Chapter 6
Customs Clearance System

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6.1 Introduction

Recently, Egypt has been attracting the attention of the industrial countries as one of the candidate locations for manufacturing next to Brazil, Russia, India and China (BRICs[1]). Surely, Egypt is very attractive as a manufacturing location because of its geographical location, land cost, labor quality, stability of the society and government policies.

The investors would, however, soon be stunned at the information through an internet search indicating that it takes almost four weeks in Egypt to clear customs for import and export. If it takes nearly one month for customs clearance, the total scheme of the modern international Supply Chain Management will be much delayed and disturbed. The customs procedure is a possible bottleneck in the entire logistics of any country that tries to induce foreign investment such as Egypt.

This is an area where exporters and importers themselves have very little influence to improve the situation. It takes a strong will and determination of the policy makers to facilitate the customs clearance procedures and to promote trade with foreign countries. In other words, if there is no improvement in the procedures of the export and import customs clearance, Egypt cannot compete with other countries to induce investment from the foreign countries. This means that all the efforts and funds to improve the logistics system of this country would be end in vain unless the procedures of customs clearance are improved.

The purpose of this chapter is to recognize the current customs clearance situation in Egypt, to analyze the problems and to propose ideas for the improvement of the total procedure to strengthen the international competitiveness of Egypt.

6.2 Current System and Facilities

6.2.1 Function of Customs

The function of the Customs House in general is:

- Duty collection,
- Protection of the domestic industry, and
- Control of smuggling and prohibited items.

However, ***Facilitation of Foreign Trade*** is becoming a new function of customs around the world. A country's economy is stimulated by increasing the trade amount and the production for the export. If the nation's economy is boosted, it will generate tax income as well. That kind of economic and social spiral is much better than restricting import and export and imposing a high rate of duty on the imported commodities.

[1] BRICs: BRICs are terms used to refer to the combination of Brasil, Russia, India and China. The economies of the BRICs are rapidly developing and by the year 2050 will eclipse most of the current richest countries of the world. General consensus is that the term was first prominently used in 2003 by Goldman Sachs, a New York based investment bank.

6.2.2 Procedures of International Trade and Logistics Flows

(1) System of Custom Clearance

Figure 6.2.1 is an illustration of international trade and logistics, and necessary procedures. It is noted that so many related parties are involved in the export and import business. In this Chart, there are five kinds of flows such as:

a) The flow of money,
b) The flow of contracts,
c) The flow of information (documents),
d) The flow of procedures, and
e) The flow of cargo.

Needless to say, in order to promote export and import, it is quite important and necessary to educate the people in the trade circle properly, including traders, manufacturers, freight forwarders, shipping agents and even customs officers.

It is quite notable that in a USAID Report entitled "Monitoring and Reducing Time of Release of Egyptian Imports April 2004–August 2006 (October 2006)", there is a description on the Importers' Remarks and Recommendations saying as follow[2]:

All Competent Authorities should be provided with training for staff in ports and customs points on an ongoing basis, to include in particular:

a) Full assimilation of laws, regulations, flyers, and their amendments, and

b) Reasonable knowledge of English language to enable dealing with documents and certificates.

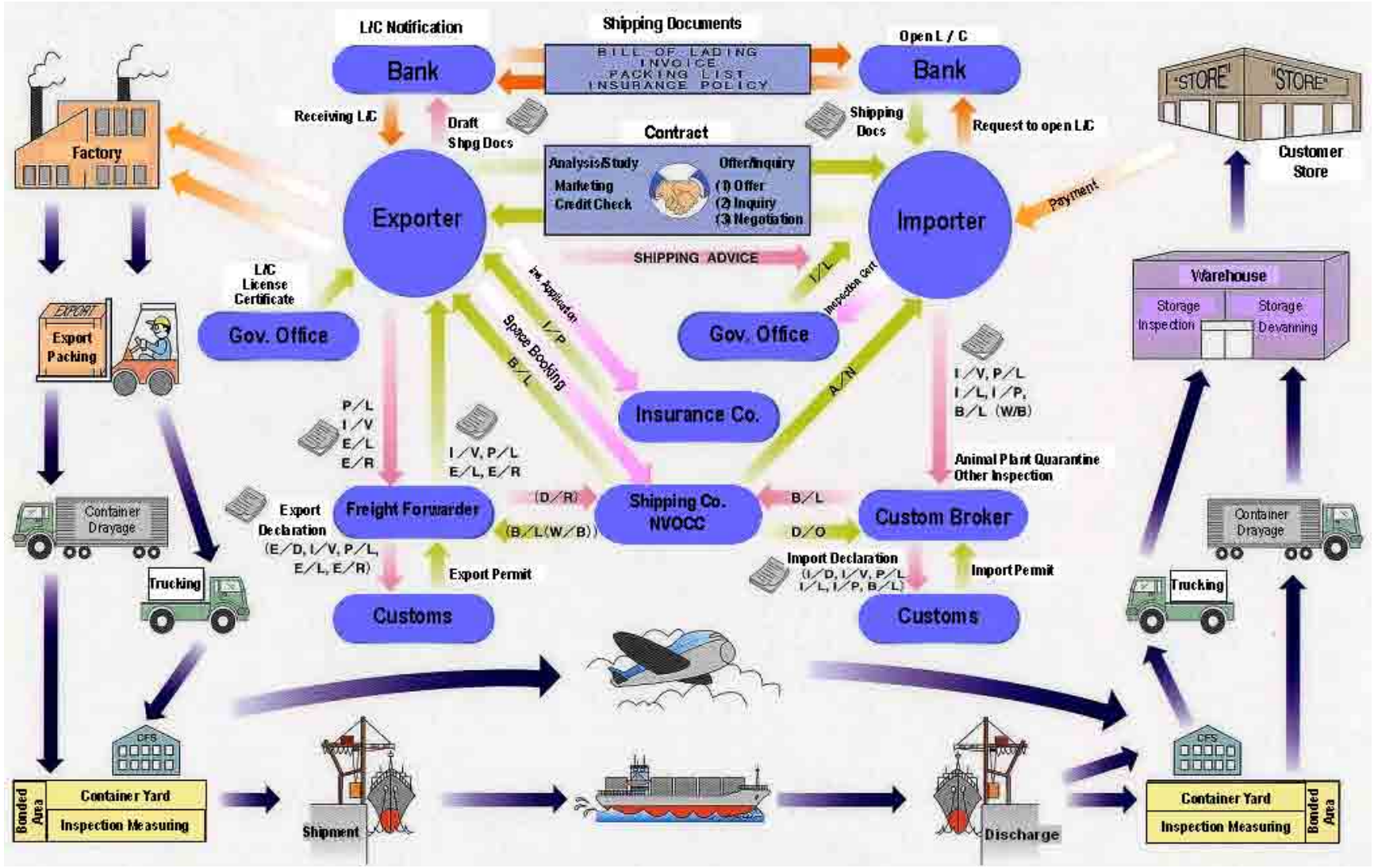
(2) Custom Clearance Procedure as an Improvement Focus

Egypt can be a very competitive manufacturing location for the European and US market. Egypt has the geographical advantage of being closer to Europe and to the east coast of the United States, with very few restrictions to the foreign investment and activities. Land and labor cost is competitive, but not the logistics infrastructures, especially speaking of the control of lead-time, if we look at the information widely spread on the Internet. Moreover, the Free Trade Agreement with the EU will open up a great future for Egypt, if there is an improvement in certain fields to build up the international competitiveness.

The most important key for the international competitiveness is to shorten the time to release imports into Egypt. Thus, drastic change and modernization of the Customs Clearance System is critical for the progress of the Egyptian economy and for the improvement of the total logistics system of Egypt.

Egypt has a great history and wonderful sightseeing resources with which no other country can compete. But in the field of the international trade and foreign investment, the competition is open and free to any country.

[2] Appendix B, Phase 3- Importers' Remarks and Recommendations Page B-9



Source: Ted Kawamura, Japan Shippers' Association

Figure 6.2.1 International Trade and Logistics

6.2.3 Existing Problems in Customs Clearance in Egypt

It is reported that it takes 27 days to clear customs in Egypt compared with only a few days in some countries (e.g. 5 days in Denmark, 6 days in Singapore) according to "Doing Business in 2006 - Creating Jobs" (World Bank 2006), and its major findings are shown in Table 6.2.1. The Report also indicates that numbers of signatures are needed for a shipment before the cargo is cleared. The same is true for the required number of documents for customs clearance. The Customs Authority is characterized by an aggressive approach to duty collection rather than trade facilitation. Egyptian Customs has a tendency to dispute the appropriate classification and value of the cargo to determine the amount of duty. Despite the common international practice, commercial invoices are rarely accepted as a document in determining the value of the shipment without official proof of the bank payment.

Table 6.2.1 Trade Facilitation Indicators

Country Name	Number of Documents required for Exports	Number of Signatures required for Exports	Number of Days required for Exports	Number of Documents required for Imports	Number of Signatures required for Imports	Number of Days required for Imports
Algeria	8	8	29	8	12	51
Egypt	8	11	27	9	8	29
Iran	11	30	45	11	45	51
Iraq	10	70	105	19	75	135
Jordan	7	6	28	12	5	28
Kuwait	5	10	30	11	12	39
Lebanon	6	15	22	12	35	34
Morocco	7	13	31	11	17	33
Saudi Arabia	5	12	36	9	18	44
Syria	12	19	49	18	47	63
Tunisia	5	8	25	8	12	33
UAE	6	3	18	6	3	18
Yemen	6	8	27	9	18	42
USA	6	5	9	5	4	9
Singapore	5	2	6	6	2	8
New Zealand	5	2	8	9	2	13
Denmark	3	2	5	3	1	5
Germany	4	1	6	4	1	6

Source: Doing Business in 2006 - Creating Jobs – World Bank Report in 2006

6.2.4 Apparent Problems

(1) Necessity to Monitor Website Information on Egypt

According to the report by USAID as mentioned in Section 6.2.2, there seems to be a tremendous improvement in the recent years in Egypt including clearance time and cost, number of steps, number of disputes. According to that report, increasing numbers of entries are submitted electronically. However, the information of this improvement has not been reflected yet on most of the websites about Egypt.

In order to improve the quality of the information on Egypt, it is strongly suggested that an appointed government agency should monitor the information from the foreign investors' point of view and to promote the reality of the country to the international society.

(2) Too Many Government Agencies Involved

According to the USAID report, there are too many government authorities controlling export and import in Egypt. The number is not too surprising since it is almost the same in any country around the world. The question is, whether or not there is good coordination.

Ideally speaking, if those authorities adopted the one Single Window System, the procedure would be much shortened, like 1~3 days. Successful countries are: USA, most of the EU countries, Singapore, Hong Kong and partially Japan. Speaking of Japan, besides the Customs House System, there are the Port Network, Quarantine Network System, Traders and Banks Network that used to function before the Single Window System. They are trying to set up a national Single Window System now.

ASEAN Countries[3] will be assessing the Indonesian Single Window System model once it is completed. In Indonesia, a certain government official has mentioned that the difficulty is the pride of the government official to be a big shot making many people wait in line for his signature or stamps. He also mentioned that "It takes a strong will and determination of the policy maker to lead the country as a prosperous industrialized country avoiding all the malpractices of the government officials".

[3] ASEAN: The Association of Southeast Asian Nations or ASEAN was established in 1967 by the five original Member Countries, namely, Indonesia, Malaysia, Philippines, Singapore, and Thailand. Brunei Darussalam joined in 1984, Vietnam in 1995, Lao PDR and Myanmar in 1997, and Cambodia in 1999.

Figure 6.2.2 Too Many Government Agencies

6.3 Policy Efforts of Customs Authority

6.3.1 Recent Activities by Egyptian Customs Authority

According to the website of the Ministry of Communications and Information Technology (MCIT) available in English as of April 2007: "*The Egyptian Customs Authority is enhancing its information network and service procedures with the help of MCIT for procurement of hardware, equipment, and software programs, installation and testing of software, and updating databases as well as executing training programs in all customs-enabled ports nationwide. The project provides an information portal -Egyptian Customs Information System- which will be particularly beneficial to exporters and importers located outside of Egypt. Increased awareness will save time and resources for both importers and exporters, as they will have clear information regarding their rights and responsibilities.*"

According to a recent report made by the Egyptian Customs Authority (ECA) titled "Egyptian Customs Achievements July 2004 – February 2007" there seems to be a drastic improvement in the time of release of the import goods. The reform is in progress in the following areas:

- A new simplified tariff reducing the number of items and duty rate,
- Providing online customs service with extensive training,
- Implementation of post release auditing,
- E-payment and payment system of duty fees,
- Radioactive inspection to avoid opening of containers, and
- Launching Egyptian Customs Authority website.

The above information was incorporated with the result of the interviews with the trading circle such as the traders and customs brokers on the appraisal of the customs clearance in Egypt. According to the preliminary interview with a limited number of traders in December 2006, there seems to be a drastic improvement in the import customs clearance for most of the items. However, judging from the experience of other countries for the reform of the import procedures, it will be necessary to monitor the reform of the Inspection Agencies like GOEIC (General Organization for Exports and Imports Control). In most of the countries, the delay in the release of the import cargoes is caused by the inspection procedures by government agencies other than the customs house.

Although it is premature for making a conclusion, the Egyptian Customs Authority is steadily building up modernization steps to reform the system with a firm perspective. The determination of the ECA is well understood from the description in the above-mentioned report gallantly saying that: "*Customs procedures were multiple, repetitive and redundant, exceeding 34 procedures requiring 35 employees. According to March 2003 statistics, it took a dealer 22 days to go through the employees in charge offices coupled with the unclearness of things required from importers/exporters, which*

therefore opens the door for corruption and puts the dealer all the time under the customs employee's mercy in the absence of any efficiency raising strategy and performance assessment standards for customs employees. On one hand, this resulted in a state of confusion and loss of rights, time and money. On the other hand, smuggling and fraudulent actions increased and the public state treasury lost large amounts of revenues due to the lack of transparency, credibility and clearness."

6.3.2 General Assessment

(1) Modernization of the Egyptian Customs Procedure

It is a very rare case in the world history of customs' modernization that all the facilities should be well installed, and its improvement would be remarkable in a short time. The modernization of the Egyptian customs procedure took place in the following examples[4]:

a) The new simplified tariff reducing the number of items and duty rate

The new customs tariff was implemented as per the Presidential Decree No. 39 of year 2007. In this new tariff, the structure was simplified with the categories reduced by 30%. Tariff categories average was reduced from 14.6% to 6.9%.

This modification resulted in reducing the confusion about customs tariffs and also facilitating the application of the tariff by the customs officers and by the importers /exporters as well.

b) Single Window System (GOEIC, Custom Office, and others) with extensive training

On 14 May, 2005, the ECA provided online services for the first time, as follows:

- Customs statement filing service,
- Manifesto filing service, and
- Enquires about tariff items and exchange rates announced by the Central Bank.

Importers/Exporters who were allowed access to the service had been already registered and trained on filing their customs statements and manifestos online.

It is reported that 244 Customs Clearance companies and importers have registered, 24 companies were trained on filing their customs statements online, 88 companies were filed in the manifesto and 116 employees were trained on filing manifestos automatically as of February 2007.

Also, 230 import certificates were filed by May 2006. Efforts are continuously exerted for maximizing the number of companies having access to such service.

[4] Those examples are taken from the presentation material made by the Ministry of Finance Customs Authority in March 2007 English translation version.

c) Implementation of post release auditing

Post Release Auditing is an efficient and important tool to achieve the balance between facilitating the trade and maintaining the efficient customs control. This system is adopted by most of the OECD countries to facilitate customs clearance while maintaining customs control.

All operations and reviews of Post Release Auditing simply aim at ensuring the correctness of data and documents, submitted by the importer for release, and not aim at revising the release procedures. Importers may not be punished except for submission of false data for release.

Customs Authority established the Post Release Auditing Department and recruited very well trained staff, in cooperation with the EU, based on up-to-date scientific methods of accounting and record auditing techniques. 80 staff members were given an 18-months training program (from which 10 months elapsed as of Feb. 2007) to become the core of the best auditors in Egypt.

Although this operation was still in its early stage and is manually performed, customs staff audited the works of 86 companies and 315 customs statements during the year of 2006.

d) Duty e-payment and deferred payment system

The Egyptian Customs Authority has developed and implemented payment automation for the first time. About LE 62 million was collected by July 2006 via e-payment.

This is a system granted to the importer to withdraw goods and fulfill release procedures during three days from the date of ship's arrival while goods are released and customs duties, taxes and other charges are paid in deferment for 30 days from the date of the release of the goods. The importer shall provide financial guarantees declared by the Customs Authority for deferred customs duties.

e) Radioactive inspection to avoid opening the containers

The Egyptian Customs Authority uses radioactive inspection devices for inspecting imported goods as a substitute for manual methods. Such devices inspect shipped goods inside the containers precisely and effectively as well as giving correct and true results without the need to open containers or dealing with packages through traditional manual methods, thus reducing the time for the inspection procedures.

f) Launching Egyptian Customs Authority website

The Egyptian Customs Authority's website was experimentally launched in September 2004. The site encompasses data, information and also all new decisions or procedures crucial for all the visitors. The upgrading and updating program for the Egyptian Customs Authority's website is financed by the EU. The site is currently available in both English and Arabic.

(2) Performance Indicators in the World Bank's Website

As for the custom clearance and procedure of the cross border trade, the necessary number of documents, time, and cost for export and import in Egypt are presented in the Website of the World Bank on "Trading Across Borders in Egypt" as shown in Table 6.3.1 and Table 6.3.2. Compared with the performance of OECD countries, these tables indicate that there are more rooms to improve.

Table 6.3.1 Trading Across Borders in Egypt (1)

Trading Across Borders (2006)

The costs and procedures involved in importing and exporting a standardized shipment of goods are detailed under this topic. Every official procedure involved is recorded - starting from the final contractual agreement between the two parties, and ending with the delivery of the goods.

Indicator	Egypt	Region	OECD
Documents for export (number)	8	7.1	4.8
Time for export (days)	20	27.1	10.5
Cost to export (US$ per container)	1,014	924	811
Documents for import (number)	8	10.3	5.9
Time for import (days)	25	35.4	12.2
Cost to import (US$ per container)	1,049	1,183	883

Details | Compare All Economies

Source: http://www.doingbusiness.org/ExploreEconomies/Default.aspx?economyid=61, World Bank, Region stands for the Middle-East Region

Table 6.3.2 Trading Across Borders in Egypt (2)

Trading Across Borders in Egypt

Change selection

select an economy

These tables list the procedures necessary to import and exports a standardized cargo of goods in Egypt. The documents required to export and import the goods are also shown.

Export to Excel | Local partners | Methodology

Nature of Export Procedures (2006)	Duration (days)	US$ Cost
Documents preparation	13	104
Inland transportation and handling	3	850
Customs clearance and technical control	1	10
Ports and terminal handling	3	50
Totals:	20	1,014

Nature of Import Procedures (2006)	Duration (days)	US$ Cost
Documents preparation	19	104
Customs clearance and technical control	2	10
Ports and terminal handling	2	185
Inland transportation and handling	2	750
Totals:	25	1,049

Import documents	Export documents
Bill of lading	Bill of lading
Cargo manifest	Certificate of origin
Certificate of origin	Commercial invoice
Commercial invoice	Customs export declaration form
Customs import declaration form	Packing list
Packing list	Pre-shipment inspection clean report of findings
Ship arrival notice	Shipping note
Terminal charges receipt	Technical standard/health certificate

Source: http://www.doingbusiness.org/ExploreEconomies/Default.aspx?economyid=61, World Bank

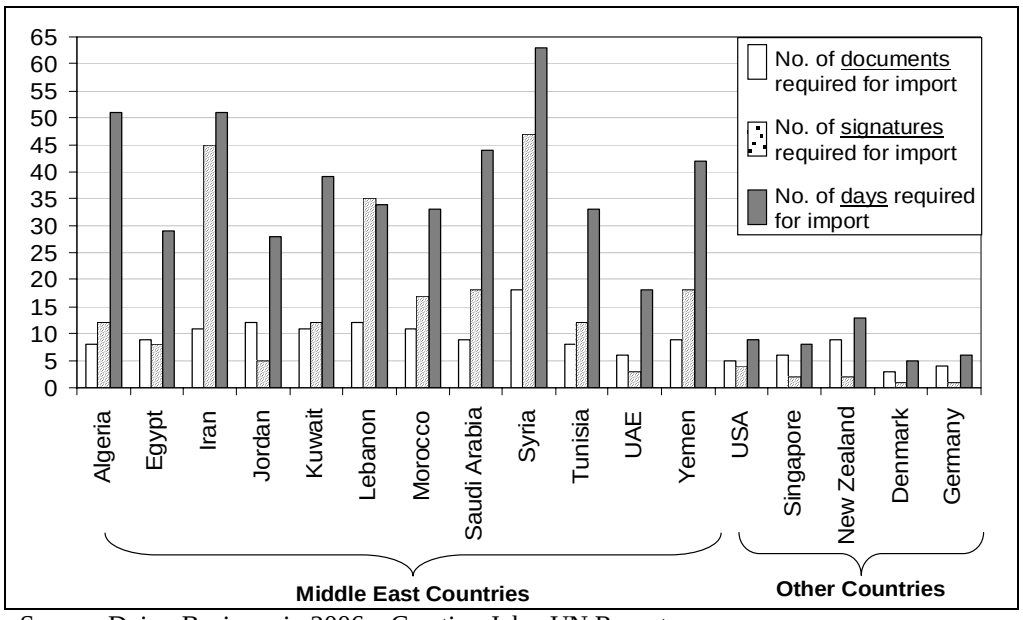
(3) Assessment by Importers and Customs Brokers

When we interviewed the importers and customs brokers, most of them stated that there was a remarkable improvement in the total number of days for the release of the imported cargoes. However, the story varies depending on the importers and also on the kind of commodities they import. Some importers informed that they could clear the goods in 2-3 days after the arrival of the vessel at the port, while other importers informed it still take three weeks to clear the cargo after the arrival of the vessel. The reason for the difference between the interviewed importers may be due to the difference of the document preparation period between one importer and the other.

6.4 Operation Performance and Efficiencies

6.4.1 Efficiency Indicator for Egyptian Import Procedure

According to "Doing Business in 2006 – Creating Jobs, IBRD/WB", it takes four (4) weeks, eight (8) documents, and seven (7) original signatures for the customs clearance of imports in Egypt. The report also shows the indicators of Syria - it takes almost two months to clear customs for imports. In such case, no one would be interested in investing in a manufacturing plant when components for the manufacturing have to be imported from foreign countries.



