852 Min. Telecom Circular 2/1	1. Decree No. 16852 prohibits the marketing of VOIP. 2. Ministry of Telecom Circular No. 2/1 allows limited use of VOIP (inbound-only) for some call centers, with bureaucratic restrictions.	Amend GoL policy and relevant decrees to allow for full commercial use of inbound and outbound VOIP in the TSEZ.
Legal Issues of Important, but Secondary Concern These legal provisions are not in line with international best practices, and should be addressed in parallel with—or subsequent to—Priority Concerns.			
Labor	TSEZ Law No. 18 National Labor Law	Article (28) of the TSEZ Law eliminates the minimum wage requirement in the zone. The Law puts the TSEZ Authority in charge of monitoring labor contract compliance, but does not grant the Authority the powers of the Ministry of Labor to inspect facilities or examine contracts. It is not best practice to disregard minimum accepted conditions in the Law.	1. Amend Article (28) of the TSEZ Law with regard to minimum wage requirements so as not to violate Lebanon's international ILO commitments. 2. Draft labor enforcement and monitoring Decisions (procedures) for the TSEZ Authority.
Compliance Monitoring	TSEZ Law No. 18	Article (38) of the TSEZ Law gives adequate basis to issue a compliance and enforcement Decree, allowing the Authority to enforce the Law, and monitor compliance by companies in the zone. It is	Amend the TSEZ Law so that the powers of the Authority to enter, inspect, order closures, or suspend business activities in violation of the Law and Decrees is sanctioned in a clear, stable,

Table 9-1: Concerns with the Legal and Regulatory Framework of the TSEZ

Priority Issues Arising from the TSEZ Law No. 18, Its Decrees, and Proposed Board Decisions

Topic	Pertinent Law, Decree, or Treaty	Challenges	Recommendation
		preferable, however, to have the encroaching powers of a public entity such as the Authority explicitly stated in the Law, rather than a Decree.	and objective manner within the TSEZ Law itself.
Licenses	TSEZ Law No. 18 Decree No. 2226 Unissued Decree or Board Decision	Article (8) of the TSEZ Law states that the Authority shall establish the conditions relevant to licensing, and Article (9) says that the Authority is solely empowered to do such. Decree No. 2226 specifies the department responsible for licenses. However, there is no specific Decree related to the particular conditions and procedures for licensing in the TSEZ.	1. The recommended approach with regard to Licensing is to have a separate Decree—rather than a Board Decision—governing the matter. The Law may need to be amended to stipulate a Licensing Decree. 2. The legal instrument issued (Decree or Decision) should cover the following: a) Establishment of a one-stop investor services center for removal of administrative barriers; b) Roadmap to be followed by investors; c)Technical requirements for specific industries; and d) Inspection criteria. One unified legal tool should govern all inspection procedures undertaken by the Authority.
Administrative Oversight	Decree No. 2223	The TSEZ Internal Decree No. 2223 defines the roles and responsibilities of the Board of Directors and Chairman of the Board, and details the role of the administrative custodian of the TSEZ. The administrative oversight required by the Office of the Prime Minister and the Ministry of Finance overly limits the autonomy of the TSEZ Authority. The list of matters that require endorsement is lengthy; the Authority should be able to quickly resolve many matters itself.	Amend the Internal Decree No. 2223 to minimize matters that require endorsement by the Prime Minister or Minister of Finance.
Building Permits	TSEZ Law No. 18	1. The TSEZ Authority is responsible for issuing Building Permits, and submitting a Master Plan for the zone (Article (11)). However, the Authority cannot issue its own Building Decree or develop new building standards superior and more international in nature for SEZs. 2. National building legislation is not best practice for SEZs.	Amend TSEZ Law to allow the Authority to issue its own zoning and building codes.
Work Permits	TSEZ Law No. 18 Decree No. 2232	Decree No. 2232 provides procedures for the Authority to follow in issuing work permits. It gives the Authority discretion to issue a work permit without fulfilling conditions stated in the TSEZ Law (ie. minimum capital requirement of US$300,000 and 50 percent Lebanese workforce). This creates too much ad hoc discretionary power in the	1. Abolish the minimum capital required to receive work permits (Article (33) in TSEZ Law). 2. Amend the clause in Decree No. 2232 giving the Authority discretion to waive work permit requirements.