Source: Doing Business in 2006 – Creating Jobs, UN Report

Figure 6.4.1 Efficiency Indicator for Egyptian Import Procedure

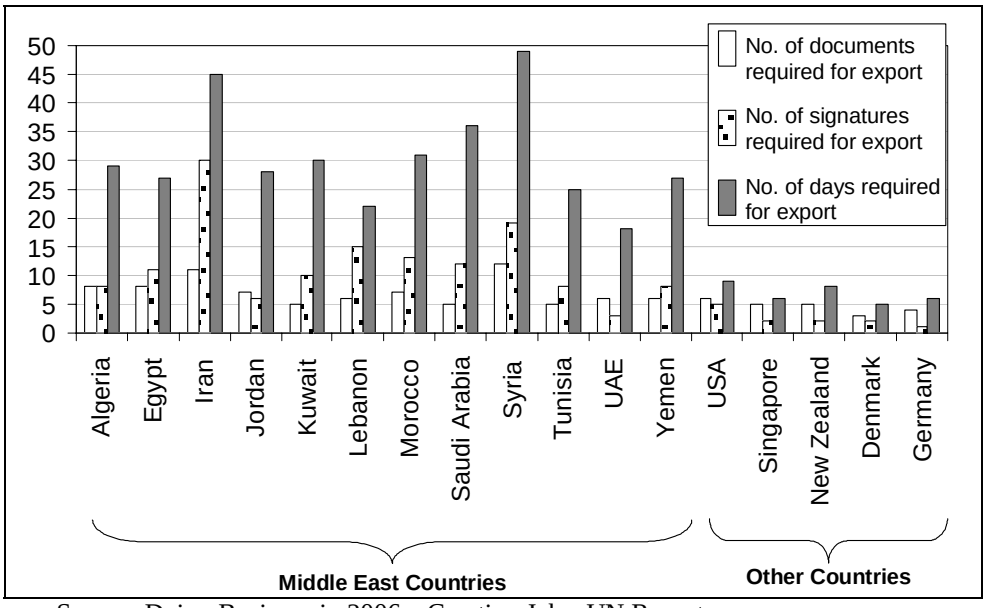
In most countries, the customs procedure could be the bottleneck of the entire logistics. It is a common knowledge that there will be a considerable delay at every type of node[5]

[5] Node: Terminal, Junction, Station, Transfer Point, Stops where the cargo stops or transferred or transhipped.

in the logistics or supply chain. Customs Clearance is the area where exporters and importers have very little influence to improve the situation. It takes strong determination from the policy makers to facilitate the procedure and to promote the trade with foreign countries. If there is no improvement in the procedures of the export and import customs clearance, it is difficult to induce the foreign investment.

6.4.2 Efficiency Indicator for Egyptian Export Procedure

For export from Egypt, it takes four (4) weeks with eight (8) documents and 11 signatures as shown in Figure 6.4.2.

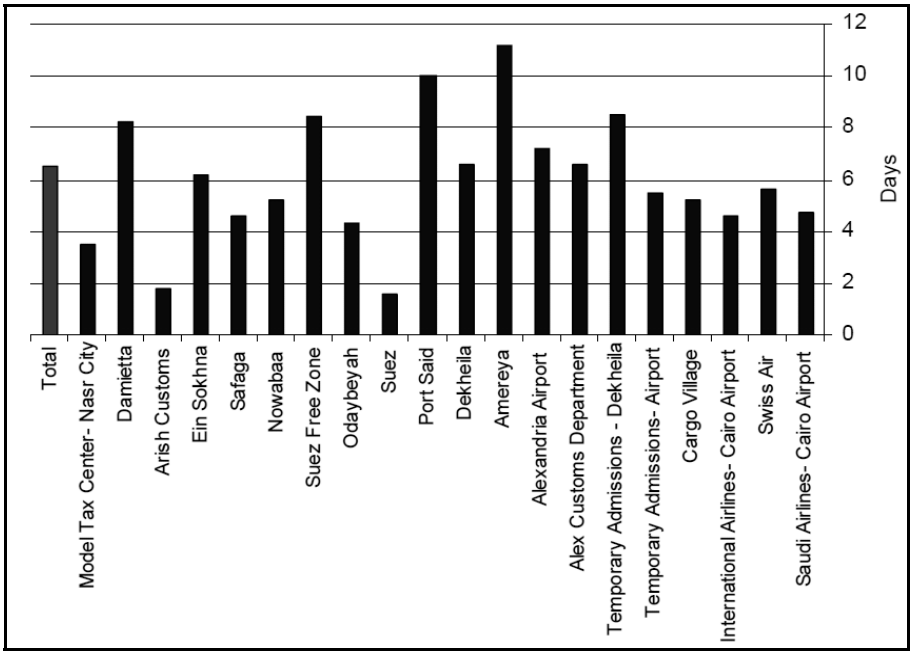


Source: Doing Business in 2006 – Creating Jobs, UN Report

Figure 6.4.2 Efficiency Indicator for Egyptian Export Procedure

6.4.3 Recent Improvement in Egypt

Back in 2002, the United States Agency for International Development (USAID) launched a 5-year project with a US$30 million budget to provide Assistance for Customs and Trade Facilitation (ACTF) in Egypt. In June 2006, USAID issued a review paper and also in October they have issued the report "Monitoring and Reducing Time of Release of Egyptian Imports April 2004 – August 2006". This review paper reported an average time of release in Egypt concluded remarkable improvements which had been achieved in recent years in Egypt.



Source: Monitoring and Reducing Time of Release of Egyptian Imports April 2004–August 2006, October 2006 USAID

Figure 6.4.3 Average Time of Release in Export

6.5 Steps to Improve Customs Clearance Procedures in Egypt

6.5.1 Basic Improvement

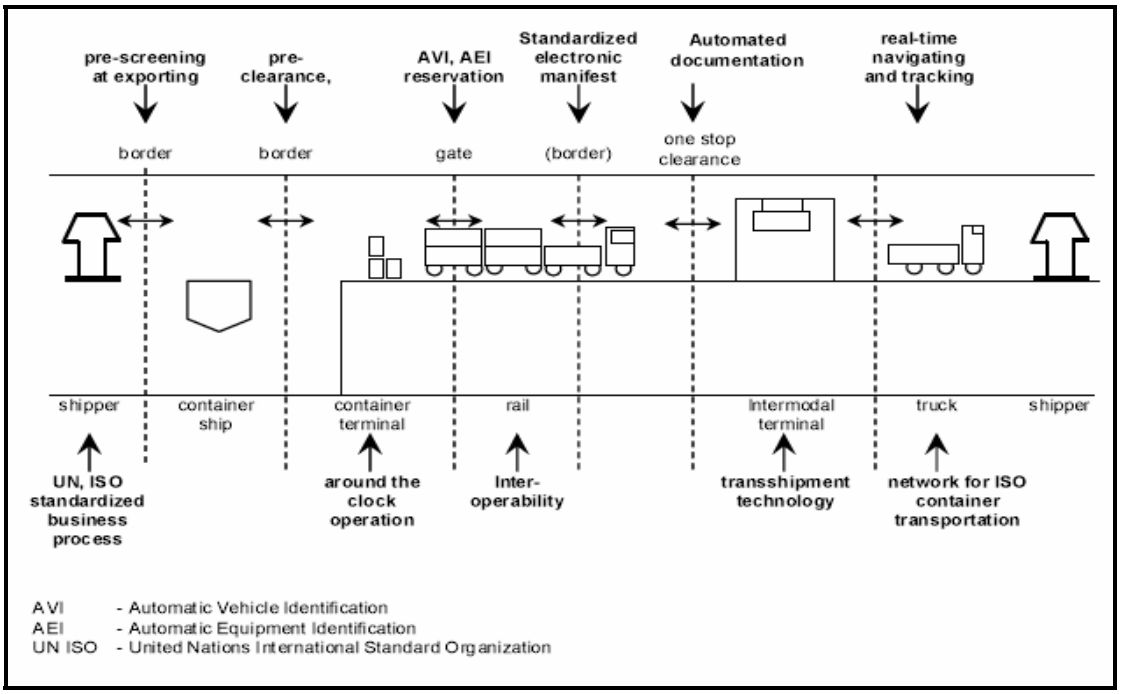
Basic improvement should be a realistic improvement that does not require massive financial investment but rather more of a structural reform. For instance one of the ideas is to allow a preferential procedure for the industries within the foreign trade zone or for specific companies that have established credibility with the customs department.

In most of the countries where they induce foreign investment companies into a free trade zone, they allow benefits of Tax and Duty Exemptions for easier customs procedures.

6.5.2 Large Scale Improvement

Full and large-scale improvement may call for the following:

- Building of a system architecture that will manage all the port related activities,
- Designing of a framework for cooperation between traders, customs, and other agencies,
- Building of a database that allows all stakeholders (i.e. shippers, forwarders, ship's agents, warehouse operators, port operators, ocean carriers) easy access to information, and
- Standardization of all the IC tag related items and automation of every node of the logistics chain (see Figure 6.5.1 for the concept).



Source : JICA Study Team

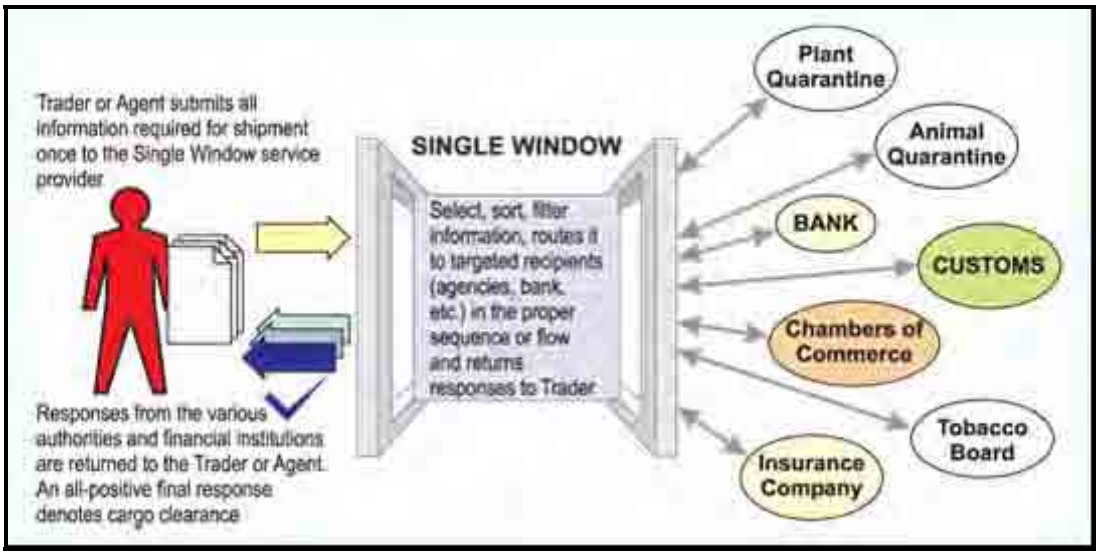
Figure 6.5.1 Model of Improved Customs Clearance

6.5.3 Single Window System

The Single Window System is a trade facilitation idea. The implementation of a Single Window System enables international traders to submit regulatory documents at a single location and/or single entity. Such documents are typically customs declarations, applications for import/export permits, and other supporting documents such as certificates of origin and commercial invoices.

Single Window increases the efficiency through time and cost savings for traders dealing with various government authorities for obtaining the clearance and permits for moving cargoes across borders.

In a traditional pre-Single Window environment, traders have to visit the every government agencies that are related to import or export to obtain the necessary papers, permits and clearance in order to complete their import or export procedures.



Source : http://en.wikipedia.org/wiki/Image:Single_Window_Example.jpg

Figure 6.5.2 Single Window System

6.6 Conclusion and Recommendation

6.6.1 General Conclusion

The Egyptian Customs Authority (ECA) (March 2007) has done a wonderful job in recent years to modernize the customs clearance system, which was originally considered to be the most serious bottleneck in international logistics to and from Egypt at border crossings. Most remarkable improvement is a reduction in the number of days to clear customs, as suggested in the ECA report above.

Customs regulations were revised to match the modernized procedures. For example, the rules and the classification of commodities were simplified. Moreover, the Electronic Data Interchange (EDI) system has been implemented in the customs declaration and clearance process in order to shorten the procedures. With the installation of the computer system, One Stop Service is now in a trial stage to enable the Customs Authority to collaborate with General Organization for Exports and Imports Control (GOEIC) for the inspection of the cargoes to offer better service to importers and exporters.

The overall assessment is “excellent” considering the accomplishment to shorten the time of releasing the import goods in such a short period of time. However, there will be some issues that have to be continuously monitored to follow up the efforts of the ECA. Certain suggestions for further improvement may have to be recommended in order to give more satisfaction from the users’ point of view.

The JICA Study’s suggest is to monitor the situation from the users’ point of view and to make suggestions or recommendations for the purpose of strengthening the international competitiveness of Egypt with a view to induce direct investment by foreign industry to set up manufacturing plants for Egyptian export.

6.6.2 Recommendations

The following issues are suggested to be monitored:

(1) Assessment of user satisfaction has to be made.

The above-mentioned general assessment is mostly from the Customs Authority's view point regarding their accomplishment of the modernization effort.

The JICA Study Team has made an extensive survey on the actual situation of the service by the Egyptian Customs Authority. The inquiry was sent to nearly 500 importer/exporters in January 2007. However, the contents of the response were rather poor in details since most of the importer/exporters are small size companies and they have no desire to criticize the government agencies. Another reason is that they have been so used to doing business in the current fashion for a long time and they have never tried to compare the Customs Service of Egypt with that of foreign countries.

It is therefore necessary to interview foreign investment companies doing business in Egypt or some companies capable to comparing the customs service in Egypt with that of foreign countries to make a fair judgment.

It should be noted that documents required to clear imports in Egypt include:

- Authorization from consignee to forwarder to clear customs,
- Bank Certificate to certify that the value of the goods was paid by the buyer to the seller,
- Original Bill of Lading,
- Legalized by Egyptian Consulate Invoice issued at exporter's country,
- Certificate of origin stamped by a bank,
- Certificate from the appropriate Ministry or GOIEC,
- Importer's business registration card, sales tax card, company tax card,
- Customs' Registration - Form 11or Form 12 or Form 13,
- Custom's declaration form, and
- Receipt from Import and Export Administration of fee payment.

Especially, the "Bank Certificate" and the "Original Bill of Lading" may not be available for some importers at the time of the arrival of the vessel, depending on the business deal and the distance from the shipping point. If there is no change in this requirement all the efforts by the Customs Authority to modernize the procedure will be simply ruined. In most of the trading countries, Bank Certificate is not required and also the original B/L[6] can be substituted by a non-negotiable B/L copy.

(2) A method has to be devised to allow GOEIC and the Custom Authority to proceed with the works at the same time to further shorten the days of release. User oriented

[6] Original B/L: In most of the L/C settlement, original B/L's are the most important documents to represent the title of the goods.

views are essential to materialize the modernization of the customs procedures.

Here are some shipper's comments on the way the Customs Authority and the Inspection Authority conduct their work as present:

a) Customs clearance takes 7 days for clean documents with no error.

b) Every shipment is stopped for inspection and each shipment is inspected based on a sampling of 10% to 100% of the goods in the shipment.

c) Officials do not always accept commercial invoices as the basis on which the value of the cargo is established and for which the duty is levied and instead enter into negotiation.

d) "Clean" documents would take 5 to 7 days to clear through the port while "unclean" documents would take a much longer time depending upon the circumstances.

e) There are many factors creating a pervasive lack of transparency, to the effect that there is considerable uncertainty in the clearance of goods through Customs. This uncertainty is due to unknown reasons regarding the amount of money it would cost and the time it would take to clear the shipment.

f) Import of insecticide takes a long time because approval from Import and Export Administration is required before Customs can release the shipment. It usually takes about 2 weeks.

g) Medicine takes even longer since the health permit has to be obtained, which typically takes 4 to 6 months. For example, when a ship arrives, the health authority takes samples for examination, a process that requires 10 days. Meanwhile, demurrage of the container at the terminal is incurred.

h) Customs clearance charge (clearing agent fee?) is LE400 per shipment of Twenty Footer Container. In addition, there are other charges, such as Customs receipt at LE60 and Certificate of Origin at LE20.

i) Import and Export Administration controls the quality standards of products which was originally intended as consumer goods only but not for manufactured or industrial goods.

USAID (United States Agency for International Development) has published a report in October 2006 titled "Monitoring and Reducing Time of Release of Egyptian Imports". In Appendix B, there is a list of Importers' Remarks and Recommendations that cover 14 pages. It is worthwhile to pay attention and to follow up each remark and recommendation made from the user's point of view. The following proposals are quite meaningful:

a) Training should be provided to staff in ports and customs points on an ongoing basis, to include in particular:

   - Full assimilation of laws, regulations and flyers and their amendments, and

- Reasonable knowledge of English to enable dealing with documents and certificates.

b) All control authorities (for inspection/testing) must be assembled in the complex to facilitate one-time exit of unified committees and simultaneous start-up of operations.

c) Refrain from claiming catalogues of previously imported products.

d) Working to gather inspection and testing laboratories and equipment in all ports and customs points in one location.

e) Setting out a sample-taking system that ensures no damage is caused to the shipment and returns equipment samples inspected immediately and in good condition to be marketed, especially in the case of importing a fixed number of units.

f) Requesting the port authorities to equip buildings within ports to group all authorities competent for release of shipments therein.

(3) Public advertisement has to be monitored. Especially the Internet information, which is the most reliable source for the potential foreign investors. The latest information about the status quo of the Egyptian Customs Authority together with other authorities should be posted on the websites of the World Bank and Egyptian Customs Authority.

It is also suggested that operation and maintenance of the customs system should be observed constantly in the future, and there should be information updates through the website for the general public. The English version is indispensable to convey the message to foreign visitors through the website because they are the potential investors for the manufacturing plants in Egypt.

(4) Customs Authority is the least trusted government office in the developing countries.

Generally speaking, the Customs Authority has a vast responsibility and power to control the traffic, smugglings and national security and to collect the duties and taxes on the merchandises. However, in the developing countries, Customs Authority is quite vulnerable to corruptions because of its power.

In order to maintain the reputation of the Egyptian Customs Authority and to accomplish the efforts to modernize the customs procedure it is quite necessary to tighten the morale and ethics of the customs officers against their seduction for corruption and over-application of “red tape”. Foreign investors are quite sensitive about under-table practice or any illegal activities of foreign subsidiaries due to the legal requirements of compliance in their own countries.

Example-1

In a certain country in Asia, it was a common practice for the customs brokers to clip one bill (about US$5) on top of the customs declaration documents. There was no receipt issued by the government for this amount. They used to take it as granted

that customs officers are not well paid by the government so the industry should take care of the situation by under-table contributions. The detail of this practice was little known to the importer/exporter circle except they are charged for this payment by the customs brokers who often exaggerated the amount.

While American and European companies invested in manufacturing plants in this country, this practice gradually became known and was considered to be against their Christian belief on under-table payment, no matter how minor it was. The government was forced to set up the new regulation to establish the official rate for such payment per application with official receipt.

Now in that country, there are two different payments necessary for the customs brokers, i.e. one bill on the table and one bill under-table.

Example-2

In Indonesia, the customs authority is engaged in a project to establish the Single Window System in the import and export customs procedures involving the customs house and many other government offices with the assistance of JICA. ASEAN Countries will be assessing the Indonesian Single Window System model once it is completed.

However there is a strong resentment in Indonesia among the government officials against the Single Window System because of the pride to be a big shot making many people wait in line for his signature or stamps, according to the customs officer in charge of the promotion of the project.

He has mentioned that "It takes a strong will and determination of the policy maker to lead the country as a prosperous industrialized country avoiding all the malpractices of the government officials".

In closing this chapter, we would like to emphasize that:

In order to induce the foreign investment, Egypt has to improve the logistics infrastructure and the import and export procedures. However, if there is no improvement in the procedures of the export import customs clearance, Egypt cannot compete with other countries to induce the investment from the foreign countries. In this case, all the efforts and funds to improve the logistics infrastructure will be just meaningless.

Fortunately, Egypt is now on a right track for the improvement of the import and export procedures, although it is necessary to watch it and push for further improvement.

Chapter 7
Freight Forwarding Industry

Chapter 7 Freight Forwarding Industry

This chapter deals with freight forwarding industry in Egypt focusing on its structure, business environment and the issues it faces. In order to further improve the competitiveness of the freight forwarding industry some countermeasures and recommendations, which tackle the issues, are suggested.

7.1 Industry Structure of Freight Forwarding Industry

The structure of the freight forwarding industry is described in this section based on the interview survey and interviews conducted by the JICA Study Team.

7.1.1 Characteristics of Freight Forwarding Industry

Firstly, the term "freight forwarding industry" should be defined in order to understand the current situation of the industry. Secondly, the major findings from the survey of freight forwarders, conducted by the JICA Study Team, are presented. Lastly, some major freight forwarders are profiled.

(1) Definition of Freight Forwarder

The industry organization for freight forwarding in Egypt, the Egyptian International Freight Forwarding Association (EIFFA), defines a freight forwarder as follows[1]:

- An international freight forwarder is a party that arranges and manages dispatch, shipping and transportation between producer or shipper and receiver (seller and buyer).
- As such the freight forwarder is handling commercial cargoes between different parties and carriers and represents both contract parties without being the cargo owner.
- The freight forwarder can issue documents covering sea, air, river or land freight for cargo handled by its facilities for a part or all voyages that the consignment may go through, and basically these documents could be considered as transport documents and not as ownership documents.
- The freight forwarder is considered as a carrier or shipping agent in front of customs authorities.

It is apparent that a freight forwarder functions as an agent of freight transport, dealing with commercial cargoes, issue of document for freight transport, and customs clearance. In terms of the definition and roles of freight forwarder, there are not big differences between Egypt and the advanced countries like Japan[2] and EU countries.

[1] Source: http://www.eiffa.org/en/definitions

[2] JIFFA, Japan International Freight Forwarders Association, Inc. was set up in October 1981 and its main activities are conducting research & study, coordinating with international organization, developing EDI systems, collecting and analyzing data, enlightening the public and holding seminar for freight forwarding industry.

(2) Main Findings of Freight Forwarder Interview Survey

The JICA Study Team conducted the interview survey of freight forwarders from January to February 2007 in collaboration with a local consulting firm. As the result, the JICA Study Team managed to collect 199 responses from freight forwarding companies. At the same time, some major local freight forwarders have been interviewed by the JICA Study Team in order to complement the results of the interview survey.

The following are the main findings from the survey of freight forwarders in Egypt:

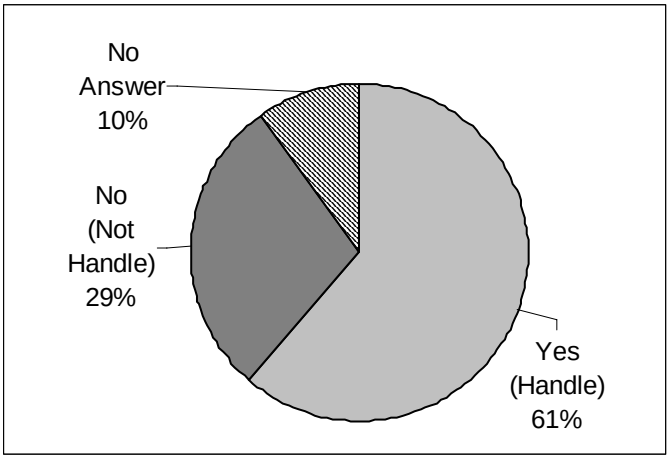
a) Many new and small & medium enterprises (SMEs)

As the results of the interview survey, more than half of the surveyed companies (199 companies) have 20 employees or less. This indicated that small-scale companies have the dominant share.

52% of the surveyed companies were established between 1991 and 2000, followed by 26% between 2001 and 2006, and 8% between 1981 and 1990. 78% of the surveyed companies were established after the establishment of EIFFA in 1990. The freight forwarding industry was therefore deemed to be a relatively new business.

b) Majority providing customs clearance service

61% of responded companies were handling customs clearance on behalf of their clients. Therefore, it was obvious that the customs clearance service was one of the main services provided by freight forwarder.



Note: Number of responded company is199.
The percentages stand for the number of responded companies.
Source: JICA Study Team

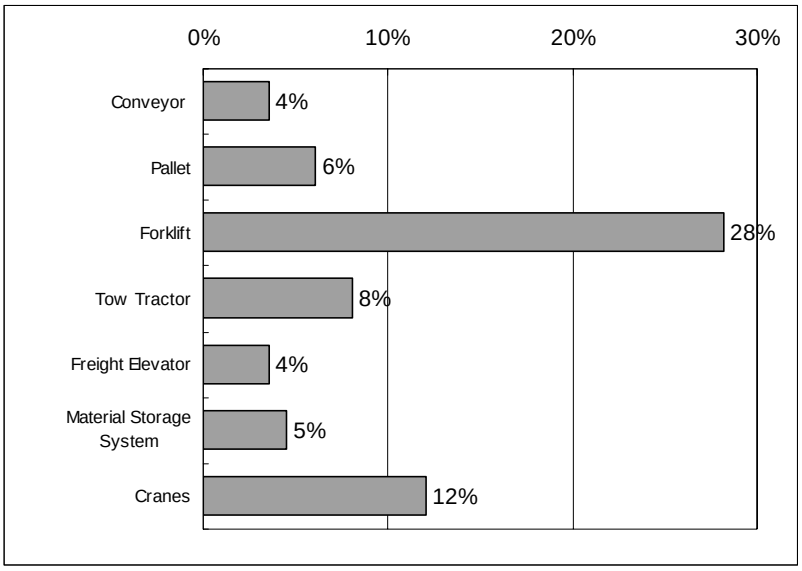
Figure 7.1.1 Customs Clearance Service

c) Limited related facilities owned by freight forwarder

The percentage of the surveyed companies that possessed one or more warehouses was 61%. On the other hand, most of the surveyed companies possessed no truck terminal – only 9% of the companies had one or more truck terminals. In case of container terminal, the percentage of the ownership was only 2%.

As regards logistics equipments, the percentages of the ownership were less than 10%

for most equipment types such as conveyors, pallets, tow tractors, freight elevators and material storage system. Forklifts were owned by 28% of surveyed companies.



Note: Number of responded company is 199.
The percentage is stand for the number of responded companies.
Source: JICA Study Team

Figure 7.1.2 Equipment related to Logistics

d) Rented truck orientated operation

70% of surveyed companies did not own trucks, while more than half of them hired trucks for their business activities. Among the member companies of EIFFA, there were less than 10 companies who possessed their own trucks.

e) Imbalance of truck loading conditions

It was noted that more than half of the trucks leave with full capacity in order to meet customer demands, while 80% of them were without a load on the return trip.

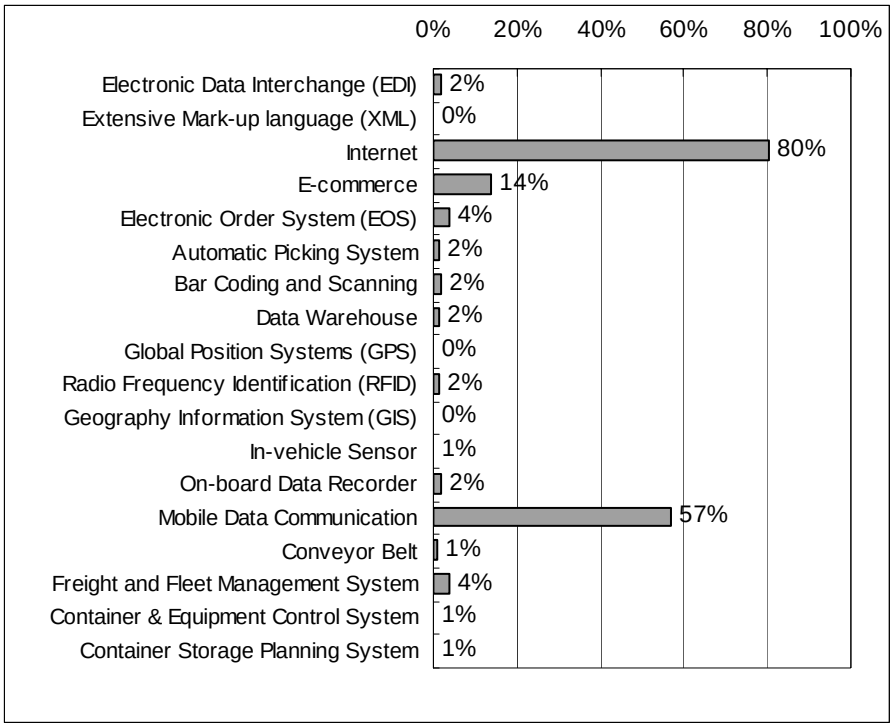
Since there were cooperative trucking operators organized within each governorate, cooperation between these cooperatives of trucking operators and the freight forwarders and shippers can be one of countermeasures to reduce the empty truck operation on the return trip. To enhance the service, it is necessary to build logistics centers that would support an efficient truck operation for intercity and intra-city transportation.

f) Limited introduction of ICT application

As shown in Figure 7.1.3, the most common Information and Communication Technology (ICT) application implemented by the surveyed companies was the Internet at 80%. Due to the size of the freight forwarders, almost none of them have introduced an Electronic Data Interchange (EDI) system.

The other applications with high implementation ratios were mobile data communication, and e-commerce. Some advanced ICT applications such as Radio Frequency Identification (RFID) were difficult for the freight forwarders to apply, due

to the use of Ultra High Frequency (UHF) and General Packet Radio Service (GPRS), which are currently prohibited in Egypt.



Note: Number of responded company is199.
The percentage stands for the number of companies that responded.
Source: JICA Study Team

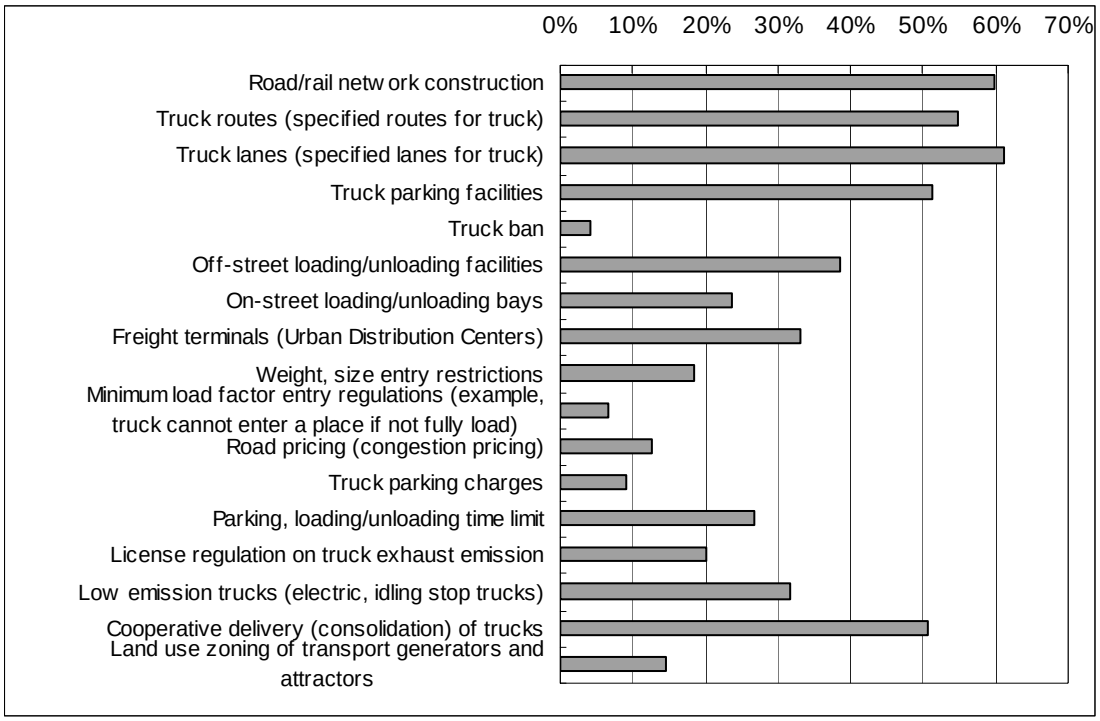
Figure 7.1.3 ICT Application

(3) Current Measures, Future Plan and Suggestions for Improving Logistics Business

Current measures, future plan, comments and/or suggestions towards government support for improving the logistics business are described in the following:

a) Current measures for improving logistics business

From the freight forwarder's point of view for improving logistics business, as illustrated in Figure 7.1.4, enforcement of dedicated truck lanes, construction of road/rail network and construction of specified routes for trucks are the top three items. At the same time, more than half of the freight forwarders mentioned that improvement of truck parking facilities and promotion of cooperative delivery of trucks are necessary.



Note: Number of responded company is199.
The percentages stand for the number of companies that responded.
Source: JICA Study Team

Figure 7.1.4 Current Measures for Improving Logistics Business

b) Freight forwarder's future plan

Regarding the future plan to improve the freight forwarder business, strengthening the logistics related infrastructure was the main factor mentioned. In other words, improvement of logistics related infrastructure and facilities were the main concerns for freight forwarders.

Table 7.1.1 Future Plan of Freight Forwarders

Aspect	Future Plan
Infrastructure & facilities	- Building of new container terminals/warehouses - Buying trucks and cranes - Installation of cargo tracing system - Facilitation of ICT Application
Business Development	- Facilitation of cooperative delivery of trucks - Establishment of new branches all over the world - Expansion of business field such as providing service in handling and packaging
Human Resource Development	- Hiring more staff/labors

Source: JICA Study Team

c) Freight forwarder's comments/suggestions for the Government

When it came to governmental support for improving the freight forwarder business, strengthening road transport such as improvement of the road network and enforcement of specified routes for truck were suggested. At the same time,

developing a logistics center and building a free zone in the new cities were mentioned.

Further improvement of customs related procedures such as using the latest electronic equipment and expansion of working hours at the customs office were also main concerns for freight forwarders.

In terms of policy related comments and/or suggestions, strengthening the coordination functions such as facilitation of cooperation among different governmental parties, freight forwarders and logistics providers, establishment of an authority for controlling road transport companies and enforcement of regulations on trucks were mentioned.

Reduction of logistics costs like shipment fees, storage fees and transport fees, which should be considered as factors controlled by the freight forwarding industry itself, were suggested as comments and/or suggestions for the government.

Table 7.1.2 Main Comments/Suggestions for the Government

Aspect	Comments/Suggestions
Road Transport	- Improvement of road network, - Enhancement of traffic management, - Construction of railway stations at the industrial zones, and - Enforcement of specified lanes for trucks.
Logistics Related Infrastructure	- Development of logistics centers, - Building free zones in the new cities, - Improving port related operations, and - Improving shipping related operations.
Customs Related Procedures	- Facilitating customs clearance by using latest electronic equipment (e.g. computerization), - Increase of working hours at customs offices, and - Applying GATT Agreement for facilitating customs procedures.
Policy/Strategy/Regulation	- More cooperation among different governmental parties, freight forwarders and logistics providers, - Permission to enter trucks inside city area in the daytime, - Establishment of official authorities to control road transportation companies working in ports, - Encouraging bank loans for trucks & logistics facilities procurement, - Facilitating export and import related procedures, - Unification of all port fees, - Decrease of fuel oil cost, - Establishing a big governmental owned transporting company in all ports, and - Facilitating the means of transportation between the Arab countries using Egyptian trucks.
Logistics cost	- Reduction of storage fees, and - Decreasing transport fees.

Source: JICA Study Team

7.1.2 Profiles of Major Forwarding Companies

(1) Local Main Freight Forwarders

Only a few local freight forwarders are providing total logistics systems. The competition with the international freight forwarders forces the local forwarders to concentrate on the limited market where constant demand enables the forwarders to offer discount rates. Table 7.1.3 shows some of the major local freight forwarders in Egypt.

Table 7.1.3 Some Local Major Freight Forwarders (1)

Company Name	Main Activities
NOSCO	The company was established to provide heavy haulage at the beginning, currently regarded as the number one company. Their services has now expanded to customs clearance, offloading at Site (by means of cranes & hydraulic jacks), air & sea freight forwarding, maintenance & operation of other fleets, handling project shipments, packaging, storage, LCL and FCL services.
Egytrans	One of the oldest Egyptian shipping companies, beside being registered ship agents at the different ports, its services include but not limited to; container freight services, dry cargo chartering, air freight and transportation, consolidation, specialized transport, customs clearance, warehousing, fairs & exhibitions organization, packing, insurance, distribution and marine parts service.
Tiffany cargo	Established in the early 1990s as general freight forwarders, now their activities are extended to NVOCC, packing, customs clearance, documentation, insurance and warehousing.
Sun express	Located at Cairo airport, engaged in customs clearance, airfreight, and container freight services.
ECU line	They started as shipping agents. Now their activities have been expanded to include container freight services, dry cargo chartering, air freight, land transportation, consolidation, specialized transport, customs clearance, warehousing, fairs & exhibitions organization, packing, insurance, distribution.
Mesco	Established in 1993 as a NVOCC, providing inland trucking, logistics management and perishable goods services. Currently own a 230TEU Egyptian flag vessel operating between the Egyptian and Black Sea ports.
East Med	Though quite new in the Egyptian market, they have established themselves to be one of the best container freight providers. Their activities include: ocean freight, airfreight, customs clearance, chartering and traders.
Ultramarine	Medium size freight forwarders involved in ocean freight, airfreight, customs clearance concentration on the far east imports.
Freight pioneers	Newly established company involved in ocean freight, customs clearance concentration on the far east imports.
Shashaty freight	A subsidiary of Amiral group, owners of Sokhna Terminal and agents of APL engaged in ocean freight, airfreight, customs clearance concentrations the far east imports.
Royal logistics	Ocean freight, airfreight, customs clearance, LCL, and trucking.
Rock it	Ocean freight, airfreight, customs clearance, project cargo. The company has recently been bought by Aramex international.
Freight professionals	International freight forwarding, project cargoes, trucking, chartering, FCL and LCL shipments. They can arrange and perform transportation by road, rail, river, sea and air.

Table 7.1.4 Some Local Major Freight Forwarders (2)

Company Name	Main Activities
Sofitrans	One of the oldest and the only authorized freight forwarder during the 60s. Their power has minimized after private firms were allowed to enter the business field, however, they are still providing good services especially in container services and project cargo.
IBA	Established in 1995 with a wide range of activities. Air freight, ocean freight forwarding, warehousing & distribution, customs clearance & brokerage, packing & crating / removals, duty drawback, expedited next day service, marine insurance, project management, case making European road freight.
Mahoney	Known mainly as shipping agents in the different Egyptian ports. Have recently expanded their activities to container transportation and clearance.
Martrans(Public sector)	Very powerful and specialized in reefer transport.
Falcon freight systems	Medium sized company providing general freight forwarding services, container freight, airfreight, custom clearance.
Salamarine	Ocean freight, airfreight, customs clearance, very powerful customs and inland transport department.
3A international	Medium sized company engaged in ocean freight, airfreight, customs clearance concentration on the far east imports.
Gate way	Medium sized company engaged in ocean freight, airfreight, customs clearance concentration on the far east imports.
Short Cut	The company was established at first to provide heavy haulage. Currently they are number one company as their services have now expanded to include customs clearance, offloading at site (by means of cranes & hydraulic jacks), air & sea freight forwarding maintenance & operation of others fleet, handling project shipments, packaging, storage, LCL and FCL Services.

Source: 1) The Egyptian International freight forwarding association (EIFFA).WWW.EIFFA.org
2) The Egyptian directory of shipping services. www.egyshipping.com

In order to understand the freight forwarder more fully, the following are descriptions of two leading Egyptian freight forwarders. As shown in Column 7.1 and Column 7.2, these two companies provide a wide range of logistics services, but most of the Egyptian freight forwarders provide limited services in logistics.

Column 7.1 A Leading Egyptian freight forwarder Company "A"

Company "A" is one of the leading Egyptian freight forwarders with a paid up capital of 48.75 million Egyptian pounds, annual revenue of 136 millions, and 380 employees scattered over 15 branches. Company "A" has managed to meet the highest certifications requirements and have acquired ISO 9001-2000, the Environmental Management system, ISO 14001:1996, and the occupational health and safety management system OHSAS 18001:1999. It was established in year 1973 as a joint stock company. Company "A" is a member of several international organizations related to transportation for example: FIATA, IATA, EIFFA, and BIMCO.

In spite of its start as provider of only international transport by sea, air and land and customs clearance, in few years it has managed to engage itself in other transport industry activities, making its success story an incentive for the rest of the local freight forwarders. Their current activities now include but are not limited to international transport, customs clearance, terminal operation, ship chandlering, container repairs, Suez canal transit, exceptional weights and dimensions cargo handling, commercial shipping agencies, Inland transport, warehousing, and distribution.

In order to manage and meet customer requirements efficiently and professionally, this company now owns and operates a series of infrastructures such as their own warehouse, trucks, tractors, handling cranes, hydraulic trailers, heavy haul tractors and the auxiliary equipment.

Source: Company "A"

Column 7.2 A Leading Egyptian freight forwarder Company "B"

Company" B' was established in 1976 with the idea of providing world class services in the Egyptian trucking industry especially the heavy haulage industry. They have managed to become one of the leading companies that provides their customers with full logistical solutions. The company's paid up capital has reached 21,500,000 Egyptian pounds with their head quarters based in Alexandria city and branches in Cairo, Suez, Port Said, Damietta, Alexandria port, and Sinai, provided with the expertise of 450 employees.

They have specialized in solving logistical problems by providing their customers with full supply chain solutions. Their activities are now expanded to include, maintenance & operation of others fleet, air & sea freight forwarding, handling projects shipments, packaging, storage, LCL and FCL services, offloading at site (by means of cranes & hydraulic jacks).

They are the number one Egyptian company that holds its own fleet of trucks, heavy haulage equipment with more than 150 pieces ranging between super attractive units, hydraulic, semi hydraulic, and telescopic low beds, trailers, semi trailers, and pick ups.

Not only for storing their own equipment, their warehouses are open for renting and storing for their clients whose business nature requires a professional storage of their project cargo.

Source: Company "B"

(2) Main Foreign Freight Forwarders

Recently, the international freight forwarders have controlled a major share of Egyptian freight transport, monopolizing clients who have regular sizeable volumes. Their international activities and total transported volumes through their offices worldwide give them influence over the major carriers of sea, air and land services, which enables them to have discount rates that are unmatchable by their local counterparts. These international freight forwarders are the ones who have the potential for developing further and investing in their infrastructure, not only through their accumulative local profits but also through the financial support that they are receiving from overseas headquarters. This creates imbalances and big gaps in the competition between international and local freight forwarders.

Table 7.1.5 shows the list of the international forwarders that are active in the freight transport market in Egypt.

Table 7.1.5 Some Main Foreign Freight Forwarders

Company Name	Company Origin	Main Activities
Expeditors	American	Global contracts with shipping lines due to their big volumes. They deal mainly with the biggest shippers and consignees as they are in need for total logistics system. They have their own warehouse at harbor city, and specialized free zone at Ismailia. Best service up to the United States east coast.
DHL Danzas	American	Global contracts with shipping lines due to their big volumes. Very active on the Fareast inbound trade. They have a rented warehouse at Ismailia desert road. Increasing Airfreight activity but they are concentrating mainly on ocean freight.
UTI	American	Have strength in European trade lane and providing good airfreight activity. Own warehouse at Nasr City, also own trucks and container trucks. Total logistics solutions provider. One of the Swift group companies.
Aramex	Arabic capital (Emirates)	Providing very good courier service and inland transportation. Providing the container freight service after the acquisition of freight professionals.
UPS	American	Good courier and airfreight.
Schenker	German	Still new in the Egyptian market, concentrating on ocean freight. One of the Swift group companies.
Panalpina	Swiss	One of the oldest companies in Egypt, concentrating on African/ COMESA ocean freight.
Deugro	German	Still new in the Egyptian market, concentrating on ocean freight. One of the Swift group companies.
GAC	French founder/ Arab co	They depend entirely on the ocean freight, with no attractive volumes. Their main focus in Egypt is ship agencies.
APL Logistics	Singapore	All transport related activities
CMA Logistics	French	All transport related activities
Maersk Logistics	Danish	All transport related activities
Century Logistics	British	Total logistics solutions provider

Source: 1) The Egyptian International freight forwarding association (EIFFA).WWW.EIFFA.org
2) The Egyptian directory of shipping services. www.egyshipping.com

7.2 Environment of Freight Forwarding Industry

Current logistics related policies and regulations, freight forwarding industry organizations, and institutions for logistics are discussed in the following section. This is based mainly on the interviews conducted with the concerned parties.

7.2.1 Current Logistics Policy and Regulations

The Government of Egypt highlighted the significant role of transport system development in "The fifth Five-Year Plan for Socio-Economic Development (2002-2007)", emphasizing three major policy targets as following:

- Strengthening inter-modality of each transport sector,
- Improving transport efficiency and maximizing economic benefit in Egypt, and
- Seeking higher participation of the private sector in the transport sector.

(1) Logistics Related Policies and Ministries

Three main ministries in Egypt, namely, Ministry of Transport, Ministry of Trade and Industry, and Ministry of Investment were surveyed regarding logistics policies and regulations, if available and applicable to the ministry. Since the concepts of logistics are new in Egypt, the government is not yet matured to function as a driving force in formulating and managing the logistics policies.

a) Ministry of Transport

Egypt has developed foreign, domestic, land and air transportation network linking Egypt with the whole world in order to facilitate transportation.

Ministry of Transport; road, railway and inland waterway sectors are being dealt with and controlled separately without sufficient policy coordination among them. Within the Ministry of Transport, there are several different authorities in charge of logistics related policy as follows:

Table 7.2.1 Logistics related Authorities within Ministry of Transport (1)

Authority in charge	Logistics related Main functions
Transport Planning Authority (TPA)	・ Developing overall plan for the transportation projects and its related executive programs in order to be included in the plan of the responsible authorities, ・ Coordinating between transport plans and projects, ・ Researching and studying transportation projects in order to achieve integration among these projects, ・ Supporting (assisting) various sectors in technical and economic studies that relate to the transportation projects, preparation, modifications, complementation of the projects introduced by these sectors that relate to transport economic and technical aspects, ・ Preparing required studies in order to achieve technical and economical efficiency for transportation utilities, ・ Preparing required research to develop transport utilities based on combination between technological and scientific progress in transportation field as well as project management methods, and ・ Supervising, planning and implementing any projects attributable to the Authority.