Table 9-1: Concerns with the Legal and Regulatory Framework of the TSEZ

Priority Issues Arising from the TSEZ Law No. 18, Its Decrees, and Proposed Board Decisions

Topic	Pertinent Law, Decree, or Treaty	Challenges	Recommendation
		hands of the TSEZ Authority.	3. Issue Board Decisions in coordination with the Ministry of Labor to specify details pertinent to application of Decree No. 2232.
Public Tenders	Decree No. 2222	Decree No. 2222 stipulates that tenders should be awarded based on cost. However, for development and operation of an SEZ, a bid should also be evaluated on the soundness of the development plan, amount of investment, development impacts, and past successes.	Amend language in Financial Decree No. 2222 to allow for greater flexibility in utilization of alternate means of procurement other than the public tender process.
TSEZ Authority Organizational Structure	Decree No. 2226	1. The TSEZ Organizational Decree No. 2226 neglects the important role of a one-stop investor services center to issue licenses, permits, work authorizations, and other functions. 2. The proposed organizational structure is suitable for a large bureaucratic establishment, but not an efficient SEZ Authority overseeing a medium-sized economic zone. 3. There is a conflict of interest that arises from the Chairman of the Board and the Director General of the Authority being the same person. 4. The organizational structure does not capture what is required to oversee activities in and SEZ.	Decree No. 2226 should be amended so that: 1. The Investor Services functions of the TSEZ Authority stands alone as its own directorate, which answers directly to the Director General of the Authority 2. Infrastructure functions of the Authority should stand alone in their own directorate. The same director should not also oversee Investor Services. 3. Strategic Planning, Research, and Technical Matters Directorate should be reorganized. Strategic planning should be managed by the Director General with participation of all directorates. Financial and budgeting issues are best left to Finance and Economy Directorate. 4. Chairman of the Board and Director General should not be the same person.
TSEZ Authority Personnel	Decree No. 2283	The TSEZ Personnel Decree No. 2283 outlines the appointment and responsibilities of TSEZ Authority personnel. The personnel policies are largely of a civil service nature, and not in line with international best practices in SEZ Authority management. The system is overly bureaucratic, and not appropriate for a small efficiently run Authority.	Redraft Decree No. 2283 to be more in line with private sector employment principles.
Rachid Karami Fairground	TSEZ Law No. 18 RKF Law No. 4027 Customs Decree	Nothing in the current TSEZ Law prohibits the inclusion of RKF as a TSEZ site. However, the following must be considered: 1. RKF is under the management of RK Corporation, pursuant to Law No. 4027 of 1960. The corporation is chaired by the Minister of	*If* the GoL wants to bring RKF into the TSEZ regime, the following legal amendments are strongly urged: 1. TSEZ Board should issue a Decision to lease RKF to the TSEZ Authority, allowing sub-leases to operators and/or

Table 9-1: Concerns with the Legal and Regulatory Framework of the TSEZ

Priority Issues Arising from the TSEZ Law No. 18, Its Decrees, and Proposed Board Decisions

Topic	Pertinent Law, Decree, or Treaty	Challenges	Recommendation
	No. 18 Decree No. 16852	Economy, and is largely inactive. 2. Article (24) of the TSEZ Law specifies that Customs must be present in the SEZ. Customs control at the RKF site will be challenging, due to the nature of the projected activities and community interaction at the site. 3. The minimum capital investment of US$300,000 required by the TSEZ Law will deter the ICT companies that would locate at RKF. 4. The TSEZ Law forbids "tourism" activities, which would disallow hotel, restaurant, and exhibition activities at RKF.	investors. 2. Amend TSEZ Law to take into account need for Customs presence in a non-industrial zone such as RKF. 3. Abolish minimum capital requirement in TSEZ Law. 4. Revise TSEZ Law to allow for tourism activities, where appropriate. 5. Revise telecom policy and Decree No. 16852 to allow for inbound and outbound VOIP usage and services in the TSEZ.
Additional Decrees Specified by Law The TSEZ Law No. 18 specifies the following Decrees, which still require issuance.			
Environmental Protection	Unissued Decree	Article (38) of the TSEZ Law states that a Decree will be issued to govern the protection of the environment. This has not yet been issued.	Issue an Environmental Protection Decree that covers: a) Environmental clearance process; b) Environmental impact assessments; c) Environmental compliance and auditing; d) Environmental standards; e) Protection of public space; f) Inspection and enforcement.
Safety and Occupational Health	Unissued Decree or Board Decision	1. The TSEZ Law specifies a Decree to regulate health matters. Health-related provisions *could* be part of the Environmental Protection Decree, as both are mentioned in the same provision of the Law. 2. Article (8) of the TSEZ Law states that the Authority will be responsible for supervising all buildings, construction, and equipment to ensure compliance with public safety requirements. However, the Law does not state that a Decree will be issued to regulate safety, and the general preamble of Article (38) of the Law does not allow for issuance of decrees not specifically mentioned.	1. Issue an Occupational Health Decree, or include issues of Occupational Health within the Environmental Protection Decree. 2. Amend TSEZ Law to stipulate a Safety Decree, or the TSEZ Board should issue Decisions covering public safety requirements.
Board Remunerations	Unissued Decree	Article (5) of the TSEZ Law states that a Decree will be issued to detail the financial remunerations of the Board. This has not yet been issued.	Issue the Financial Remunerations of the Board Decree.