Source: JICA Study Team based on various data

Table 7.2.2 Logistics related Authorities within Ministry of Transport (2)

Authority in charge	Logistics related Main functions
Maritime Transport Sector	・ Develop maritime transport facilities in order to cope with world developments in the field of maritime transport industry. ・ Develop necessary plans for organizing the work process and achieving optimal level of efficiency in order to serve for national economy. ・ Ensure territorial water safety and providing the labor capable of coping with the scientific and technological development in the field of maritime transport industry. ・ Develop a plan for enhancing efficiency of the maritime transport facilities in order to cope with the world developments in the framework of economic and social development plan of the country. ・ Develop general policy for establishing and developing ports and lighthouses in order to enhance their efficiency to face the world trade volume and coordinating between the port authorities. ・ Provide navigational aids in the territorial waters in order to ensure safety of navigation. ・ Supervise and control implementation of the safety plans of the maritime transport units, fixed and mobile installations as well as all the equipment relevant to the maritime transport activity in cooperation with the competent bodies of the country.
General Authority of Roads, Bridges and Land Transport (GARBLT)	・ Responsible for making integration plans for all roads, bridges and all relevant industrial works. ・ Undertaking regular monitoring for implemented projects in order to ensure safety. ・ Conducting scientific studies and research, in addition to establishing specialized training centers to enhance performance level.
Egyptian National Railways(ENR)	・ Providing transportation for people and goods. ・ Connecting densely populated areas of the Nile delta with Cairo and Alexandria as hubs. ・ Offering transport services under supervision of the government. ・ Operating and maintaining the underground through the Metro Operation Authority.
Inland and Dry Ports Authority	・ In Egypt, there are 2 border crossings with Palestine, 2 border crossings with Israel, 1 border crossing with Libya and 2 with Sudan. ・ The first law regarding dry ports was conceived in 2004. This law does not spell-out the definition of dry ports particularly well. ・ Another law was issued in 2006 and another in 2007 which gives priority to the development of Bashtel dry port in Giza.
River Transport Authority	・ The River Nile plays a main role in the tourism and transport movements. The total length of first class waterways in Egypt is approximately 2,182km. ・ Inland waterway transport (IWT) aims to invigorate this service technically to grow the movements of goods and passengers in the light of government plans in this regard. This stems from the belief that the modernization of IWT achieves the national goal of reducing pressure on demand for land transport. ・ Current functions of the General Nile Company for IWT are: - Transportation services for individuals and goods, - Renting and withdrawing services, - Maintaining tourist units, and - Shipping and uploading.

Source: JICA Study Team based on various data

b) Ministry of Trade and Industry

The Ministry of Trade and Industry is handling several activities such as:

- Representing the Arab Republic of Egypt in international organizations and different countries,
- Settling programs, plans, and development policies,
- Supervising programs and activities for developing Egyptian trade and industry,
- Preparing and implementing required programs for conducting national and international exhibitions,
- Conducting regional, unilateral, and multilateral economical and commercial negotiations within the frame of the International Trade Organization agreements,
- Issuing all the releases and indicators relevant to the Egyptian and international trade as well as all the data related to the Egyptian industry,
- Supervision on the Export Development Fund and the other related authorities,
- Preparing the legislation for organizing foreign trade (Import & Export), and
- Others.

However, there are neither logistics related policies nor regulations in the activities of this Ministry.

c) Ministry of Investment

The Ministry of Investment supports the government mandate to implement and reform programs aiming at improving investments in different sectors, adopting the role of coordinator of institutions and ministries. The ministry implements the asset management programs.

The Ministry of Investment is establishing many transport opportunities that may be a start for the application of logistics concepts, for example, the operation of the Logistics Station at Alexandria Port through establishing a specialized factory to produce medical waste burning and treatment units, to comply with international technical and environmental standards. Such project will:

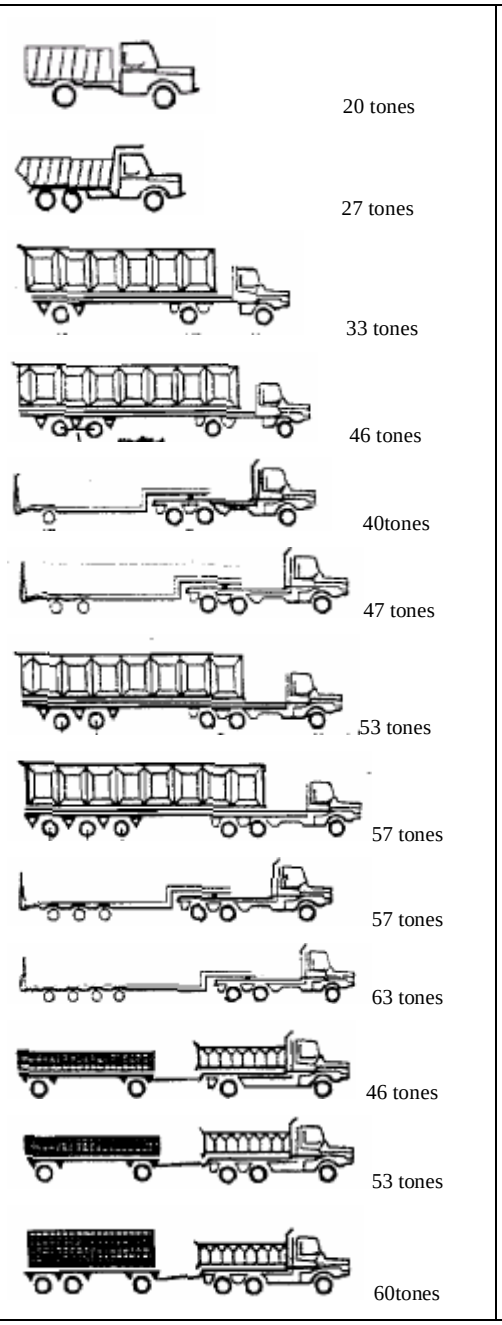
- Create new job opportunities for youth,
- Enhance medical services in Egypt,
- Apply an integrated management strategy for disposal of medical wastes,
- Allow Egypt to comply with the terms of the Stockholm Agreement on Persistent Organic Pollutants; prepare relevant reports, and
- Comply with Egypt’s sustainable development strategy.

(2) Regulations on Logistics

a) Regulations on truck

As shown in the table below, there are some regulations on weight, width, length and height for various types of trucks. However, there are no regulations on the maintenance of trucks, validated periods of using truck, and the required driving skills for trucks concerned. As a result, there are many trucks in operation without regular maintenance and inadequate working conditions for drivers.

Table 7.2.3 Notification of Loads Permitted on the Road Network Instructions



1. The calculated weight of the front single main axle should be 7 ton, and single back axle should be 13 ton, under the condition that the four tires are fitted.
2. The calculated weight of the truck/trailer front single main axle should be 13 ton, under the condition that four tires are fitted.
3. The calculated equivalent weight of the double narrow axle should be 20 ton, under the condition that the four tires are fitted on each axle, and the distance between axles is less than 2 m.
4. The calculated equivalent weight of the broad axle should be 13 ton for each axle, under the condition that each axle has four tires.
5. The calculated equivalent weight of the triple narrow axle should be 30 ton for each axle, under the condition that four tires are fitted on each axle.
6. There is a 5% allowance in transported load weight in different kinds of cars permitted on roads. This is to overcome the problem of differences in weights for containers and balances.
7. The width of vehicles should not exceed 2.6 m.
8. The length of vehicles should not exceed:
   A. 12 m for vehicles with 2 or more axle
   B. 17m for vehicles with one or more junction according to recent traffic regulation.
   C. 20 m for regular trailer
9. Loaded vehicle height should not exceed 4 m. The measurement in this case is taken from the road's surface up to the top of the load. The distance between bottom of the vehicle and the road's surface should not be less than 28 cm.

Source: El Waka El Misraya Journal, Vol.280, 12th of Dec., 2004

b) Truck ban for entering Cairo city during the daytime

Large trucks are not allowed to enter Cairo city anytime from 6 a.m. to 12 p.m. In fact, there is a ring road constructed around Cairo city, therefore these truck bans may not be a crucial obstacle for the freight forwarder. However, some drivers are forced to work in the nighttime when trucks can enter Cairo city, and this working condition causes not a few traffic accidents.

c) No regulation for foreign investment on freight forwarding industry

In January 1998, the new maritime law 1/1998 was issued to modify the law 12/1964 that gave the Egyptian state owned company a monopoly over the maritime transport sector. This monopoly was very inefficient and actually decreased the Egyptian competitiveness in the Egyptian maritime market. The new law allows and legalizes the private sector individual companies and personnel to get engaged and own business in all maritime related services as follows:

- Shipping companies,
- Stevedoring companies,
- Shipping agency,
- Ship chandlering,
- Ship repairs and maintenance, and
- Many other maritime service sectors that ought to be identified by a ministerial decree.

There is no regulation about foreign investment in the freight forwarding industry in Egypt at the moment, unlike other developing countries in Asia, which used to regulate foreign investment in the freight forwarding industry. Consequently, there are many foreign freight forwarders operating in Egypt.

In order to protect the domestic freight forwarding industry, the Egyptian International Freight Forwarding Association (EIFFA), which is the only industry organization on behalf of freight forwarders, has recently decided to restrict foreign freight forwarders to such companies where Egyptian shareholders account for more than 51%.

7.2.2 Egyptian International Freight Forwarding Association (EIFFA)

(1) Overview of EIFFA

EIFFA, the Egyptian International Freight Forwarding Association was established in 1990 as a division of the Alexandria Chamber of Commerce. It hosts more than 290 member companies which cover sea transport, air transport, road transport and consolidations all over Egypt. EIFFA is considered to be the only official representative in Egypt of the FIATA (International Federation of Freight Forwarders Association). Its member companies account for more than 90% of the freight forwarding industry market share in Egypt.

EIFFA's main goal is to enhance, support and lead the freight forwarding industry in Egypt to compete in the international market in the globalization era and let it achieve success. Such objective requires EIFFA to attempt to:

- Monitor, direct and aid the advancement and utilization of the freight forwarding industry in Egypt,
- Strengthen and create demand for freight forwarding in Egypt, and
- Cooperate with the governmental bodies and decision makers in Egypt to exchange policies, related information, feedback and trends in order to help in setting regulations that are beneficial for each party.

Moreover, EIFFA not only act as a liaison and lobbyist for the national forwarders, but also creates ideas and activities that improve such industry and increases its effectiveness. It also keeps its members updated through gathering of data, news and events of interest in the freight forwarding field either nationally or internationally and publishing it continuously.

EIFFA keeps track of and follows the international trend of the forwarding industry to encourage the development of freight forwarding industry in Egypt.

In July 2007, 11 Arab countries formed 'The Arab Union for Multimodal International Transport and Logistics', which has its headquarters in Alexandria city, to promote multimodal international transport and logistics within the region. EIFFA's chairman was elected as the chairman of the Union.

(2) Training Courses Provided by EIFFA

From the belief that the freight forwarding industry in Egypt should be developed to compete internationally, and from the belief that there is always a need for learning and upgrading information and developing opinions in order to cope with the new era and maintain a competitive edge, EIFFA encourages their staff and members to participate in training activities for gaining benefits and ability to represent the freight forwarding industry.

EIFFA's training covers courses, workshops and seminars on the freight forwarding industry. Below are outlines of some of the courses supervised by the EIFFA.

Table 7.2.4 Some Main Training Courses Conducted by EIFFA

Training courses	• Understanding Freight Business, • Strategic Marketing for Freight Forwarders, • Strategic Logistics Management, • Sales & Marketing Strategy for Freight Forwarders, • Distribution, Warehousing and Insurance, • Inland Transportation, • Chartering & Ship-broking, • FIATA Documents, • Incoterms & Letter of Credit (L/C), • Cargo Exhibitions, • Marine/Air cargo Insurance, • Air Freight Dangerous Goods, and • Air Freight Basic Cargo.
Period of courses	• 3 to 4 days per course (for Air Freight Dangerous Good, it takes two weeks).
Number of participant	• 30 to 40 participants per course.
Frequency of conducting course	• 6 to 8 courses a year.
Fees	• Approximately 200 to 300 Egyptian Pound per course.
Lecturers	• EIFFA members, academic, and consultants.
Venue	• EIFFA office at Alexandria, and campus of Arab Academy in Cairo.

Source: EIFFA

A Training Committee within EIFFA, which consists of 20 members, is in charge of training matter for its member companies. The Training Committee meeting is held once a month to discuss the content of training courses, and how to achieve international standards and the FIATA standard for freight forwarders. For the sake of improving the quality of the members, the members of EIFFA are obliged to dispatch their employees to participate in two training courses provided by EIFFA at least once a year. After completion of training course, a certificate is issued to the trainees. EIFFA has trained 1,600 trainees since 2001.

Photo EIFFA Training Scene at AASTMT

Courses, which are expected to be held in 2007/2008 by EIFFA, are as below.

- Contract Unification,
- Reefer Shipments,
- Business English Language,
- Personal Effects,
- Claim Handling,
- FIATA Multimodal Bill of Lading,
- Diploma International Transport and Logistics Program, and
- FIATA Diploma.

7.2.3 Institutions for Logistics Related Courses

(1) Arab Academy of Science Technology & Maritime Transport (AASTMT)

The Arab Academy for Science & Technology and Maritime Transport was established in 1972 with an objective to offer educational services in science & technology and maritime transport for more than 58 countries. AASTMT consists of the following four main colleges and listed educational entities.

Following four colleges have their individual education programs and specialization:

- College of Maritime Transport and Technology,
- College of Engineering and Technology,
- College of Business and Technology, and
- College of Computer and Information Technology.

Following educational entities are also part of AASTMT:

- Maritime Training Institute,
- Simulation Center,
- Center of Research and Consultancy,
- International Secondary School,
- The Center of Serving Community Programs, and
- Post-graduate studies.

The academy main branch is located in Alexandria "Abu-keer, Miami" and it has three other branches as below:

- Two branches in Cairo "Doki Campus-Sheraton Campus",
- Aswan branch, and
- Syria branch.

a) Undergraduate studies

The College of Maritime and Technology includes a very important department, which

is Management of International Transport & Logistics both in English and Arabic.

This department got a lot of attention because it is the only department offering this field of study in the Middle East. In addition, such study is new and unique in Egypt.

This department is available in both the Alexandria and Cairo "Sheraton Campus" branches, and the language is available in Arabic and English. Cairo branch includes 1,200 students both in -English and Arabic sections- and Alexandria branch includes 650 students -English and Arabic sections-.

As shown in Table 7.2.5, the Department of Management of International Transport and Logistics courses is concentrating on subjects that deal directly with logistics issues and international transport.

Table 7.2.5 Some Main Courses Conducted by AASTMT

- Principles of Transport	- Multimodal Transport
- Transport and Trade	- Port Operation Management
- Import and Export Management	- Transport Law
- Transport Economies	- Quality in Logistics
- Logistics Operation Management	- Liner Trade Management
- Supply Chain Management	- Cost Accounting

Source: AASTMT

The Arab Academy collaborates with different organizations and Institutions. In the case of the college of Maritime Transport and Technology, Department of International Transport and Logistics, it signed a convention with Huddersfield College in England to exchange students in bachelor studies and for graduate students to pursue postgraduate studies.

This convention helps the fresh graduates to get job offers by contact with different logistics, freight forwarding, insurance, maritime companies, etc. This is besides recommending the top students for courses, studentships and training in ports, airports, and many other companies.

For more work experience in the field, the Department of Management of International Transport and Logistics tends to hold training programs in companies that work in the field of freight forwarding. Herewith listed some companies in which such programs are held:

- Global Logistics (Forwarding),
- Suez Canal (Shipping Agent),
- Challenger (Forwarding),
- Swift Forwarding,
- Kadmar Forwarding,
- Ultra Marine Service,

- Egytrans,
- International Cargo System (Forwarding), and
- Egypt Air.

b) Post graduate studies

The Institute of International Transport and Logistics is one of the Academy's specialized entities established in year 2000. The Institute was established in response to the increasing demand for post-graduate education in the field of global trade and logistics.

The Institute of International Transport & Logistics (IITL) is comprised of two main branches:

- Alexandria Branch, and
- Cairo Branch.

It also has other branches in Arab countries such as Sudan (Port Sudan), Oman (Muscat), and Syria (Lattakia).

IITL keenly seeks strong links of cooperation with the commercial, industrial and transport communities through the following:

- The highest level of professors from academic field, universities and also prominent practitioner experts from industry for conducting the courses.
- Field trips to various modern centers of transport & logistics are a vital part of the course.
- The Institute is also a member in leading scientific associations both locally and internationally.
- The Institute provides consultancy services as well as applied research in fields of specialization.
- The institute signs mutual agreements with regional and international educational institute as well as training institutes.
- The Institute delivers short tailor-made courses to meet the needs of the Arab world, Africa and Asia on subjects related to international trade, shipping, logistics and port management.

IITL delivers part-time courses in seven programs in both Alexandria and Cairo branches with an average batch of 50 students at each branch for two intakes per year. Students of the first batch graduated in March 2004. The M.Sc. Programs are as follows:

- International Transport and Logistics,
- Legal, Commercial International Transactions and Logistics,
- Logistics of Hospital Management,

- Logistics of Tourism,
- Logistics of Litigation and Disputes Settlement,
- Logistics of International Trade, and
- Logistics of Exporting Agriculture Products.

A number of these programs are delivered as well in Oman, Kuwait, Syria and Sudan. Currently, delivery of programs in Saudi Arabia and United Arab of Emirates is under negotiation.

In terms of international relations with foreign organizations & institutions, IITL cooperates with the following institutions, partly in scientific and training fields.

- Norwegian Shipping Academy (NSA) – Norway,
- Norwegian Agency for Development Cooperation (NORAD) – Norway,
- Barcelona Port Authority – Spain,
- Molde University College, Norway,
- Tempus Organization Establishment of the Euromed Maricentre European Mediterranean Maritime Centre,
- University of Genova,
- Zaragoza Logistics Platform – Spain, and
- Ports of Marseille – France.

The institute is also a member of the International Multimodal Transport Association (IMMTA) Switzerland. The institute has continuous relations with the following organizations:

- UNCTAD - Geneva – Switzerland,
- Rotterdam Municipal Port Management,
- Genova Port Authority,
- FIATA organization - Zurich – Switzerland, and
- Japanese International Cooperation Agency JICA – Japan.

(2) Port Training Institute (PTI)

Believing in the great role of ports, the Arab Academy for Science & Technology and Maritime Transport has sponsored the establishment of the Port Training Institute in the Alexandria branch.

The PTI is a unique and specialized institute that offers training courses to ports and maritime sector personnel not only for Egypt but also for several Arab and African countries. It was set up in July 1982 according to a ministerial decree that the PTI should be affiliated to the AASTMT.

The PTI mission is:

- To offer training courses to industrial, petroleum, service, commercial and many more sectors, and
- To be in relation and contact with the international organizations and port authorities.

The PTI has many objectives to achieve; some of them are the followings:

- To maintain international standards and up-to-date training both in technical and managerial levels in seaports and companies in the maritime sector or petroleum sector,
- To prepare fresh graduates -newly recruited- with skills to guarantee high-qualified staff that is able to fit in seaports and companies,
- To offer human resources development in the commercial, industrial, service and petroleum sectors, and
- To exchange expertise with different international organizations and international training and maritime institutes in order to keep track of the latest trends and programs.

The PTI comprises a great group of lecturers and training staffs who are specialized in seaport business. The lecturers from the Arab Academy, Egyptian Universities and Maritime Sector contribute to an enhancement of trainees' expertise. The PTI training programs are held in a well equipped modern building located in the customs area of Alexandria port.

Table 7.2.6 Training Staffs and Training Equipment at PTI

Lecturers and Training staffs	♦ In-house lecturers	27
	♦ Administrative personnel	19
	♦ Technicians and helpers	41
	♦ Total Employees	87
Training Equipments	♦ 13 training rooms and labs contain the latest training aids, ♦ Latest training simulators (Gantry Crane Simulator – Truck Simulator), ♦ Computer labs, ♦ Engineering labs, and ♦ Supporting activities.	

Source: PTI

The PTI introduces many courses in two main fields, which are in logistics and international shipping; examples are as follows:

Table 7.2.7 Training Courses Provided by PTI

Logistics Courses	International Shipping Courses
- Basics of Logistics, - Logistics Supply Chain Management, - New Markets for Logistics Services, - Efficient Processes of Logistics Development, - Logistics Customer Relationship Management, - Developing of Logistics Strategies, - Logistical Coordination, - Modern Transport System, and - Transport and Globalization.	- Ports Management, - Shipping Economics, - Electronic Commerce in Ports, - Ports Service Marketing, - Hinterland Transport, - Maritime Law, - Maritime Insurance, - International Transport and Trade Techniques, and - EDI Systems in Multimodal Transport Field.

Source: PTI

Since 1982 till 2005 PTI has provided 100,931 training opportunities by holding 6,461 training courses with an average of 675 courses annually.

Table 7.2.8 Outline of Training Courses Provided by PTI

Training course	Logistics Courses, International Shipping Courses.
Period of training courses	1 or 2 weeks to 3 months.
Training method	1st week: Theoretical teaching, and 2nd week: Conducting simulation and OJT at workshop.
Participant	15 trainees.
Fess per week	・ Non-members:500USD as equivalent to Egyptian Pound, and ・ Member in PTI board: 300USD as equivalent to Egyptian Pound.

Source: PTI

The PTI has held many international seaport conferences and maritime exhibitions since 1984.

(3) Egyptian-German Technical Co-operation (Mubarak-Khol Dual Training System):

The dual project, which relates to the technical and vocational education training of the private sector and employment promotion, was agreed and signed between the German Chancellor Helmut Khol and the Egyptian President Hosny Mubarak, and is so called the Mubarak-Kohl initiative.

The visions of the project are:

- Establish programs focusing on training males and females in the schools,
- Find graduates sustainable employment in their occupations,
- Government sets the demand-oriented legislation, organizational and financial frame, and
- The vocational education and training is an alternative to academic education.

Some of the future objectives to be achieved are:

- Finalize the equipment of the Technical Secondary School (TSS),

- Enhance TTS performance in management, organizational and educational aspects,
- Strengthen the relationship between companies and advisory assistance,
- Improve quality of external training programs for company employees, and
- Consider introduction of new trades according to the needs and willingness of companies.

In January 2001, there was a protocol signed between EIFFA (Egyptian International Freight Association) and GTZ (German Agency for Technical Cooperation) devoted to provide the technical know how by EIFFA members and board of directors. The protocol also provides a vocational training for EIFFA member companies in the field of international and multimodal transport.

As a result, a class for 27 students in Alexandria in September 2002 and a class for 24 students in Cairo in September 2003 were established by EIFFA members who contributed 25,000 Egyptian Pounds. The classes were equipped with computers, fax machines, etc. Recently in 2007, a class for 24 students was commenced in Port Said for continuing and expanding those programs.

There are two schools in which the system is applied; Talaat Harb School in Alexandria and El-Nile school in Cairo.

The curriculum in international and multimodal transportation was prepared and revised by EIFFA together with other institutions such as the Arab Academy for Science and Technology and Maritime transport, professors and GTZ consultants. Graduates join different freight forwarding and transportation companies.

Table 7.2.9 Outline of Dual Training Program Scheme

・ Students spend their 1st academic year at school. They start the vocational training from the summer in the 2nd year.
・ During the 2nd and 3rd year, students spend three days a week at school and three days in companies for training.
・ In the three school days, students receive general subjects "Economics-Accounting-Secretarial" for 1day, and technical subjects "Commercial subjects-Commercial mathematics-Computer science" for rest of 2 days.
・ In three days at company, students receive training supervised by the training manager at each company.

Source: The Egyptian International Freight Forwarding Association (EIFFA)

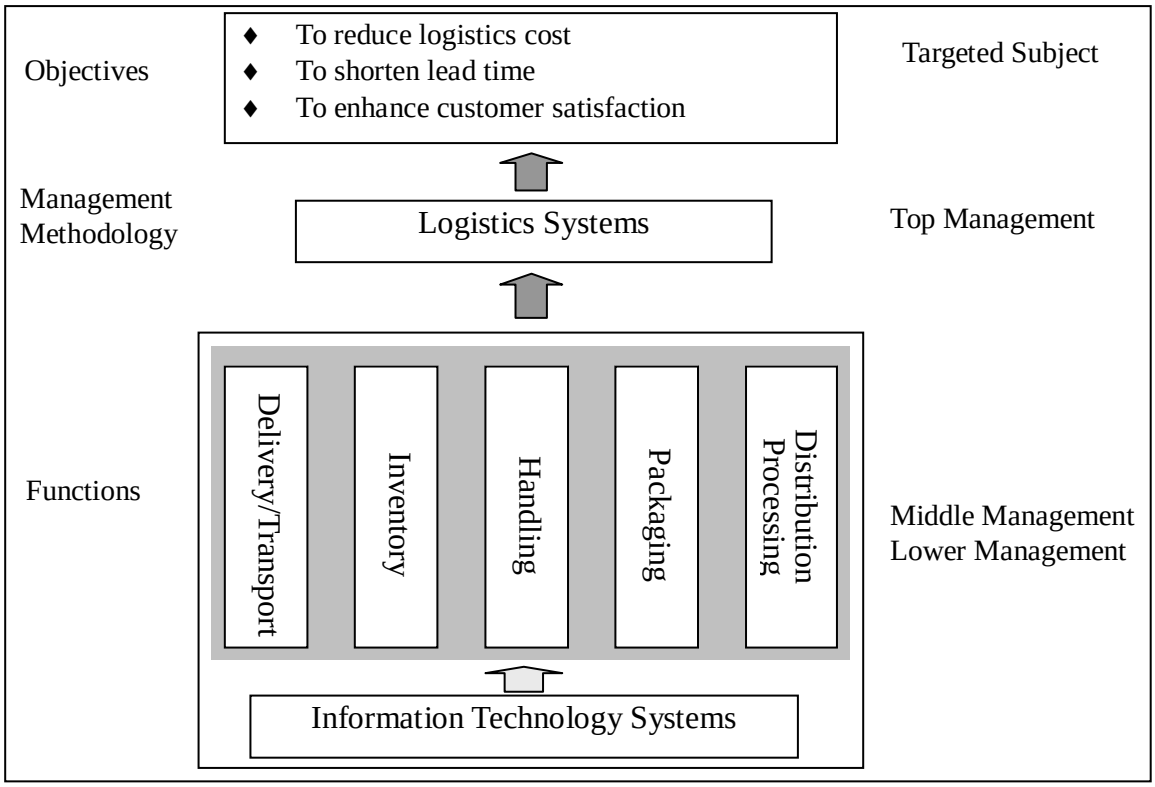
7.3 Freight Forwarding Industry Related Issues

In order to highlight freight forwarding industry related issues and the challenges faced by freight forwarders themselves, this section analyses the following issues:

- Issues on logistics related policies and regulations
- Issues on logistics related training courses, and
- Issues on logistics related infrastructure based on the findings of the interview survey and the result of interviews with representative freight forwarders, industry organizations, and academics in logistics field.

7.3.1 Issues for Freight Forwarders

As shown in Figure 7.3.1, a logistics system, which is an integrated concept consisting of various functions supported by IT systems, is a management tool for top management to achieve its objectives e.g. to reduce the logistics cost, to shorten the lead time and to establish greater customer satisfaction. However, the concept of logistics is quite new in many developing countries including Egypt. When it comes to logistics, the freight forwarder is a player who has several important roles.



Source: JICA Study Team

Figure 7.3.1 The Conceptual Image of Logistics Strategy

According to the interview survey and interviews conducted by the JICA Study Team, the challenges faced by the freight forwarder can be summarized as below:

(1) Constraint of Finance for Business Expansion

As mentioned previously based on the main findings of the freight forwarder interview survey, the majority of freight forwarders are relatively small scale companies who employ around 20 employees or less. In addition, the years of operation in the freight forwarding industry is relatively short[3] compared with those in advanced countries. At the same time, most of the freight forwarders including leading freight forwarders are mainly family based companies, which limit a driving force in modernizing the business operation in many cases.

Hence, due to the size of the company and the nature of the family-run business, many of the freight forwarders tend to have constraint on finance for expanding their business such as further investment on logistics related facilities and handling equipment. Consequently, logistics facilities owned by freight forwarders are limited. In order to compete with foreign freight forwarders who have the financial basis to invest in their business operation, some public support for the small scale Egyptian freight forwarder should be considered.

(2) Lack of ICT Systems

With the arrival of severe competition, introduction of sophisticated IT systems in their business activities is indispensable for freight forwarders to survive. For example, Electronic Order System (EOS), Automatic Picking System, Bar Coding, Freight Management System and Container & Equipment Control System are some of the IT based applications for freight forwarding operations.

However, as a result of the interview survey as shown in Figure 7.1.3, in terms of ICT applications for freight forwarders, except the use of the Internet (80%) and mobile data communication (57%), it turned out that the adoption of ICT applications is extremely low at the moment. For instance, only 2% of the surveyed companies have introduced an EDI system. Due to the insufficient IT related infrastructure such as fixed telephone lines, mobile phone subscription, the number of internet hosts, low skills and/or limited knowledge on ICT both by the shippers and the freight forwarders, there is only limited need for using ICT applications in Egypt[4]. However, if the trade with the USA and EU increases in the future, importers in those countries might push the Egyptian exporters to apply bar-code, EDI and RFID especially for high value added products like automobile parts and textiles.

As shown in Table 7.3.1, there are many merits accruing from the introduction of an EDI system such as improvement of productivity, in reducing office processing cost, enhancing work saving and, driving informatization and standardization within company, and improvement of customer satisfaction. Therefore, it is necessary to facilitate introduction of ICT applications to improve competitiveness of freight forwarders in the future.

[3] Approximately 80% of surveyed companies were established since 1991 and 26% of them have operated since 2001.

[4] According to the interview with one of the leading Egyptian freight forwarders, there were only 2 or 3 computers used in the office before 2000. But after 2003, many Egyptian companies started to use the internet.

Table 7.3.1 Merits on Introduction of EDI

Merits	Number of responded*	Percentage**
Reducing office processing cost	49	57.0%
Enhancing labor saving/work saving	48	55.8%
Driving informatization and standardization within company	31	36.0%
Improving customer satisfaction	23	26.7%
Strengthening partnership with crucial client	21	24.4%
Shortening delivery	12	14.0%
Reducing inventory level and improving rate of turnover	3	3.5%
Others	7	8.1%

Note: * Total number of response is 86. ** Up to three multiple answers
Source: Next Generation Electronic Commerce Promotion Council of Japan (ECOM) 'Study on Introduction of EDI in Japan, 2006'

(3) Limited Services Provided

As one of the key players in the supply chain management, the freight forwarder/logistics company provides a wide range of services in logistics business and operation in advanced countries like the USA, EU and Japan. For example, there are many logistics companies and freight forwarders in Japan that have evolved from other origins, namely warehousing, customs brokering and port stevedoring, trucking, shipper and shipping lines, and in Egypt they have come from shipping line and international courier origin.

Excluding a few leading freight forwarders, the majority of freight forwarders in Egypt are heavily focusing on delivery of transport and customs clearance services as described in Figure 7.1.1, mainly due to the low awareness on logistics as a whole. In order to fulfill customer satisfaction with competitiveness, the services of the freight forwarder should be expanded in the near future.

Column 7.3 Various origins of logistics companies/freight forwarders in Japan

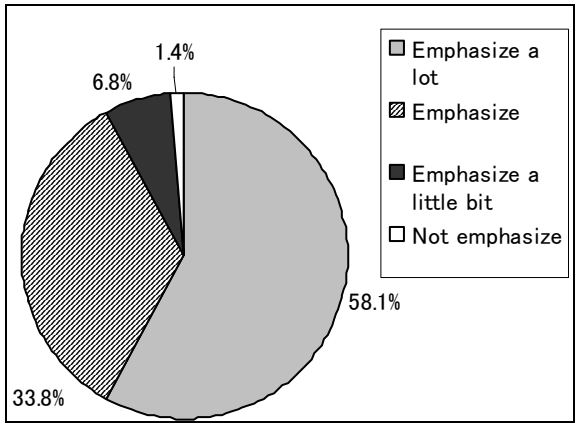
- Warehousing, customs broker and stevedoring companies at ports:
  Some warehousing, customs broker and stevedoring companies at ports expand their functions from warehousing and trade related procedures to distribution processing, packaging, and delivery, e.g. Mitsubishi Logistics, Mitsui Logistics.
- Trucking company origin:
  Expanded from existing delivery function to handle inventory, packaging and distribution processing as an integrated logistics company, e.g. Nippon Express, Sagawa Express.
- Shipper origin:
  Some big manufacturers spin off their logistics unit as their subsidiary to handle logistics related services, e.g. Hitachi Logistics.
- Shipping line origin:
  Some major shipping lines outsource the logistics functions by setting up a logistics subsidiary, e.g. NYK Logistics, K-Line Logistics.
- Trading company origin:
  Major trading companies used to establish logistics arm for dealing with logistics matter, e.g. Sumitomo Logistics.

Source: JICA Study Team

(4) Insufficient Training Opportunities

For the sake of expanding business activities and improving the level of service, human resource development is essential. As one of the basic mechanisms to develop human resource, training consisting of in-house training and outside company training is indispensable.

The JICA Study Team has conducted a survey regarding training courses organized by EIFFA[5]. The result showed that 97% of the trainees, which accounts for 72 trainees out of 74 responses, mentioned that training was useful to improve their skills for current tasks and/or assignment. At the same time, as shown in Figure 7.3.2, 92% of the trainees also answered that their companies emphasized training for improving the skills of the employees.



Note: Number of responded trainees is 74.
Source: JICA Study Team

Figure 7.3.2 How Much the Company Emphasizes Training for Improving Skills of Employees

According to the interview with EIFFA and some leading freight forwarders, training needs were inspired by employees and company, except for some training courses coordinated and organized by EIFFA to their members. However, there are still insufficient training opportunities sponsored and/or conducted by the companies themselves to their employees[6]. In addition, as mentioned previously, some major Egyptian freight forwarders are sending their employees to the Arab Academy for Science & Technology and Maritime Transport (AASTMT) for training.

Therefore, strengthening the human resource development seems a crucial factor for most Egyptian freight forwarders to improve their competitiveness.

[5] The JICA Study Team has conducted a questionnaire survey for the trainees who attend the training course on Incoterms & the Letter of Credits on 20 June 2007 at AASTMT.

[6] Some major foreign freight forwarders are conducting training courses for their employees based on the training methods and materials from their headquarters.

7.3.2 Issues on Logistics Policies, Regulations and Logistics Related Training Courses

The issues on logistics policies, regulations and training courses provided are mentioned below by referring to some initiatives towards strengthening logistics competitiveness in the advanced countries like Japan.

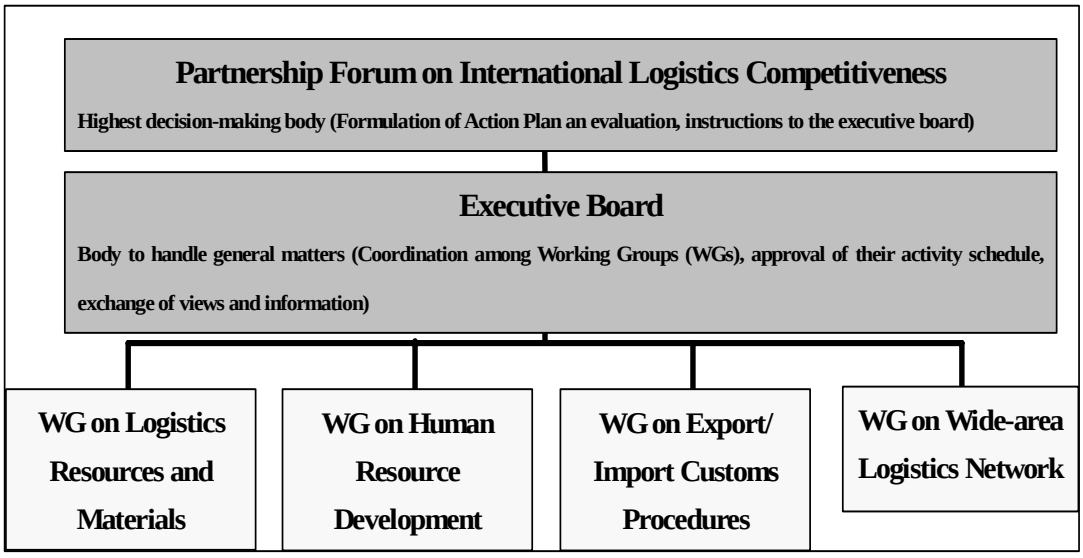
(1) No Comprehensive Policy on Logistics and Lack of Interconnectivity among Logistics Related Ministries

Logistics involves several sectors such as seaport, airport, road, railway and inland water transport. At the same time, in order to improve international logistics competitiveness, some export and import related authorities like the Customs Authority and General Organization for Export and Import Control (GOEIC) should be involved actively.

The Ministry of Transport is considered to be the ministry in charge of logistics issues in Egypt. However, as mentioned in the section 7.2.1, within the Ministry of Transport, each sector is being dealt with and controlled separately and sectors are handling their activities separately without any coordination. In other words, there is no comprehensive policy on logistics within the Ministry of Transport at the moment. Besides, when it comes to the logistics related ministries such as Ministry of Transport, Ministry of Industry and Trade and Ministry of Investment, it seems that there is a lack of interconnectivity among those ministries.

For example, the Japanese Cabinet adopted the "Comprehensive Logistics Policy (only Japanese version available)" in April 1997 and the "New Comprehensive Logistics Policy (only Japanese version available)" in July 2001, and has undertaken efforts to review logistics systems aimed at improving convenience for users and building automated systems to simplify customs procedures and other administrative procedures. In 2005, the revised "Comprehensive Logistics Policy 2005 to 2009 (only Japanese version available)" was implemented.

In addition, the Japanese government consisting of the Ministry of Economy, Trade and Industry (METI), and the Ministry of Land, Infrastructure and Transport (MLIT) cooperatively with the private sector, in August 2006, launched a forum called "Partnership on International Logistics Competitiveness" aimed at realizing an "Asia-wide seamless logistics network". Various laws and regulation are drafted, and the logistics center plan and other road development plan are also reviewed at the forum based on this inter-ministry discussion opportunity, resulting in smooth implementation of the policies and regulations. In order to further improve international logistics competitiveness, the inter-ministries mechanism should be discussed.



Source: Ministry of Economy, Trade and Industry of Japan

Figure 7.3.3 Partnership Forum on International Logistics Competitiveness in Japan

(2) No Regulations for Freight Forwarder and Trucking Companies

The deregulation of the trucking industry is the current trend in many developed countries like Japan, the USA and UK. In Japan, the abolishment of restrictions on business area and the deregulation of service charges were executed in 2003. In parallel with this deregulation, some laws such as the Subcontractor Act and Antitrust Act were enforced to protect small and medium enterprises including trucking companies. These acts aim at enforcing the contractors not to require severer working conditions to the subcontractors and to pay the working compensation regulated by the Minimum Wage Law of Japan.

However, there are almost no regulations and restrictions towards freight forwarders and trucking companies in Egypt as summarized in Table 7.3.2. As a result, it is very difficult to ensure the logistics quality. Some regulations on freight forwarders and trucking companies are needed for the purpose of improving the logistics quality especially for exported goods.

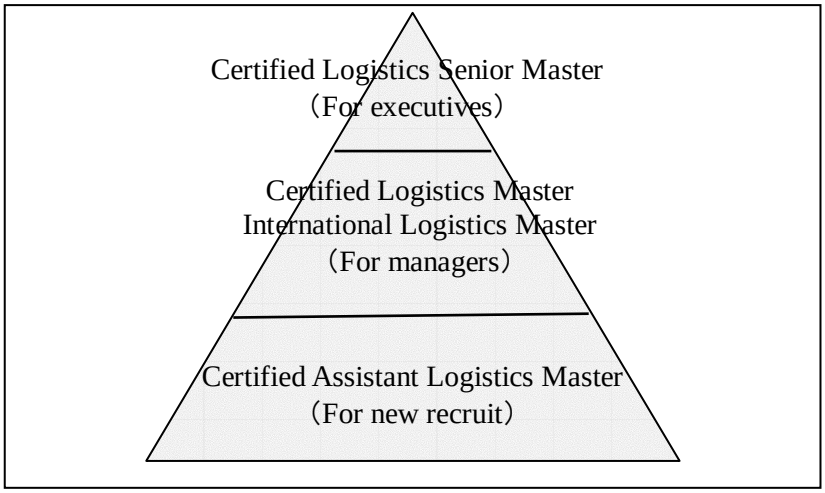
Table 7.3.2 Current Regulations for Freight Forwarders & Trucking Companies

License, regulation	・ No license is needed for freight forwarders, ・ No regulation to control foreign investment in freight forwarding industry, ・ Minimum capital to be registered for a trucking company is only to have 50,000 pounds, and ・ No license is required for normal warehousing.
Business Activities	・ No restriction on the business areas of trucking companies, and ・ No minimum charges for transport.
Drivers	・ No regulation of driver related matters (e.g. safety instruction), and ・ No guideline on working hours.
Vehicle	・ No regulations on maintenance of vehicles, and ・ No third party to guarantee the condition of vehicles (fuel consumption, tires, and lighting, etc.).

Source: JICA Study Team

(3) Insufficient Needs-oriented Training Courses Provided by Industry Organizations

For the sake of further improvement in the service level of the industry itself, industry organizations are responsible for delivering training courses for their members. As shown in Figure 7.3.4, the Japan Institute of Logistics Systems (JILS), the industry organization for logistics related companies, delivers some qualification systems for logistics in Japan. For instance, 'Certified Logistics Senior Master' which is the training course at the executive-level for someone who has been qualified as 'Certified Logistics Master' or 'International Logistics Master' for more than 3 years. 'Certified Logistics Master' or 'International Logistics Master' is provided specially for a manager-level person who is in charge of logistics related business.



Source: Japan Institute of Logistics Systems (JILS)

Figure 7.3.4 The Qualification System for Logistics in Japan

In addition, the Japan Trucking Association (JTA), the industry organization for trucking companies, also certifies company personnel as 'Logistics Management Chief Officer' for trucking companies.

As described in section 7.2.2, the Egyptian International Freight Forwarding Association (EIFFA) organized and supervised some training courses for their members and EIFFA requires their members to send their employees to take part in training courses. However, due to the reason that there was no survey about the needs on training by EIFFA conducted before the courses were organized, the training courses provided by EIFFA tend to be insufficient in fulfilling the practical needs of trainees.

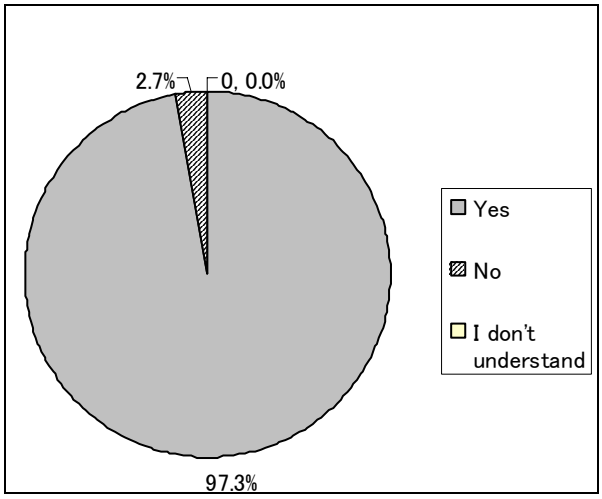
Based on group interviews with some trainees who attended one of the training courses organized by EIFFA at AASTMT, some trainees mentioned the following comments regarding the current training courses.

- Contents:
  "Contents of current courses are more focused on theoretical aspects rather than practical."
- Trainers:
  "Some trainers are not well qualified."

- Teaching method:
  "Most of the current teaching method is basically conducted by one way teaching from lecturer to trainees in the classroom. But in order to attract the attention of trainees, some other teaching methods should be reconsidered. For example, introducing open discussions, site visits and assignments are recommended."

Therefore, needs oriented courses should be emphasized to fulfill the requirements of the trainees as mentioned above.

At the same time, in order to motivate participation and to maintain the level of training, a qualification system on logistics should be introduced in the future. As shown in Figure 7.3.5, 97.3% of the trainees have interests in training for a qualification, which is recognized by the public.

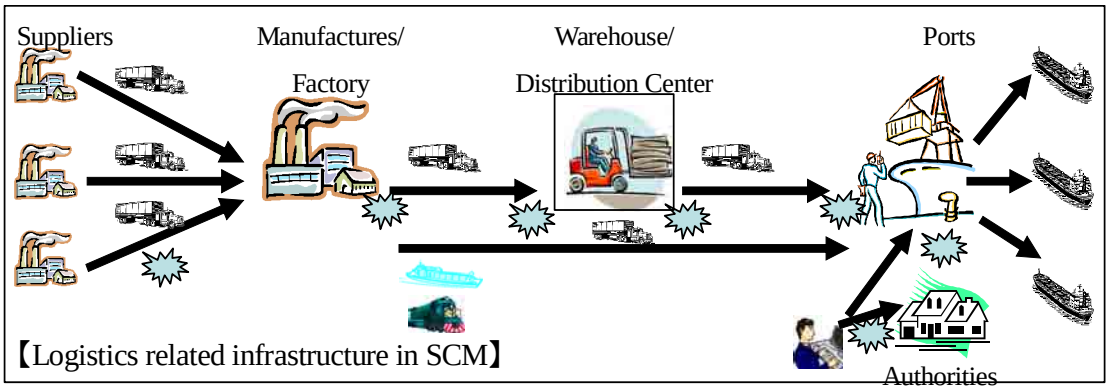


Note: Number of responded trainees is 73.
Source: JICA Study Team

Figure 7.3.5 Intention to Participating Qualification Systems

7.3.3 Issues on Logistics Infrastructure

As illustrated in Figure 7.3.6, logistics system is supported by many infrastructures such as road, railway, seaport, airport, warehouse, and distribution center, which tends to involve a lot of bottlenecks. Since the infrastructure related issues have been analyzed in the previous chapters, main issues on infrastructure are summarized in Table 7.3.3, along with issues on logistics related facilities and trade procedures.