Table 9-1: Concerns with the Legal and Regulatory Framework of the TSEZ

Priority Issues Arising from the TSEZ Law No. 18, Its Decrees, and Proposed Board Decisions

Topic	Pertinent Law, Decree, or Treaty	Challenges	Recommendation
TSEZ Master Plan	Unissued Decree	Article (11) of the TSEZ Law states that a Decree will be issued detailing the Master Plan of the TSEZ. This has not yet been issued.	1. Amend TSEZ Law to allow the Authority to issue its own building codes and zoning plan. 2. Issue the Master Plan Decree subsequent to developing a best practice master plan and design guidelines.
Penalties for Violations	Unissued Decree	Article (38) of the TSEZ Law states that a Decree will detail the penalties for violations in the TSEZ. This had not yet been issued.	Issue the Decree on Penalties for Violations.
Recommended Board Decisions These Board Decisions are not specified by the TSEZ Law No. 18, but are recommended for the efficient and transparent operation of the TSEZ, and to make the TSEZ in line with international best practices.			
Additional Matters	Recommended Board Decisions	In addition to Decrees and Board Decisions mentioned in the TSEZ Law No. 18, the TSEZ Authority will need to issue numerous Decisions on specific issues with regard to implementation of the law. Many of these would best be handled as Decrees, but the TSEZ Law currently does not allow for additional Decrees not specifically mentioned in the Law.	Issue Decisions that regulate the following: 1. Details for managing the TSEZ, including infrastructure 2. Dispute resolution mechanism between Authority and investors 3. Ongoing supervision over buildings, construction, and safety 4. Licensing procedures and approvals 5. Terms of contracts signed with developers/operators 6. Fees and service charges collected by the TSEZ Authority 7. Types of investment activities allowed in the TSEZ, and the technical and health requirements of each 8. Entry and exit of persons and goods from TSEZ 9. Admission, receipt, and storage of goods into and out of TSEZ 10. Enforcing health insurance schemes of employers in TSEZ 11. Relationship between Authority and government agencies 12. TSEZ Authority ability to license businesses engaged in VOIP.

PUBLIC AND PRIVATE STAKEHOLDERS CONSULTED

APPENDIX A

PRIVATE SECTOR MEETINGS

Over the course of Phase 1 of the project (August through December 2010), the TSEZ Project Team consulted with 39 companies in the private sector to collect data and information in their industry sectors, and gauge current and evolving trade and investment trends. Table A1 lists the sector, company size, and location of each firm interviewed for this project. The company identities are protected for reasons of privacy.

Table A1. Private Sector Companies Consulted

Small = <50 employees; Medium = 50-150 employees; Large = >150 employees

Company	Sector	Company Size	Location
1	Metals	Medium	Greater Beirut
2	Food	Medium	Greater Beirut
3	Furniture	Small	Tripoli/North
4	Pharmaceuticals	Large	Greater Beirut
5	Beverages	Large	Greater Beirut
6	Beverages	Medium	Tripoli/North
7	Garments	Medium	Greater Beirut
8	Auto imports	Medium	Tripoli/North
9	Publishing	Large	Tripoli/North
10	Chemicals, electronics	Medium	Greater Beirut
11	FMCG	Large	Greater Beirut / North / South / Bekaa
12	Garments	Large	Greater Beirut
13	Food	Medium	Tripoli/North
14	Paper, plastic	Large	Greater Beirut
15	Software	Medium	Tripoli/North
16	Software	Small	Tripoli/North
17	Electronics	Small	Greater Beirut
18	Pharmaceuticals	Medium	Greater Beirut
19	Garments	Medium	Greater Beirut
20	Electronics	Small	Greater Beirut
21	FMCG, Chemicals	Small	Greater Beirut
22	Chemicals	Medium	Greater Beirut