Source: JICA Study Team

Figure 7.3.6 Freight Forwarder Related Infrastructure

Table 7.3.3 Main Issues on Infrastructure for Freight Forwarder

Items	Main Issues
Road	Insufficient highway network, no dedicated lane for trucks, lack of trucks
Port	Container yard is insufficient (Alexandria, Port Said West), expensive handling charge (Sokhna), low efficiency due to deterioration of handling facilities/equipment
Railway	Lack of handling equipment and freight wagons, low frequency and lack of convenience
Handling equipment and logistics facilities	Low efficiency due to lack of handling equipment and/or logistics facilities at transhipment point
Trade related procedure	EDI system is not fully implemented except at some ports

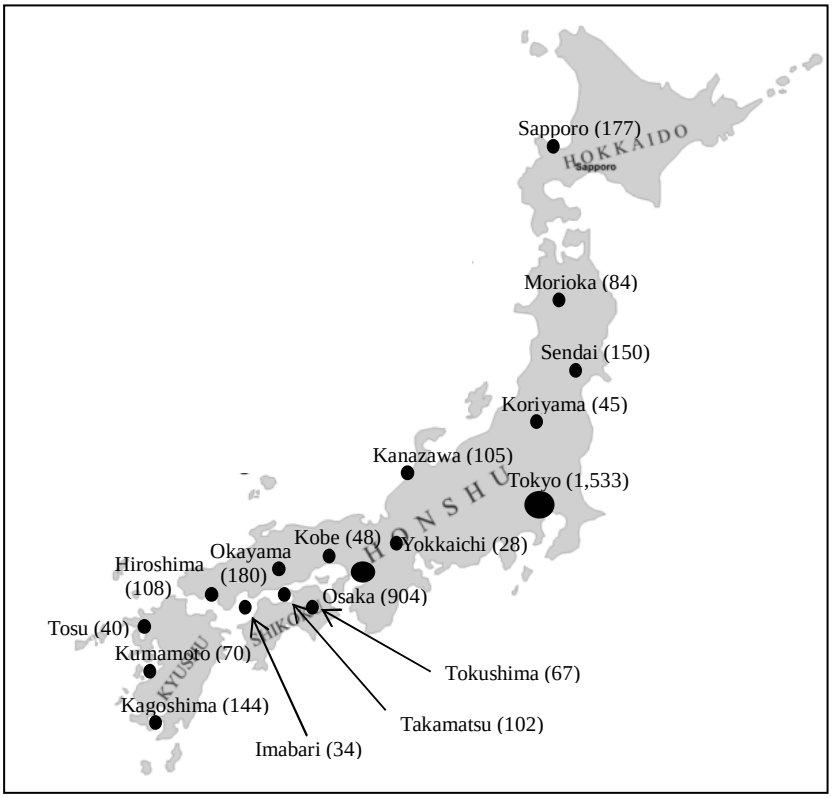
Source: JICA Study Team

(1) Lack of Handling Equipment and Logistics Facilities

In order to provide logistics service efficiently, speedily and safely, logistics facilities and handling equipment are indispensable as the basic infrastructure for logistics. For example, as shown in Figure 7.3.7 and Table 7.3.4, there are 24 truck terminals with 3,819 berths located from Sapporo, in the northern part of Japan, to Kagoshima, in the southern part of Japan to support logistics function throughout the nation, which were established around the 1970s mainly as joint efforts between local government and private companies.

As illustrated in the previous part of this chapter, the freight forwarders in Egypt having their own truck terminals and container terminals account for only 9% and 2%, respectively. At the same time, almost all freight forwarders have insufficient handling equipment and facilities such as conveyors, pallets, tow tractors, freight elevator, and material storage. In order to improve the level of service on logistics, enhancement of

handling equipments and logistics facilities will be inevitably required in the future.



Note: The numbers stand for the number of Berths as of March 2006
Source: Ministry of Land, Infrastructure and Transport of Japan

Figure 7.3.7 Distribution of Truck Terminals in Japan

Table 7.3.4 The List of Truck Terminals in Japan

No	Truck Terminal Name	Number of Berths	Year of operation	Shareholder (%)	Capital (million Yen)
1	Sapporo Truck Terminal	177	1971	Gov. 50% Private. 50%	300
2	Iwate Truck Terminal	84	1974	Gov. 50% Private. 50%	460
3	Sendai Truck Terminal	80	1962	Gov. 9.2% Private. 90.8%	175
4	Koriyama Truck Terminal	45	1976	Gov. 55.3% Private. 44.7%	1,083
5	Sendai Minami Truck Terminal	40	1979		
6	Sendai Port Ryutsu Truck Terminal	30	1979	Gov. 50.1% Private. 49.9%	569
7	Keihin Truck Terminal	433	1968	Gov. 47.1% Private. 52.9%	12,230
8	Itabashi Truck Terminal	320	1970		
9	Adachi Truck Terminal	320	1977		
10	Kasai Truck Terminal	460	1983		
11	Yokkaichi Truck Terminal	28	1987	Private. 100%	15
12	Kanazawa Truck Terminal	105	1977	Gov. 45.1% Private. 54.9%	1,157
13	Higashi Osaka Truck Terminal	316	1968	Gov. 49% Private. 51%	4.000
14	Kita Osaka Truck Terminal	424	1974		
15	Osaka Minami Port Truck Terminal	164	1976	Gov. 54% Private. 46%	4,000
16	Kobe Truck Terminal	48	1973	Private. 100%	10
17	Okayama Truck Terminal	180	1975	Private. 100%	550
18	Hiroshima Seibu Truck Terminal	108	1977	Gov. 70% Private. 30%	1,000
19	Tokushima Truck Terminal	67	1970	Private. 100%	79
20	Shikoku Truck Terminal	102	1971	Private. 100%	230
21	Tenbouzan Truck Terminal	34	1974	Private. 100%	120
22	Tosu Truck Terminal	40	1981	Gov. 32.2% Private. 67.8%	539
23	Kumamoto Truck Terminal	70	1976		
24	Kagoshima Rinkai Truck Terminal	144	1977	Gov. 12% Private. 88%	500
	Total	3,819			

Note: The numbers stand for the number of Berths as of March 2006

Note: Share of each shareholder is dependent of the financial capability of the private sector: however, the principle is that the private sector occupies more than a half of the total. Actual burden of private sector is decided case by case.

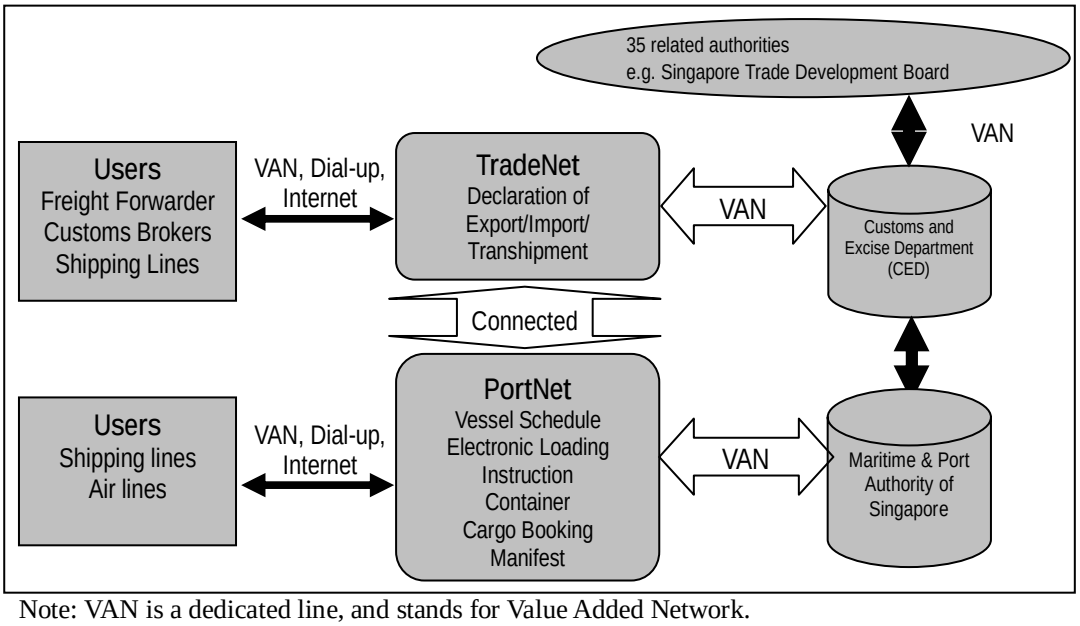
Source: Ministry of Land, Infrastructure and Transport of Japan

(2) No Fully Implemented Nationwide EDI Systems

In order to facilitate international trade, it is very important to have EDI systems to provide simplified and harmonized trade related procedures for relevant authorities. Recently, introduction of trade related EDI systems in developing countries such as ASEAN countries has been getting popular for the purpose of maintaining their international competitiveness.

For instance, Singapore, Malaysia, Thailand, Indonesia and Philippines have implemented EDI systems in trade related procedures since the late 90's. As illustrated in Figure 7.3.8, Singapore has implemented TradeNet, which is a one-stop service for declaration of export, import and tranship in 1989. As a result of the introduction of TradeNet, the time to complete declarations has been reduced from 1 or 4 days to 15 or 30 minutes.

Some seaports like Sokhna Port, Alexandria Port and other main ports have recently started to implement EDI systems for import/export related procedures. However, since the current EDI system is only connected to the Egyptian Customs Authority (ECA), some manual processes are still needed to connect with other relevant authorities like GOIEC. Consequently, it still takes time to declare imports and exports. In other words, the nation-wide EDI systems which is connected to all concerned authorities as Single Window System is not fully implemented yet in Egypt. Therefore, in order to improve the international logistics competitiveness, the implementation of nationwide EDI systems should be considered in the future.



Note: VAN is a dedicated line, and stands for Value Added Network.
Source: METI 'Survey for Adaptability of IC Tags (RFID) Among ASEAN Countries' 2006

Figure 7.3.8 Customs and Port Related EDI Systems in Singapore

7.4 Countermeasures/Recommendations

The current situation and issues on the freight forwarding industry have been analyzed in the previous sections of this chapter. However, in order to meet the following emerging requirements from the macro environment, some countermeasures and/or recommendations are suggested.

- Inevitable to strengthen logistics competitiveness for attracting foreign investment,
- Indispensable to improve logistics competitiveness for promoting export industries, and
- Necessity to upgrade the freight forwarding industry.

7.4.1 Countermeasures

Some countermeasures are suggested below:

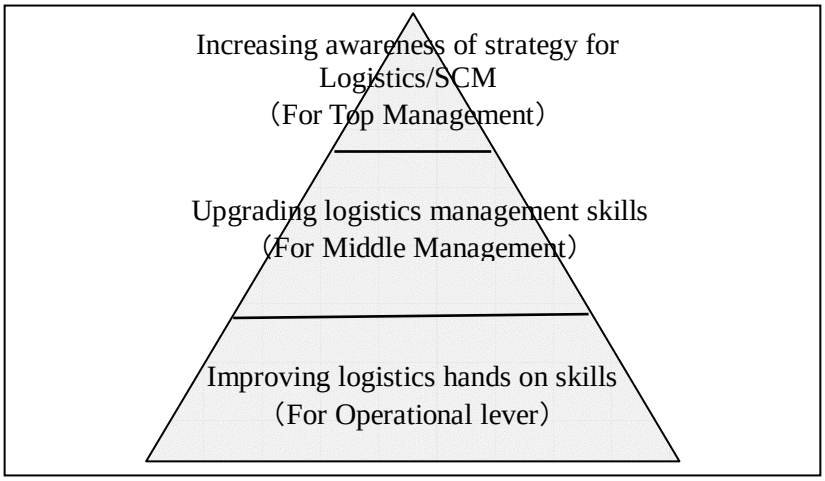
(1) Strengthening Logistics Related Human Resource Training Courses by the Industry Organization

For strengthening the training function of EIFFA, delivery of needs oriented training courses and provision of incentives for participating in training should be devised based on some initiatives conducted in developed countries like Japan. For example, a needs survey on training should be implemented by EIFFA, before training courses are commenced, under supervision of the logistics committee consisting of EIFFA members, logistics experts and academics.

The purpose of logistics related human resource training courses for three layers can be summarized as follows:

- Increase the awareness on the importance for logistics/SCM strategy formation for top management,
- Upgrading skill on logistics management by providing a qualification system on logistics e.g. design of customized logistics systems, logistics related IT course for middle management, and
- Improve hands-on skill by providing a qualification system on delivery, handling, packaging, inventory management, distribution processing, demand forecast, and IT systems for operational level staff.

Introduction of a qualification system is one of the effective mechanisms to facilitate the logistics training course and maintain a level of training like those systems in Japan. Some benchmarking of the Japanese experience could be a useful method to smoothly initiate this new training system in Egypt.



Source: JICA Study Team

Figure 7.4.1 Image of Logistics Related Human Resource Training Courses

(2) Formulation of International Logistics Competitiveness Study Group by Industry, Government and University

Dissemination of logistics/SCM's concept is still in the primitive stage in many developing countries including Egypt. To raise the attention on logistics at a national level and to create a hub of logistics research in the region, an 'International Logistics Competitiveness Study Group' within the concerned ministry, comprised of logistics industries, government and university in charge of logistics matters should be formulated.

The tentative objectives of the Logistics Study Group and its functions can be drafted as follows:

- Objectives
  Upgrade the level of logistics industries and create the hub of logistics research in the Middle East region.
- Functions
  Conducting joint research on logistics, organizing seminars and/or workshops for enlightening the public awareness, and conducting periodical dialogue among industry, government and university
- Topics to be discussed
  Export/import customs procedures, wide-area logistics network in Eastern Mediterranean region, human resource development, logistics resources and materials.
- Members
  Industry (e.g. EIFFA, logistics experts), university (e.g. Arab Academy of Science Technology & Maritime Transport, Cairo University), and government (e.g. Ministry of Transport, Customs Authority, GOEIC)

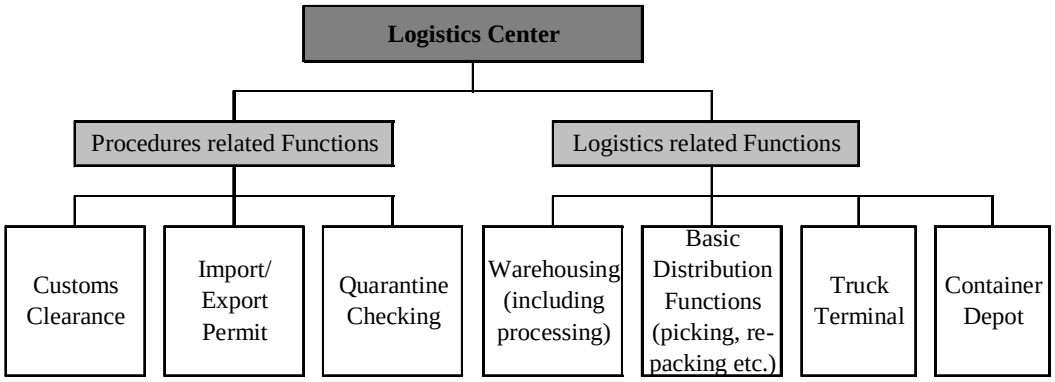
As one of the future evolutionary forms of this study group, a new national body dealing with logistics from an integrated perspective should be considered in the future.

(3) Establishment of Logistics Centers

Taking the constraint of logistics facilities into account, setting up logistics centers in some of the major industrial zones would be very effective for improving the logistics quality of SME freight forwarders and trucking companies, based on the experience in ASEAN countries and Japan. Major contribution can be observed in terms of distinction of line-haul trucks (inter-city services) and distribution truck (services between logistics center and consumers), and higher operation ratio of trucks (shorter time of idling time/waiting time), and punctual delivery of freight (without idling time).

Currently, as mentioned in the previous chapter, there are several dry ports operated by the public sector or private sector around the Greater Cairo Region (GCR). However, in order to integrate the existing functions of the dry port with advanced logistics functions such as handling equipment and storage, so-called integrated logistics, jointly operated public and private centers are suggested.

Main functions of logistics centers are shown below:



Source: JICA Study Team

Figure 7.4.2 Main Functions of Logistics Center

As illustrated in Figure 7.4.2, procedures related functions consist of mandatory procedures like customs clearance, import/export permits and quarantine check. On the other hand, under logistics related functions, warehousing, basic distribution functions such as handling and re-packaging, truck terminal would be delivered for private logistics related companies as a common logistics infrastructure.

7.4.2 Policy Enforcement

In parallel with the above-mentioned countermeasures, some policy enforcements are suggested in this section.

(1) Enforcement of Regulation on Freight Forwarders and Trucking Companies

Currently, there are almost no regulations and restrictions on freight forwarders and trucking companies in Egypt as summarized in Table 7.3.2. The lack of regulations on freight forwarding and trucking business, business license, vehicle and driver are the main concerns to be considered.

In order to improve logistics service quality, as described in Table 7.4.1, enforcement of regulations is needed. The ministry in charge should take the initiative to set up a study committee comprising members from the ministry, the law, academia and industry to study the feasibility of the proposed regulations.

Table 7.4.1 Proposed Regulations on Freight Forwarder and Trucking Company

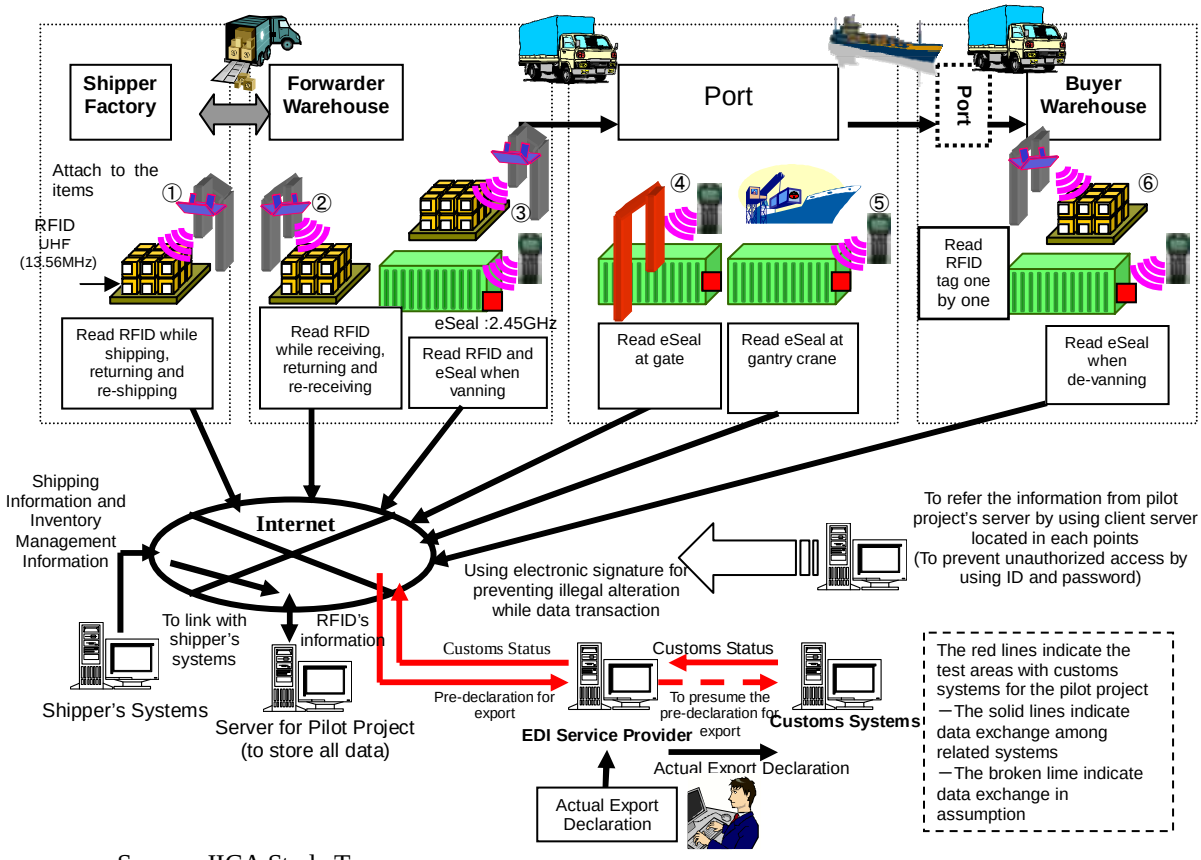
Items	Main points to be regulated
Business License	・ For freight forwarding and trucking company to be registered, it should be based on some conditions such as size of company and minimum capital to be paid-up. ・ Some small-scale freight forwarding and trucking companies can be registered as a cooperative entity with a management team. ・ The concerned ministry should issue the license for the freight forwarder and trucking company after conditions are fulfilled. ・ The business license should be renewed regularly.
Vehicle	・ Setting up a third party to examine the condition of vehicles regularly before applying for permission for renewal of the vehicle license at the police station. ・ Checking points for vehicles should be based on condition of maintenance, carbon dioxide emissions, and tire condition. ・ This third party should be run by the private sector with endorsement from the regulatory authority.
Driver	・ Driver is required to undergo mandatory regular training at a driving center for safety driving and compliance with driving rules. ・ Issuance of driving guideline for driver should be introduced to prevent unnecessary accident due to driving too many hours.

Source: JICA Study Team

(2) Implementation of Pilot Project for Cargo Traceability and Security by Using RFID

Nowadays, under the global trend of safe and efficient international logistics, RFID (IC tags) has been actively implemented in the USA, Japan and EU. From the viewpoint of facilitating future trade with the USA, EU and Japan, application of RFID might be requested in the near future. In order to be the pioneer country to implement RFID in this region, a pilot project for cargo traceability and security by using RFID in major ports should be considered.

Figure 7.4.3 shows an example of a RFID pilot project for exportation, which is funded by the Japanese government in ASEAN countries.



Source: JICA Study Team

Figure 7.4.3 Example of RFID's Pilot Project for Exportation

For facilitating trade and improving logistics efficiency for Japanese companies operating in ASEAN, the Japanese government has been funding several pilot projects on RFID in ASEAN countries over the last three years. Some know-how and experiences obtained from these pilot projects can be utilized for the proposed pilot project. The outline of the proposed pilot project is as follows:

- Objective: To facilitate trade and improve logistics efficiency
- Trade lane: Exportation of electronics goods from Egypt to advanced countries
- Period: 6 months

Column 7.4 indicates some characteristics of RFID. It is apparent that there are many advantages from applying RFID in international logistics.

Column 7.4 Characteristics of RFID (IC tags)

- ♦ Can read/write information recorded on RFID Tags without touching RFID Tags,
- ♦ Can read/write information on RFID Tags comprehensively and simultaneously,
- ♦ Can read/write information on moving RFID Tags without stopping the motion of such RFID Tags,
- ♦ Can add/delete information and write new information on existing information, unlike bar code,
- ♦ Can record large amounts of information: a few kilo bytes, much more than bar codes,
- ♦ Can better prevent unauthorized reproduction of information compared to bar codes, and
- ♦ Can resist dust and dirt, and can be used in high temperatures.

Source: JICA Study Team

7.4.3 Recommended Project List

All the recommended projects in this chapter are shown below:

- Pilot Project on Radio Frequency Identification (RFID) system,
- Single Window System Establishment Supplemental Project (Sea Ports), and
- Single Window System Establishment Project (Dry Ports).

Chapter 8

Private Sector Role in Egypt's Inter-modal Logistics System

Chapter 8 Private Sector Role in Egypt's Inter-modal Logistics System

8.1 Privatization Process in Egypt

8.1.1 Role of Private Sector

This section provides a brief history of the privatization process in Egypt partially based on CARANA PCSU[1] reports in 2002, in addition to some other general sources.

After the 1952 revolution, the Egyptian Government began to play more active role in the economy through projects that directly affect the national economic development. The period 1952-1973 showed massive government intervention with strong initiative in national economic development. In 1956, through the application of Law 258, the government nationalized private companies and the Suez Canal, and the public sector dominated the economy by 80-90% share in total investment.

The *Infitah* or opening policy in economy started in 1974 to provide Egypt with some sound economic growth; however, since 1986 Egypt had suffered a drastic fall in growth and macroeconomic imbalances. By the end of 1980s, there was a budget deficit of 17% of GDP and around 15% inflation rate. In 1991, the government introduced policies to stabilize the economy, including the Economic Reform and Structural Adjustment Program designed with the assistance of IMF and World Bank. The main objective of the reforms was to establish a market-oriented economy in which the private sector would play a leading role. Among others, the most challenging agenda was to privatize the public sector enterprises.

Since early 1980s there were a number of privatization initiatives. But the public sector remained a dominant force in the economy constituting about 37% of GDP, and was responsible for about 55% of the industrial production, controlled over 80% of import/export and about 90% of the banking and insurance sectors. Once the macroeconomic stability was achieved, the government needed strengthen signals to the private sector along with deregulation that would attract new and higher level of investment.