Table A1. Private Sector Companies Consulted

Small = <50 employees; Medium = 50-150 employees; Large = >150 employees

Company	Sector	Company Size	Location
23	Software	Small	Tripoli/North
24	BPO	Medium	Greater Beirut
25	Beverages, FMCG	Large	Greater Beirut, Tripoli/North
26	Software	Small	Tripoli/North
27	Food	Medium	Adra, Syria
28	University	Medium	Tripoli/North
29	University	Medium	Tripoli/North
30	Paper and plastic	Large	Greater Beirut
31	Furniture	Small	Tripoli/North
32	Furniture	Medium	Beirut
33	Food	Small	Tripoli/North
34	Food	Medium	Tripoli/North
35	University	Medium	Tripoli/North
36	ICT Park	Small	Greater Beirut
37	FMCG	Large	Greater Beirut
38	Wood imports and distribution	Medium	Tripoli/North
39	Tire imports and distribution	Small	Tripoli/North

PUBLIC SECTOR MEETINGS

Table A2. Public Sector and Organizational Officials Consulted

Organization	Individual	Location
Parliament of Lebanon *(former)* Office of the Prime Minister *(nominee)*	Najib Mikati, Prime Minister *(Nominee)* Member of Parliament *(Former)*	Beirut
Office of the President of the Council of Ministers	Mazen Hanna, Advisor for Economic Affairs	Beirut
	Dr. Sateh Arnaout, Chief Technical Advisor	
	Salam Yamout, National ICT Strategy Coordinator	
	Fida Khalifeh, International Affairs Unit Officer	
Ministry of Economy and Trade	Mohamad Safadi, Minister of Economy	Beirut
	Lama Oueijan, Advisor to the Minister	
	Firas Safieddine, Advisor to the Minister	
	Sahar Al-Attar, Communication Officer	
Ministry of Finance	Raya Haffar El Hassan, Minister of Finance	Beirut
	Carol Khouzami, Senior Legal Advisor to the Minister	
Ministry of Public Works and Transport	Abdel Hafeez Kayssi, Director General	Beirut
	Hatem Al Aissami, Director of Public Works	
	Hassan Koraytem, General Director, Port of Beirut	
	Ahmad Tamer, Manager, Port of Tripoli	Tripoli
	Fadlallah Georges, Head of Council	
Ministry of Industry	Eng. Ibrahim Dadayan, Minister of Industry	Beirut
	Ramez Bou Nader, Adviser to Minister	
	Fabienne Balaa, Industrial Census Advisor	
Ministry of Telecommunications	Charbel Nahas, Minister of Telecommunication	Beirut
	Naji Andraos, Director General	
	Joseph Chelala, Special Advisor	
	Diana Bou Ghanem, Head of ICT Office	
Ministry of Labor	Botros Harb, Minister of Labor	Beirut
Ministry of Energy and Water	Mona Fakih, Engineer	Beirut
Ministry of Education and Higher Education	Dr. Nada Abdel Wahed Mneimneh, Director	Beirut
	Dr. Mazen Al Khatib, Dean of Studies - Lebanese University	
Council for Development and	Nabil Jisr, President	Beirut

Table A2. Public Sector and Organizational Officials Consulted

Organization	Individual	Location
Reconstruction	Hirair Hakimian, Economist	
	Ibrahim Chahrour, Planning and Programming Division Director	
	Fadi Matar, Civil and Environmental Engineering	
Alfayhaa Union of Municipalities	Dr. Nader Al Ghazal, President and Mayor of Tripoli	Tripoli
	Abdalla Abdel Wahab, Director	
	Jalal Halwani, Member of Municipality of Tripoli and Head of Environment Committee	
Investment Development Authority of Lebanon (IDAL)	Nabil A. Itani, Chairman, General Manager	Beirut
	Rabih G. Timotaous, Research Analyst	
Rachid Karami International Fair	Antoine Abou Rida, Director General	Tripoli
Chamber of Commerce, Industry, and Agriculture of Tripoli and North Lebanon	Marcel Chaptini, Vice-Chairman	Tripoli
Business Incubation Association in Tripoli (BIAT)	Fawaz Hamidi, Director	Tripoli
Chamber of Commerce, Industry, and Agriculture of Beirut and Mount Lebanon	Albert Nasr, Director, Center for Economic Research	Beirut
	Rabih Sabra, Director General	
	Roger E. Khayat, Economic Advisor to the President	
Higher Council for Privatization	Ziad Hayek, Secretary General	Beirut
	Tarek Dandashli, Legal Expert	
Issam Fares Institute for Public Policy and International Affairs	Lana Salman, Program Coordinator	Beirut
North Lebanon Water Establishment	Jamal Krayem, Director General	Tripoli
Adra Industrial City	Eng. Ziad Badour, General Manager	Syria
	Eng. Walaa Kadi, Assistant to the General Manager	