The privatization program started in 1991 with the passage of Law 203 which stipulates that a "holding Company" would replace the "organization" under the public sector. The numbers of public sector companies to be privatized were determined as 314, with total assets of LE 104.0 billion and number of employees of about 1.0 million. These companies were assembled under 27 holding companies.

The pace of privatization was slow up to 1993 in order to prepare necessary legislation and regulations. Also socio-economic culture of the country had not been yet ready to accept the concept of privatization. Once the enabling mechanisms were set in place, privatization gained the momentum in the second half of 1990s after a favorable ruling by the constitutional court upholding the government's right to privatize the public sector. Since 1999, privatization has made slow progress for a number of reasons: down turn in the economy and Egyptian stock and capital markets and to some degree the less attractive investment

[1] As of 19 August 2002 the CARANA Corporation's Privatization and Coordination Support Unit (PCSU) concluded this USAID sponsored privatization monitoring project in Egypt

opportunities in the remaining companies in the Law 203 portfolio.

On the fiscal side, privatization has had major impact upon reducing the burden on Government's fiscal resources by not only cutting future losses of the public enterprises (PEs) but also bringing in revenues from the sales.

Regarding the investment environment for the private sector in Egypt at present, the following section is based on information presented by the Ministry of Investment in its website of: http://www.investment.gov.eg/Moi_Portal/en-GB/Investment/]

The Government of Egypt (GOE) is undertaking a series of versatile amendments towards reforming and improving business and investment climate in Egypt. The government strategy is strongly committed to streamlining investment procedures, dismantling bureaucratic obstacles, and liberalizing business. Towards the realization of its goal, the GOE undertook a series of reforms regarding its policies as well as its institutional frameworks to pave the way for an improved investment climate and a more developed business environment in Egypt.

It is indispensable that attracting more Foreign Direct Investment (FDI) is becoming a highly developed profession that requires the existence of appropriate and integrated national as well as regional institutions and structures. Furthermore, FDI attraction unquestionably requires a supportive business environment and a community of qualified and professional people with the skills and knowledge to attract FDI flows within the highly competitive international context.

New set of government policies, investment laws, and guarantees have been introduced with the purpose of fortifying and revitalizing the investment environment in Egypt. On one hand, Egypt's proximity to international markets and the rapidly growing demand for certain industries, locally as well as worldwide, play a vital role in encouraging exports and improving productivity. On the other hand, new investment laws and government regulations have recently eased international trade barriers and allowed for more competition through bringing foreign investment flows into Egypt, as well as increasing competitiveness of Egyptian businesses to meet international standards and compete in the global markets. As a result of international trade agreements, Egypt enjoys a wide range of market access to North America, China, Europe, North Africa and the Middle East, with its central location bridging the three continents, Europe, Asia, and Africa.

As part of the coherent and comprehensive framework set off by the Ministry of Investment, a number of exceptional incentives are being granted to companies in particular for their purchases of stakes in public sector enterprises, and their endeavor for administrative restructuring and financial modernization.

Appendix 5 provides detailed information on the PPP strategy prepared by the Ministry of Investment to attract private sector participation in public works infrastructure projects. The strategy for promoting Public Private Partnership (PPP) and to promote private investment in infrastructure projects is based on a series of economic, financial, legal, and institutional reforms. The proposed strategy for realizing the goals set and to overcome obstacles rest mainly on the three pillars of:

1) Reforming and upgrading the laws governing private investments in infrastructure facilities,
2) Reforming and improving the institutional framework, and
3) Developing a communications strategy.

8.1.2 PPP Existing Laws and Regulations

Under the current governmental framework, the Ministry of Investment is responsible for privatization of state-owned enterprises and also for the application of PPP schemes, while finance itself is the responsibility of the Ministry of Finance. A national committee to make decisions over priority among the projects is composed of Ministries of Planning, Finance, Investment and International Cooperation.

With regard to tax, under the current investment encouragement tax treatment, depending upon the location of the project, 5/10/15 years tax exempts were previously awarded, however, there is no tax exempt anymore after the new tax reform.. The more remote is the location of a project, the longer is the tax exempt period. Upon the new tax law to be enacted in a few months, such investment encouraging tax treatments are to be abolish, but it is regarded giving little impact on the BOT investments because in general a BOT project is supposed to generate loss in the start-up period. BOT law & regulation will be revised shortly in order to integrate Government BOT promotion functions and to establish effective procedures.

Another law on PPP is being prepared by the Ministry of Investment granting concessions to exploiting public infrastructure projects to Egyptian and Foreign investors selected in a competitive, public and transparent way to guarantee choosing the best offers from the technical, financial, economical and environmental aspects.

Based on the proposed PPP Law, the period of the concession is suitable for the nature of the project and the period needed for getting back the invested money is 40 years maximum. The projects should use the most suitable technology from the technical and economical aspects during the whole period of the concession. In addition, taking into consideration the nature of the project and its economy, the authority granting the concession may get a certain percentage of the project's profit that can be used in improving and developing the services of the public utilities.

8.1.3 Financial Policies

During the last two physical years, Ministry of Finance (MOF) has adopted a number of financial programs and polices aimed at restructuring the state public finances. To implement these polices, the following measures have been taken:

- Reforming tariffs and developing new customs processes to serve the national economy,
- Application of the newest tax law on income, profits and payroll that will serve development and investment,
- Resolving deficiencies in the sales tax,
- Tax Revenue Enhancement (Law 147/1984),

- Reforming of governmental procurement, tenders and public auctions,
- Development of State Budget, and
- Formulation of projects for development and modernization.

In order to complete all the procedures taken by MOF to activate the financial performance and implement integrated financial polices, MOF has taken the following procedures:

- Improving the property law, and
- Improving the sales tax.

8.1.4 Actual Performance in Private Sector Participation

Egypt has long experience with BOT projects since a concession agreement was granted to a French company to construct and operate the Suez Canal with a concession period of 99 years after the completion of the canal in 1869. At present, several BOT projects are being implemented in different sectors and new approaches of PPP are being studied to get more involvement of the private sector in developing public work projects that were exclusively implemented by the government. A previous study titled "Public-Private Partnership (PPP) Program for Cairo Urban Toll Expressway Network Development (JICA, May 2006)" (hereinafter; Cairo PPP Study) investigated the status of previous BOT projects as summarized in the following sections.

Under the electricity sector, there are three BOT power plant projects which are currently operational, namely, Sidi Krir 3 and 4 (Note: Sidi Krir 1 and 2 are conventional state projects.), Suez Gulf and Port Said East. For Sidi Krir, Government provided a full supporting package, containing a guaranteed fuel supply with price adjustment mechanism set in place based upon Price Index as well as foreign exchange protection. Because of such comprehensive protection for a private investor, the government believes the private investor can enjoy a return on investment basically risk-free on the US dollar basis. In addition, required finance was secured from local financial institutions, with no interests of introducing international capitals. Judging from this kind of BOT scheme nonsense by the government, Project Nubaria was reverted to a conventional state project.

Under the aviation sector, Marsa Alam Airport is a highly successful BOT project; the investor is a Kuwaiti capital (Khorafi Company). The investor was successfully awarded a 49 year concession while awarded a franchise over neighboring land of 20 million square meters from the Ministry of Tourism. The awarded land was developed by the investor's own funds to a splendid resort, which produced huge profits. Considering it too much to a private investor, the Government has implemented the Sharm El Sheikh Airport Project as a conventional state project as Sharm El Sheikh was already an established resort so it was too apparent that awarding franchise of land in that area would give too much benefit to the private investor. El Alamein Airport Project is now operational as a BOT project. Burg El Arab Airport Project is proceeding as a state own project with JBIC loan. Other projects are either suspended or withdrawn.

Under the Ministry of Transport, maritime BOT projects are presented in Table 8.1.1. All of

the maritime BOT projects in the list are considered successful, in which generally the government constructs the infrastructure while the private investor constructs affiliated facilities and undertakes both tasks of Operation and Management.

Several projects under the road sector were proposed as BOT projects as shown in Table 8.1.2. However, there have been no road BOT projects except Katamia - Ain Sokhna, which is sponsored by the Ministry of Defense. This road was constructed by the National Service Company (Ministry of Defense), which was awarded toll revenues (LE5.0-25.0 per car) and public land. Sohag - Hurghada is regarded as a pilot BOT road project.

Table 8.1.1 BOT Projects under Ministry of Transport – Maritime Sector

Project	Cost (million US$)	Concession Period Years	Status
Petroleum Terminals (Alexandria/Dekheila)	45	30	Operational (2001)
East Port Said Port	481	30	Operational (2004)
North Sokhna Port	176	25	Operational (2002)
Damietta for Liquid Gas Export	1,600	25	Operational (2003)

Source: Cairo PPP Study, May 2006

Table 8.1.2 BOT/PPP Projects under Ministry of Transport - Road Sector

Project	Cost (million LE)	Length (Km)	Contractors	Status
Katamia-Ain Sokhna	300	118	National Service Company	Operational (2004)
Development of Cairo – Alexandria Desert Road	1,750	185	Prep. By GARBLT	Under Study
Construction of Shobra – Benha Road	750	45	Prep. By GARBLT	Under Study
Construction of Toukh – Zagazig Road	750	45	Prep. By GARBLT	Under Study
Construction of Kafr-el-Zayat – Hosh Issa – Alexandria Road	750	110	Prep. By GARBLT	Under Study
Development of Tanta – Shebin Road	200	20	Prep. By GARBLT	Under Study
Development of Cairo Ring Road	1,500	100	Prep. By GARBLT	Under Study
Development of International Coastal Road	1,950	575	Prep. By GARBLT	Under Study

Source: Cairo PPP Study, May 2006 (Updated)

(One sentence was deleted) The government tried to provide investors with rights to develop some public land in order to subsidize toll revenue lower than that of cost recovery basis. However, the government was not able to reach an agreement with related ministries and governmental agencies, especially among ministries of housing, agriculture and defense, with regard to the land which should be provided.

A long lasting argument on the interpretation of BOT Law (Law No.229/1996) was another factor which delayed road BOT projects. The argument was whether upgrading of existing road will be included in the targeted freeways for concession or not. It was clarified by the State Council in 2002 and agreed that road concession can include upgrading of existing roads. Moreover, it took a long time to build a consensus among the Ministry of Transport on the priority routes for BOT project.

As for BOT/PPP projects under the railway sector, several projects were proposed by investors, however, there is no progress and no any further information is available in this regard.

In other sectors, GOE, through the Ministry of Education (MOE), announced in February 2007 a project to construct 300 schools nationwide under PPP schemes. MOE invited the private sector (Egyptian, Arab and foreign investors) to participate in this project as a start to be followed by a project to construct another 600 schools under the same concept of PPP. On the other hand, MOF announced the establishment of a new mechanism to activate PPP projects in different infrastructure sectors such as roads, bridges, hospitals, water treatment and sewage. Now, the private sector is considered by the government not a rival but as a partner in the national development process in order to improve the efficiency in project implementation.

8.1.5 Assessment of PPP Performance

Assessment of the Egyptian experience in recent years by the Ministry of Investment uncovered a number of obstacles to promoting private investment in infrastructure projects. Private involvement in financing and operating infrastructure facilities is blocked by several factors as follows:

(1) Inadequate Legislative System

- Regulations governing the selection of the most qualified investors and best offers are imperfect. There are no evaluation techniques that comply with the financial, technical and operational aspects of these projects. The fundamentals included in the current law governing bids and auctions are not applicable to these projects.
- Some laws, such as the law governing public facilities, include stipulations that contradict contemporary financial and economic fundamentals and, given the nature of these projects and facilities, based on their current situation. In fact, these laws are hindrances to private investments in public facilities and infrastructure projects. The legislators have enacted new laws for private investments in some economic sectors such as electricity, communications and airports. The result has been to create some unjustified and contradictory laws.
- Current Egyptian law does not cover all modes of private involvement, resulting in legal ambiguity. Contradictory legal opinions and advice have been given over the validity of some contracts entered into by the government. This has led to more difficulties in raising finance, adding cost to cover potential legal jeopardy.
- Current laws do not identify the authorities or administrative bodies authorized to make partnership agreements with the private sector.
- Except for the communications and electricity sectors, no controlling or supervisory bodies exist to regulate the establishment and operation of facilities, and to issue licenses that ensure quality and free competition among service providers.
- Current laws lack the objective organization of the rights of the relevant authority and the investor, especially concerning the financial arrangements and the capital

being invested.

- Lack of established legal and regulatory procedures that define the means for enforcement of contracts and the resolution of disputes.
- Lack of adequate regulatory structures to control both technical and economic performance. Regulations of tariffs and other economic factors are undeveloped.

(2) Difficulties related to institutional framework.

In spite of the corrective measures taken by the government, many institutional obstacles confront private investments in infrastructure facilities. The negative impacts of these obstacles have doubled due to the slow structural reform of public facilities. These difficulties can be summarized as follows:

- The absence of a unified strategic vision at the central level to deal with the private sector's involvement in financing and operating infrastructure facilities. There are many institutions responsible for organizing this involvement. Investors are required to obtain several approvals and licenses. These procedures have created contractual complications and prevented the implementation of many projects. Investors received contradicting messages concerning the government stance on private investments in infrastructure facilities.
- Many economic sectors lack the technical, financial and legal experience necessary to offer infrastructure projects to the private sector and organize private participation. These sectors lack strategic planning skills to determine needs and priorities and the ability to judge the social and economic feasibility of these projects.
- The poor economic feasibility and considerable commercial risk involved in operating a number of the offered projects. This has led the private sector to become ill-disposed to the investment in these projects with the consequent of fewer projects that were planned being implemented.

(3) Unfavorable Public Opinion:

Lack of Public awareness concerning the following issues:

- The importance and advantages of private involvement in financing, improving and operating infrastructure facilities and its positive impacts on economic and social development.
- The different forms of the public private partnership in infrastructure and the dominance of the idea that private sector participation is confined to full privatization. This lack of awareness and negativity are not confined to the public but exist in legislative bodies and local councils as well as some government bodies. It is a matter of urgency to correct this situation and motivate the public and institutions to support the road to private investment.

8.2 Private Sector Participation in Infrastructure Projects

8.2.1 The Need for PPP

Public investment has been falling as a share of GDP in many countries. The investment requirements of economic growth and the increase in standards for public services, which citizens expect, have resulted in a significant infrastructure gap in many sectors. Governments need to address the overall size of investment requirements for infrastructure and public services. Public-private Partnership (PPP) is a useful tool for financing public work infrastructure projects in order to reduce the life-cycle of governmental burden, deliver better and less expensive services, contribute to private sector development and to support the national budget on the long-term.

PPP Experience in UK

UK is one of the pioneer countries in applying PPP schemes in developing public work infrastructure projects. PPP experience in the UK has demonstrated the following satisfactory results:

- A report commissioned by the Treasury Taskforce found that the average percentage estimated saving by PPP projects against the Public Sector was 17%,
- About 89% of projects were delivered on time or earlier, and
- 77% of public sector managers stated that their project was meeting their initial expectations.

8.2.2 Objectives of Introducing PPP

PPP projects are structured to be implemented under work and risk sharing analysis between the public and private sectors. The government intends to utilize the private sector's funds as much as possible by allocating appropriate risks to the private sector and by developing optimal support for finance and implementation to attract the private sector participation in the most efficient way in the long term. The objective of achieving improved value for money, or improved services for the same amount of money as the public sector would spend, is often stated as the prime objective. But other objectives may also be important. These can include the desire to provide increased infrastructure provision and services within imposed budgetary constraints by utilizing private sources of finance. Other objectives of the government to introduce PPP include:

- Utilize the private sector's operation, maintenance, and management skills as much as possible for the effective operation of the project, and achieve reduction in life cycle cost under an appropriate monitoring by the Government or an independent regulator;
- Utilize the private sector funds as much as possible to reduce governmental financing burden for infrastructure projects, and
- Introduce competition and provide better services for users.

8.2.3 PPP Structure

One major factor of consideration is whether public sector's involvement and private sector's involvement are implemented as separate projects or not. These options are categorized under two types, Separated Type and Integrated Type. "Separated Type" will include public and private sector participation for the project development but roles of each sector can be separated as different projects. "Integrated Type" will include public and private sector participation as an integral part of the project development and roles of each sector cannot be separated as different projects.

Advantage of separated development:

- Traditional procedure will be used to some extent and shorten the development period.

Disadvantage of separated development:

- It will be difficult to coordinate between the public and the private sectors. Clear division of role and responsibilities will be required.
- It will not be able to leverage the use of government fund most effectively unless coordination among projects will be ensured.

Advantage of integrated development

- One party or consortium can be in charge of design, construction, operation and maintenance of the PPP facility and provide services effectively. Designing and constructing the facility from an operator's point of view will enable effective operation and maintenance structure.
- It will leverage the use of government fund effectively.

Disadvantage of integrated development

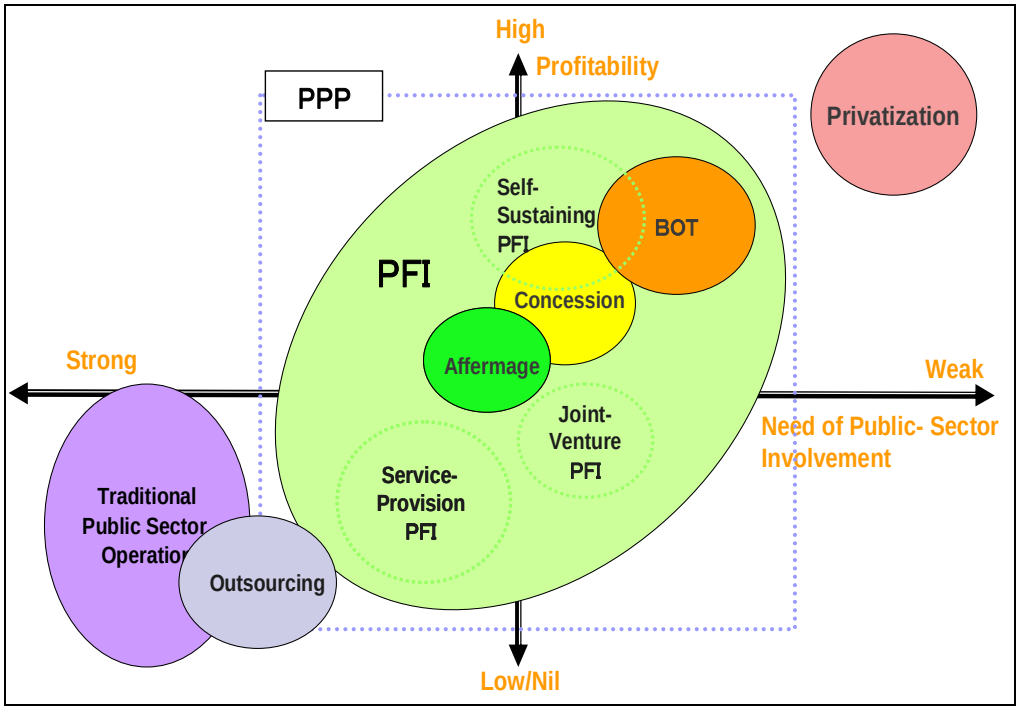
- It will be required to consider procedure for implementation among related parties.

Figure 8.2.1 shows a spatial allocation of main PPP schemes that are located between the traditional governmental procured projects under the public sector, which are mostly subsidized or non-profitable, and private-sector projects which look for high profitability.

As shown in the figure and in Table 8.2.1, there are different options that can be structured under PPP schemes. Under the process of all options, it should be noticed that planning and regulating the PPP projects are under the Government's responsibility. In addition, the land acquisition issue as a social and sensitive matter is usually implemented under the Governmental responsibility, except for few cases under BOT schemes where the private sector may handle all financial expenses of the project including land acquisition. Other major activities, such as project design, construction, maintenance, transport demand management, revenue collection, operation and management, are shared between both the Government and private sector.

Optimum work sharing and risk allocation with strong political commitment are the key factors toward the successful implementation of PPP schemes. Table 8.2.2 presents a general presentation for the widely applied risk allocation between both public and private sectors in the two types of traditional public work and PPP schemes. The political and legislative risk

that includes changes in associated laws and regulations is the responsibility of the government. In most traditional public work projects, maintenance is outsourced to the private sector while operation may be implemented through the private sector that may be affected by inflation risk.



Source: Cairo PPP Study

Figure 8.2.1 PPP Structure

Table 8.2.1 A Simplified Comparison between Different PPP Options

PPP Scheme	Design / Construction	Operation / Maintenance	Revenue Collection	Transport Demand Management	Design Management	Land Acquisition	Planning and Regulating
BOT							
OBFO							
Operation Contract Out							
Outsourcing							
Corridor Management							
Public Works							

Private Sector Government

Source: JICA Study Team

Table 8.2.2 Risk Allocation

	Traditional Public Work			PPP Scheme		
Risk	Public	Private	Shared	Public	Private	Shared
Political and Legislative	✓			✓		
Design	✓				✓	
Construction	✓				✓	
Technology & Integration	✓				✓	
Approval Process	✓			✓		
Customer Acceptance	✓				✓	
Right-of-Way Acquisition	✓			✓		
Operation & Maintenance		✓			✓	
Traffic & Revenue	✓					✓
Finance	✓					✓
Force Majeure	✓			✓		
Inflation			✓			✓

Source: JICA Study Team

On the other hand, the private sector bears more risks and responsibilities under PPP schemes. Excess risk transfer to the private sector and weak political commitment are the two main factors for PPPs failure.

8.3 Railway Logistics Projects and Private Sector Finance

8.3.1 Basic Concept

As a result of investigating the existing logistics system in Egypt and establishing a development plan that can cope with future requirements, it is concluded that the main development strategy is to give high priority to railway and inland river freight transport and to apply measures that will reduce the nearly full dependence on road freight transport in order to improve the efficiency of an inter-modal freight transport system on more economic environmental-friendly modes.

For the prioritization of projects required to be urgently implemented under an action plan (short-term plan) in order to accelerate improvements in the multi-modal logistics system in Egypt and east Mediterranean, the following points of development policy are of major importance:

- Upgrading the existing railway network and adding new railway sections and access links to industrial areas to provide an efficient freight railway network is expected to bring benefits and efficiency to the logistics of freight transport as a whole. Efficient freight transport system, especially between ports and industrial areas, is an important issue that should take high priority. This is an environmental friendly transport mode that can be utilized under a cost-competitive level when compared with other modes.
- Logistics centers should be established in different strategic locations in Egypt to serve industrial areas for export promotion. Such centers can be considered as multi-function inland dry ports that include customs clearance activities as well as storage and distribution center facilities.
- Improving facilities and river ports of inland waterway sector provides low transport costs and environmental-friendly freight transport mode.
- Reducing the full dependence on road transport for freight through improvements in other transport sectors of railway and inland waterways in addition to applying new regulations and management procedures to control the demand on the road transport network and to improve safety on roads.

To achieve each of the above mentioned policies, many measures and new regulations should be applied in each sector and in an integrated approach. Encouraging the private sector to participate in projects that will improve the nationwide logistics system in all involved sectors is an important measure that requires strong political commitment and balanced distribution of tasks and risks between the government and private sector.

Based on the above policies, two projects are selected as pilot projects for private sector participation in financing logistics projects for the development of efficient freight railway lines and logistics centers with integrated functions. The first project deals with required urgent requirement of developing railway freight transport network with direct accessibility to all major industrial areas. This project requires a strong partnership between the government, represented by ENR, and the private sector to establish a Freight Transport Company under the holding company law. The second project is to establish a pilot Logistics Center at the

industrial area of 6th of October City. This project can be implemented completely by the private sector under a BOT scheme.