OVERVIEW OF VALUE PROPOSITION FOR TSEZ SITES

APPENDIX B

Table B1: Port of Tripoli Site
Reclaimed Land Project

Size: 50 ha	**Expansion Potential:** None • Very expensive to expand (+/-US$800,000/ha)	**Land Ownership:** GoL
Development Potential: Aggressive 8 years Base 16 years Conservative 20+ years	**Sectors:** Chemicals Plastics Paper Warehousing Auto Storage Construction Equipment	**Number of Tenants:** Aggressive 80 firms Base 70 firms Conservative 40 firms
Employment Potential: Aggressive 3,000 Base 3,000 Conservative 1,400	**Power:** Highest Requirement 5,000,000 kwh per month 60,000,000 kwh per year	**Water:** Highest Requirement 18,500 m^3 per month 222,000 m^3 per year
Key Legal Challenges or Changes Required: • Change the law to allow the TSEZA to own the Port SEZ lands outright or on a 99-year lease without requiring them to sub-lease the lands on a yearly basis • Abolish minimum investment requirement of US$300,000 to benefit from fiscal incentives. At this site it may not be a significant problem but by eliminating this minimal capital requirement, this location would become more attractive to investors.		
Key Development Features: • Strategic location adjacent the Port of Tripoli • Located within an industrial area in Tripoli and the lands have an industrial designation • Land is being reclaimed with minimal funding/capital investment being required by the GoL • Location has access to transport infrastructure and off-site utilities • The site would be an attractive location for exporters because it has direct access to the Port of Tripoli • Minimal impact on the surrounding area		
Key Development Challenges: • The SEZ is located in close proximity to a number of industrial waste projects such as: i) the Tripoli landfill, ii) a solid waste sorting plant, iii) an existing slaughterhouse and a potentially, new, larger slaughterhouse, iv) an old batching plant, v) Tripoli's sewage pipeline, vi) Tripoli's waste-water treatment plant, vii) a potentially new composting plant, and viii) an old Oil Jetty pipeline. These types of industrial facilities reduce the SEZs attractiveness. • At present, the cost of reclaiming lands at the Port would be approximately USD$800,000 per hectare in 2010 dollars. This is extremely expensive and may not be viable in the future, if the site needs to be expanded. • Construction of infrastructure and utilities on reclaimed land may be slightly more expensive than on regular land. • The GoL must be confident that the reclamation of the Port of Tripoli lands has been carried out to the highest levels (pre-treated materials which are now stable and uncontaminated) so that the TSEZ Authority can enter into a PPP with a private developer. A developer will undertake due diligence (bore holes) to ensure the lands are clean and stable before entering into a legal agreement with the TSEZ Authority. • The roads leading to the Coastal Highway, which are in front of the Port and SEZ lands, are to be upgraded in the near future. These activities are programmed and should be implemented before the SEZ is opened.		
Development Cost Estimate:	**Cost of Land:** No cost to government or developer. Land reclaimed through channel dredging project. **Additional Landfill Required:** US$ 12 million **On-site Infrastructure:** US$ 13.4 million (US$ 26-35 /m^2) **Off-Site Infrastructure:** US$ 6 million	
Development Timeframe:	**Immediate-Term Development Timeframe** • The site is designated for an SEZ • The GoL owns the lands • The lands will be reclaimed by July 2011 • Initial demand is available	

Table B1: Port of Tripoli Site **Reclaimed Land Project**	
	• This site will help kick-start investment in Tripoli

Table B2: North Site (Al Qleiat) **Greenfield Project**		
Size: 50+ ha	**Expansion Potential:** Yes	**Land Ownership:** Private- Needs Land Acquisition (Existing land costs+/-USUS$30-40/$m^2$)
Development Potential[38]: Aggressive 5 years Base 8 years Conservative 20 years	**Sectors:** Food and Beverage Furniture Chemical Paper and Plastic Production Warehousing Construction Materials	**Number of Tenants:** Aggressive 80 firms Base 70 firms Conservative 40 firms
Employment Potential (with expansion): Aggressive 16,000 Base 9.000 Conservative 3,100	**Power:** Highest Requirement 6,000,000 kwh per month 72,000,000 kwh per year	**Water:** Highest Requirement 27,000 m^3 per month 324,000 m^3 per year
Legal Challenges or Changes Required: • The site needs to be acquired and designated an SEZ location. A new decree must be declared. • Eliminating the US$300,000 minimum capital requirement would make this site more attractive to investors.		
Key Development Features: • Over 50 hectares of contiguous lands potentially available • Direct access to transport infrastructure • Availability of utilities • Direct access to the border • Can be developed in a low carbon manner • Minimal impact on the surrounding area • In close proximity to the Rene Mouawad Airport, so in the longer term, these two national assets could support each other. I.e. A cargo terminal with cold storage facilities attached to the airport.		
Key Development Challenges: • The lands for this project need to be acquired. • This site should be developed in an environmentally friendly manner. • This location has potential security risks associated with its close proximity with Syria and the border. • Although lands have not yet been designated for the SEZ site, the area of Al Qleiat may suffer from flooding. Any potential flooding on the SEZ site could be mitigated during the earthworks phase of the project and would be managed via the storm water and drainage systems.		
Development Cost Estimate (for 50 hectares):	**Cost of Land:** Approximately US$40/$m^2$ **Additional Landfill Required:** US$ 0 – 14 million, depending on site **On-site Infrastructure:** US$17.7 million (US$ 30-40/m^2) **Off-Site Infrastructure:** US$ 7 million	
Development Timeframe:	**Short-Term Development Timeframe** • Only site with expansion capabilities • Market demand is greatest for this location • Offers the maximum employment potential • Will help kick-start widest range of investments in Tripoli environs • Clean location	

[38] Numbers are rounded up. Numbers originate from the demand scenarios presented in the Demand Forecast Chapter.

Table B3: Rachid Karami Fairground Site
Infill Project

Size: +/-20 ha	**Expansion Potential:** Yes (Not all of the RKF site is developed)	**Land Ownership:** GoL
Development Potential: Needs to be determined.	**Sectors:** ICT BPO Media Creative Industries Academic Facilities Retail, Hotel, Entertainment	**Number of Tenants*:** Aggressive 120 firms Base 65 firms Conservative 15 firms
Employment Potential[39]: Aggressive 3,000 Base 1,700 Conservative 450	**Power:** Highest Requirement 850,000 kwh per month 10,200,000 kwh per year	**Water:** Highest Requirement 6,000 m^3 per month 72,000 m^3 per year

Key Legal Challenges or Changes Required:

- The Rachid Karami site needs to be designated an SEZ location. A new decree must be declared.
- The industrial uses for this site needs to be amended to allow ICT, academic facilities and tourism.
- To attract ICT and SME investors to this location, the minimum capital requirement of USD$300,000 should be eliminated.
- Allowing VOIP in Lebanon.

Key Development Features:

- Central location in the City of Tripoli
- 100 hectares of land owned by the GoL
- Significant proportion of the site is undeveloped
- Easy access to roads and Coastal Highway
- Available utilities in the surrounding region
- Has 2,000 existing parking spaces
- Proposed uses (ICT and academics) has minimal impact on the surrounding residential area

Key Development Challenges:

- The site was designed by world-renown architect Oscar Niemeyer. Any alteration to his scheme may be of interest to civil society.
- The site would have to be assessed to determine the best location for new construction. A review of existing infrastructure and utilities would also be necessary. All existing structures would have to be evaluated to ensure they meet national building codes, and are not comprised of any hazardous materials such as asbestos, lead pipes or paints. It is the intent that new buildings will be state-of-the–art, smart buildings which utilize green technology.
- It will be critical to get the site fit-up with the country's best telecom capabilities including fiber optics and VOIP. As well the site will be upgraded.
- An anchor tenant would be welcome at the start of the project.
- The site must be knit back into the Greater Tripoli City and the concrete walls surrounding the site should be removed.

Development Cost Estimate:	**Cost of Land:** None. Owned by government **Additional Landfill Requirement:** None **On-site Infrastructure:** US$ 11.7 million (US$ 50-70/m^2) **Off-Site Infrastructure:** US$ 2.5 million
Development Timeframe:	**Medium-Term Development Timeframe** • GoL owns the lands • Initial demand is in place • Will help kick-start ICT investment in Tripoli • Will enliven and re-utilize an under-performing national asset • Could be undertaken via a PPP at the same time as the development of a more industrial SEZ at the Port or in Al Qleiat.

[39] Numbers are rounded up. Numbers originate from the demand scenarios presented in the Demand Forecast Chapter.

AGENDA FOR TECHNICAL WORKSHOPS

APPENDIX C

The Presidency of the Council of Ministers, together with USAID and Sibley International, hosted two technical workshops. Approximately 30 public and private sector leaders attended each workshop, held on September 2, 2010 and December 1, 2010.

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FROM THE AMERICAN PEOPLE

Under the patronage of the Office of the Presidency of the Council of Ministers,
Sibley International
under the project "Feasibility Study for Tripoli Special Economic Zone" funded by
the United States Agency for International Development (USAID)
has the pleasure to invite you to a technical workshop entitled:

"Special Economic Zones - Overview, International Best Practice and Initial Observations in the Lebanese Context"

Date: September 2nd 2010
Time: 09h00 – 12h00
Place: Radisson Blu Martinez Hotel, Beirut
Venue: Cedars Room
(Private parking available next to hotel)
RSVP: Ms Hiba Jardali 03 266577 by Monday 30th August

Agenda

08hr30 - 09hr00: Registration

09hr00 -09hr05: Welcoming Note, Barry Condron, Chief of Party, Sibley International

O9h05 – 09hr25: Introduction to project background and scope, Dr. Sateh El-Arnaout, Chief Technical Advisor, Presidency of the Council of Ministers

09hr25 - 09hr45: Word by Mr. Mark Wilt, USAID, Economic Growth Program Officer

09hr45 - 10hr00: Coffee break

10hr00 - 11hr00: Presentations by Sibley International team members Barry Condron, Chief of Party; Deborah Porte, Senior Urban Planning & Infrastructure Advisor; and Andrea Erdmann, Economist & Marketing Specialist, to include;

- Introduction to the consulting team and areas of responsibility
- Examples of international best practices from other Special Economic Zones (SEZ's) in Middle East and other relevant countries
- Initial impressions/challenges/vision for TSEZ following first visits by consultants.

11hr00 - 12hr00: Discussion to share and register strategic opinions, input and summary comments; facilitated by Dr Sateh El-Arnaout.

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Under the patronage of the Office of the Presidency of the Council of Ministers,
Sibley International
Under the project "Assistance to Lebanon for the Feasibility Study of Tripoli Special Economic Zone" funded by the United States Agency for International Development (USAID)
has the pleasure to invite you to the second technical workshop entitled:

"The Tripoli Special Economic Zone:
Site Assessment, Demand Forecast and Development Strategy"

Date: December 1st 2010 - Time: 09h00 – 12h00
Place: Radisson Blu Martinez Hotel, Beirut
Venue: Cedars Room (Private parking available next to hotel)
RSVP: Ms Hiba Jardali 03 266577 by Friday 26th November

Agenda

08hr30	Registrations
09hr00	Welcoming Notes, Barry Condron, Chief of Party, Sibley International
O9h05	Address by Dr. Jim Barnhart, Mission Director, USAID
09hr10	Progress Update and Policy Framework, Dr. Sateh El-Arnaout, Chief Technical Advisor, Presidency of the Council of Ministers
09hr25	Focused presentations by Sibley International team members ➢ Project Overview – Barry Condron ➢ Competitive position of Tripoli Special Economic Zone (TSEZ) - Andrea Erdmann ○ Results of Demand Analysis ○ Outline of Vision and Concept for TSEZ Site Options
10hr05	Discussion to share and register strategic opinions, input and summary comments; facilitated by Dr Sateh El-Arnaout.
10hr30	Coffee break
10hr45	Focused presentations by Sibley International team members ➢ TESZ Physical Site Development Options – Deborah Porte ➢ TSEZ Law – Legal Overview – Rand Hannun ➢ Recommendations for Final Phase of Feasibility Study – Barry Condron
11hr15	Discussion to share and register strategic opinions, input and summary comments; facilitated by Dr Sateh El-Arnaout.
12hr00	End of Workshop