8.3.2 National Railways and Private Sector

ENR (Egyptian National Railways) was the *sole* authority in-charge of constructing and operating all railways in Egypt based on the Law 152/180. In March 2006, the parliament agreed to delete the word *"sole"* to allow other entities to participate in the activities previously done exclusively by ENR. Now, the private sector has the right to participate in the railway sector, however, there are no private railway activities yet. ENR received some proposals from the private sector but the low charges and revenue decided by the government was the obstacle that faced many investors and resulted in low financial viability for many projects.

Table 8.1.3 under this chapter presents a list of projects that were proposed, few years ago, to be implemented under BOT schemes. Till now, there is still no progress, however, the new policies and vision of MOT gives more signals toward initiating and promoting BOT projects under the railway sector. As for PPP projects in the railway sector, there is no any progress in this regard.

8.3.3 ENR between BOT and PPP

ENR received several proposals from the private sector for BOT projects to construct and operate new railway lines and facilities. With the huge budgets required and expected low revenue (due to low fares decided by the government for socioeconomic considerations), no progress is shown in BOT railway projects as they are still under consideration without committed implementation plans to materialize such projects. On the other hand, PPP projects are not welcomed yet by ENR, apparently due to legislative considerations and lack of experience in handling PPP projects.

PPP projects are recommended to be considered and implemented in the near future by ENR for the following main reasons:

- The term "PPP" covers a range of different structures where the private sector delivers a public project or service. Concession-based transport and utilities projects have existed in EU member countries for many years, particularly in France, Italy and Spain, with revenues derived from payments by end-users, e.g. road tolls. The UK's Private Finance Initiative ("PFI") expanded this concept to a broader range of public infrastructure and combined it with the introduction of services being paid for by the public sector rather than the end-users.
- Under traditional public sector approach, the public sector designs, builds, operates, and maintains infrastructure, and sets level of quantity and standards of service quality, while under privatization approach, the private sector conducts all of these aspects in place of the public sector. Under PPP approach, the public sector is ultimately accountable for service provisions, although the private sector designs, builds, (and sometimes operates and maintains) infrastructure. PPP ensures provision of services to general public, but at lower cost and better quality by the use of private-sector management skills and finance

capabilities

- ENR has huge existing assets that are not operated in full capacity. Providing more efficient transport services by the private sector on existing facilities will generate revenues without sharing in more expenses for the construction of new facilities.
- In Egypt, only ENR has the long experience of operating and maintained railway lines all over the country. Integrating this experience with the experience of business-oriented private sector will generate benefits for both sides and for the national economy as well.
- With the new approach of dividing ENR into 5 independent economic units, applying PPP schemes will increase business opportunities for such units by incorporating applicable private sector technologies.

8.3.4 Foreign Experience of Private Role in Railways

(1) Experience of Private Role in Japan's Railways

During the late 1980s, the government-owned Japan National Railways (JNR) undergone comprehensive privatization scheme that includes the following major tasks:

- Abolition of JNR Act in which JNR was prohibited to do other related business. The new JR (Japan Railway) companies are allowed to do other business.
- Abolition of JRS (Japan railway Standards) that was old and stringent resulting in higher costs and fettered technical advancement. The new JR companied practiced quick introduction of new technologies of "Digital Revolution" and improvement measures of safety and reliability with a dramatic reduction in transport cost.

During the 1950s, Japan's postwar transport market was virtually monopolized by the railways, representing 52% of freight and 92% passenger transport. At that time, roads in Japan were generally unpaved and narrow. However, the booming economy increased overall demand. With improvements in roads and increasing demand of cars, the railway's monopoly collapsed and by 1970s, its share was only 18% and 49% of freight and passenger markets. By 1980, the railway's share of domestic freight was just 8% and had even fallen to only 40% of the passenger market. Despite the mounting problems, political pressures forced the JNR to continue making huge investments in infrastructure including new Shinkansen (bullet-train) financed by loans.

The division and privatization of JNR was first proposed in 1982. The proposal recommended privatization and dividing JNR into six regional passenger railway companies (the JRs) and one freight company (JR Freight) and a number of other companies in the information, telecommunications and research & development fields. The JRs operating balances soon improved dramatically compared to the JNR days. The good results were due to four principal factors:

a) The steady growth in transport demand resulting from economic boom at the time of privatization,

b) The release from huge burden of the old JNR debt,

c) The positive business efforts of the JRs themselves, and

d) The reduced labour cost.

The booming economy was lucky for the JRs, but the subsequent serious depression has made it impossible to sell the land held by railway companies, delaying the debt redemption. This remains a serious issue and the current debt of the JRs is almost equivalent to about 5% of the total national debt.

(2) Experience of Private Role in UK's Railways

The British railway is the oldest in the world, and it had been starved of investment for decades when it was privatized in 1995-97. It had already been rationalized in the 1950s and 1960s, with many routes closed and steam traction replaced by diesel and electrification.

The privatization model selected was extremely complex that involved splitting the British Railway (the public sector owner/operator of national railway network) into over 100 private companies. These included passenger and freight train operating companies, contractors, consultants, equipment suppliers, and one owner/operator of the fixed railway infrastructure (but not the rolling stock), namely Railtrack.

Following privatization, the industry experienced unexpected demand growth from both passenger and freight customers. On the other hand, some problems arose, including the increasing need for public subsidy, increasing unit costs, and poor delivery of infrastructure improvements. This was because Railtrack failed to grasp that its core function was as an engineering and infrastructure operating company, and had allowed the skill and experience vital to its success to fall into the hands of its suppliers. In the meantime, unexpectedly increasing demand for engineering services was causing the market to overheat. The government is currently implementing further structural changes.

(3) Experience of Private Role in India's Railways

In 2006, the Ministry of Railways in India organized a conference on "Public-Private Partnership (PPP) in Indian Railways" that deliberated on new formats for PPP in Indian Railways, such as PPP for rolling stock, managing and building freight corridors and freight terminals, and the modernization of Indian Railways. The Minister announced that he is against blanket privatization of the railway system but the private sector should be encouraged to participate with the railways in the development of its non-core activities.

Under a New Container Train Policy wherein it allows private operators to obtain license for operating container trains on Indian Railway Network, India has now several private cargo train operators for rail container services. Such operators have the vision of providing complete logistics solutions to all customers in the field of container movement operation, providing value-added seamless, multimodal high-tech solutions, and adopting evolving business needs in containerized train movement operations. The private sector operators have also established strategic alliance with warehousing corporations in the

area of logistics and supply-chain, particularly for container train operations serving both export-import and domestic markets.

The new policy has opened up all container transportation routes simultaneously and it will allow the entry of even companies lacking any prior experience in the container business. Besides resulting in better efficiency and reduction in cost for the movement of goods, the policy will definitely cause a surge in container traffic with an annual growth rate of almost 15%. Over the next 5 years, the volume of container traffic is expected to double from 55 to 110 million tones.

8.4 Freight Railway Network under PPP Scheme

8.4.1 Conceptual Network

The general concept of developing a freight railway network (Container Corridors) that can provide direct containers' transport between all major ports and industrial zones is divided into several sections as presented schematically in Figure 8.4.1. Some of the sections in the network exist, without direct access to industrial areas, and some others are proposed as new links. In addition, it should be noticed that some of the existing sections are single-track and others are double-track. Accessibility to the inside of each Logistics Center, to be newly provided in industrial cities, is a must for efficient operation with lowest transport cost. ENR has plans for new railway lines connecting the existing network to almost all the industrial zones; however, ENR plans are oriented first to passenger transport. Therefore, some modifications are recommended to be applied in order to provide efficient freight (container) corridors as will be explained in the following sections.

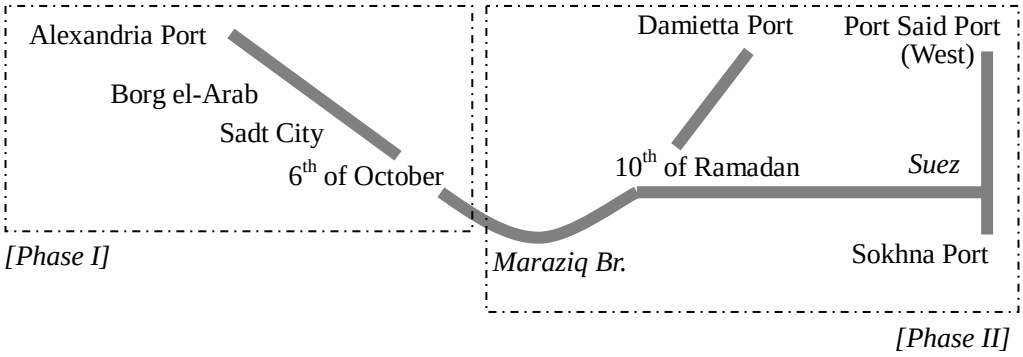


Figure 8.4.1 Conceptual Freight-Railway Network

8.4.2 Proposed PPP Scheme

In order to get an optimum PPP scheme that can be successfully applied, a detailed feasibility study is required to investigate the following main tasks:

- Preliminary design and cost estimate of required access links (on phasing base),
- Freight demand forecast that will be handled,
- Institutional and legislative framework for implementing entity (PPP Company),
- Formulation of optimum PPP Scheme,
- Cash-flow analysis for different options and sensitivity analysis,
- Factors for effective utilization of PPP scheme, and
- Implementation plan.

Under this proposed PPP Scheme, the role of the private sector requires the establishment of a

PPP Company to handle some of the required tasks, while the government should handle the remaining tasks as explained in the following sections. Under the work-sharing process of PPP programs, each party should handle tasks that can carry out more efficiently than the other party.

(1) Freight Transport PPP Company

To efficiently implement and manage this large-scale project, a Freight Transport Company is proposed to be established as a completely private entity or as a holding company under the Ministry of Investment based on the existing legislation system.

As a holding company, under the Holding Company Law, the newly established Freight Unit of ENR may acquire 51% or more of the shares while the private sector will acquire 49% or less. Such holding company will have, mainly, the advantage of the governmental guarantee for foreign loans with lower interest rates compared with loans from commercial banks for private companies. In addition, the concept of a holding company as a transitional company for future privatization, may attract more private investments that usually prefer short-term investments rather than long-term.

(2) Private Sector Participation

To develop the freight transport system based on the concept of private sector participation under PPP in the short-term plan on the railway network, especially for movement of containers between ports and industrial areas, the proposed Freight Transport Company, which is either 100% private company or a holding company, may handle the following tasks:

- To finance and construct required railway access links to logistics centers at industrial areas and missing sections in the freight network,
- To provide freight wagons that will be used in freight transport by the company,
- To operate freight transport, mainly containers, between ports and logistics centers without paying transport charges to ENR for a concession period (or ton-km basis), that can be calculated based on the costs financed by the company and the transport charge of freight on ENR network, and
- To provide handling facilities at all trip origins and destinations to load and unload containers and other cargo, if any.

(3) Public Sector Participation

The Freight Unit under ENR may participate with the private sector in establishing a holding company for freight transport. Under this option, it will bear its portion in financing the tasks presented under the private sector participation.

In addition, other tasks that are to be handled by the government, which is more experienced in such field for the smooth and efficient operation of the project, may include the followings:

- Land Acquisition: that will be required to construct the assess links and missing sections in the ENR network for efficient freight transport,

- Rolling Stock (Locomotives): that may be additionally required for the efficient operation of freight transport,
- Maintenance and Operation: of the newly constructed railway lines and movement of freight trains, and
- Signalization and Communication: for the smooth and safe operation of the freight trains on the newly constructed railway lines.

(4) Outline of PPP Scheme

Figure 8.4.4 presents the outline and major components of the proposed PPP scheme that clarifies the tasks and revenues gained by each of the government and private sector. As explained before, a PPP company is proposed to handle tasks designated for the private sector based on its experience and level of performance.

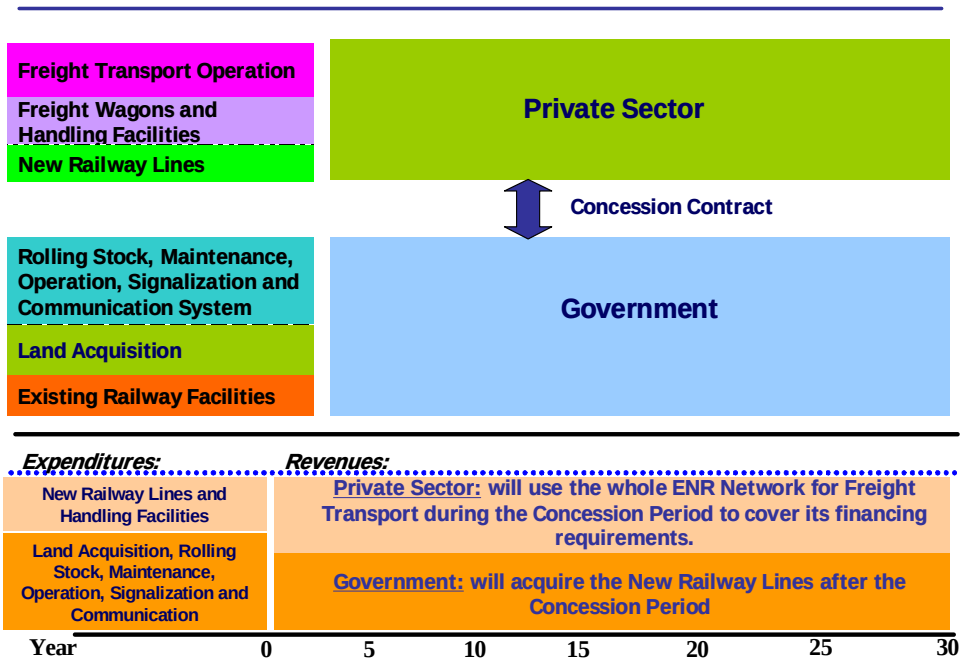


Figure 8.4.4 PPP Scheme and Expenditures/Revenues

Under the proposed scheme, the PPP Company is expected to invest in constructing the new missing railway sections and access links, and in providing freight wagons for containers and required handling facilities at locations require such facilities. Operation of all freight transport tasks will be handled by the PPP Company including marketing research and related activities to attract more customers and to open more business opportunities.

The PPP Company will use the ENR Network for freight transport free-of-charge for a contracted concession period or on ton-km basis that can be estimated through cash-flow analysis of the project. After completion of the contract between ENR and the PPP Company, ownership of new assets provided by the PPP Company will be transferred to ENR. The PPP Company can continue in the business of freight transport operation, paying freight transport charge to ENR.

The government, represented by ENR, will participate in this freight transport project through its existing assets of the network, rolling stock (locomotives), and signalization and communication systems. ENR should handle also the issue of land acquisition of newly constructed railway sections and access links. Operation of the freight railway network is also under the responsibility of ENR.

Investment compositions of the private and government sectors are determined in general at the level that the private sector can guarantee the financial viability of their investment (recovery of investment amount and return on investment), while the government can perform its duty to provide a transport infrastructure for the people's welfare with less burden of financial expenditure than the ordinal infrastructure projects of the Government itself require. Private investors in general expect to earn the investment return of 15% or more within ten years, and expect the government to burden 25 – 50% according to many PPP experiences in the world: however it is dependent on the economic conditions. Usually both sectors have a hot and long discussion on appropriate level of return on investment of the private sector, and the agreement had not been opened to the public.

(5) Risk Sharing between Public and Private Sectors

Appendix 5, Section 2 provides a detailed risk sharing analysis for the lower categories of expected risks that will be included in the signed contract between the government and PPP Co. Major expected risks include:

- Political and legislative risk,
- Economic and financial risk,
- Design risk,
- Land acquisition risk,
- Construction risk,
- Freight transport demand and revenue risk, and
- Operation and maintenance risk.

The Appendix 5, Section 2 includes also the steps and measures that may mitigate or minimize such risks for both of the public and private sectors. With the private sector's bankers are evaluating the cost of money, they will assess the risks and price accordingly. Risks that are unclear, or which are not under the control of the private sector, are disliked and will either increase the investment burden or possibly derail the deal.

The "Legislative Guide on Privately Financed Infrastructure Projects" published by the United Nations Commission on International Trade Law (UNCITRAL) defines the main risks as noted below.

Force Majeure: The parties face the risk that the project may be disrupted by unforeseen or extraordinary events outside their control, which may be of a physical nature, such as natural disasters—floods, storms or earthquakes—or the result of human action, such as war, riots or terrorist attacks. Such unforeseen or extraordinary events may cause a

temporary interruption of the project execution or the operation of the facility, resulting in construction delay, loss of revenue and other losses. Severe events may cause physical damage to the facility or even destruction beyond repair.

Political Risk: The project company and the lenders face the risk that the project execution may be negatively affected by acts of the contracting authority, another agency of the government or the host country's legislature. Such risks are often referred to as "political risks" and may be divided into three broad categories: "traditional" political risks (for example, nationalization of the project company's assets or imposition of new taxes that jeopardize the project company's prospects of debt repayment and investment recovery); "regulatory" risks (for example, introduction of more stringent standards for service delivery or opening of a sector to competition) and "quasi-commercial" risks (for example, breaches by the contracting authority or project interruptions due to changes in the contracting authority's priorities and plans). In addition to political risks originating from the host country, some political risks may result from acts of a foreign government, such as blockades, embargoes or boycotts imposed by the governments of the investors' home countries.

Construction and Operation Risks: The main risks that the parties may face during the construction phase are the risks that the facility cannot be completed at all or cannot be delivered according to the agreed schedule (completion risk); that the construction cost exceeds the original estimates (construction cost overrun risk); or that the facility fails to meet performance criteria at completion (performance risk). Similarly, during the operational phase the parties may face the risk that the completed facility cannot be effectively operated or maintained to produce the expected capacity, output or efficiency (performance risk); or that the operating costs exceed the original estimates (operation cost overrun). It should be noted that construction and operation risks do not affect only the private sector.

Commercial Risks (freight transport demand and revenue risks): "Commercial risks" relate to the possibility that the project cannot generate the expected revenue because of changes in market prices or demand for the goods or services it generates. Both of these forms of commercial risk may seriously impair the project company's capacity to service its debt and may compromise the financial viability of the project.

Exchange rate and other financial risks: Exchange rate risk relates to the possibility that changes in foreign exchange rates alter the exchange value of cash flows from the project. Prices and user fees charged to local users or customers will most likely be paid for in local currency, while the loan facilities and sometimes also equipment or fuel costs may be denominated in foreign currency. In addition to exchange rate fluctuations, the project company may face the risk that foreign exchange control or lowering reserves of foreign exchange may limit the availability in the local market of foreign currency needed by the project company to service its debt or repay the original investment. Another risk faced by the project company concerns the possibility that interest rates may rise, forcing the project to bear additional financing costs. This risk may be significant in infrastructure projects given the usually large sums borrowed and the long duration of projects, with

some loans extending over a period of several years.

(6) Role of PPP Contract

Under the proposed PPP scheme for the Project, the PPP Company would sign a single contract with the Government (the "PPP Contract") for the design, build, finance, and operation of the Project for the duration of the PPP Contract or for a fixed amount of ton-km of freight transport. The PPP Company would be responsible for:

- Design and construction of the designated railway sections,
- Finance, via a mix of equity and funding by debt or bond issues, the construction of all facilities,
- Operate and maintain all facilities for the life of the PPP Contract, and
- Return the facilities to Government with an agreed residual life at the end of the PPP Contract.

The government would sign the PPP Contract with PPP Co. providing them with the necessary rights to design, build, finance, and operate the Project. Government would be responsible for:

- Purchasing the land necessary for the Project, and providing rights of access to the PPP Co. (likely through a long-term lease),
- Providing, via budgetary allocation and potentially via ODA loans and or bond issuance, other obligations to be covered by the government such as roller stock, signalization, and
- Providing a concession period or a fixed amount of ton-km of freight transport free-of-charge on the whole ENR network that covers costs shouldered by the PPP Co. to develop the freight corridor, based on results of future freight forecast and cash-flow analysis.

(7) Procurement Process

As the proposed PPP scheme will entail the Government to enter into a long-term PPP Contract with the PPP Co., it is critical the procurement process ensures Government is contracting with qualified consortia that are capable of delivering the PPP Contract for its duration. Therefore, a two-stage procedure procurement using a Pre-Qualification ("PQ") and an Invitation to Tender ("ITT") stage is commonly used in PPP procurement.

a) Pre-Qualification (PQ)

The purpose of the PQ stage is to shortlist 3 or 4 qualified consortia (in PPP, generally the individual firms together form a Special Purpose Vehicle, or SPV, that will undertake the PPP Contract) that have necessary experience, expertise and financial capability to provide the requirements outlined in the Tender documents and the PPP Contract. The PQ would seek to:

- Evaluate the Consortia's experience and expertise in similar projects,
- Evaluate the financial capability of firms, both individually and as a consortium,

to undertake work of this scope, and

- Evaluate the ability of consortia to raise necessary debt and equity for the Project.

Only those consortia who meet the minimum PQ criteria would be allowed to progress to the ITT stage.

b) Invitation to Tender (ITT)

The ITT Stage will require Bidders to submit a detailed Technical bid including:

- Well-developed designs for main road, slip roads, drainage, signage and toll collection facilities, and
- Construction, Operation and Maintenance methodologies and management plans. These plans will outline the Bidders approach to provision of the required assets and services and will become contractual at commercial close.

Bidders will be required to provide a very detailed financial model providing:

- Financing commitments from banks and equity provider,
- Detailed breakdown of all costs,
- Detailed lifecycle and Operation and Maintenance costs, and
- All inflation and financing assumptions.

8.5 Logistics Center (LC) Development under BOT Scheme

Logistics centers can be considered, in general, as inland points for freight handling and customs clearance. Accessibility to such centers can be acquired by roads, railways and inland river transport with the ability to move in and out under costumes' bonded procedures. The centers are more advanced version of the so called Inland Clearance Depot (ICD) or Dry Port (DP) and should have a secured place to store un-cleared freight and consolidation for export freight. They function also as regional distribution centers with direct access to market for small and medium enterprises.

The proposed freight railway line from Alexandria Port is planned to have an access link that terminates at proposed Logistics Center at the industrial area of 6th of October City (and other industrial areas as well). At present, there is SOSDI (6th of October Storage & Distribution Co. SAE) functioning as Dry Port with customs clearance and storage facilities. SOSDI has limited space with no room for expansion as it is squeezed between factories. It is not yet fully computerized except for temporarily declared customs clearance process. In addition, SOSDI is not directly accessed by railway as Wahat (Oasis) Line, with a station called "6th of October" or "Km 48", is located on the other side of the nearby Oasis Highway. SOSDI、under its present conditions, will not efficiently fulfill the assumed functions of an integrated Logistics Center for the industrial area of 6th of October City.

There are the two options of either establishing a new LC in 6th of October City or relocating SOSDI to the outskirts of the industrial area so it can be easily and directly connected to the railway access link with the possibility of future land expansion of the center.

During the last few decades, general depots are being implemented in different locations in Egypt either by large-sized companies for their exclusive use or by newly established specialized companies for the general use of medium and small-sized companies. Recently, some studies were curried out in Egypt to develop depots and dry ports, by proposing their functions and locations, in order to enhance the nationwide logistics system and to provide better and efficient movement for freight.

8.5.1 Legislative Issues

The Inland and Dry Ports Authority was established in 2004 by adding Dry Ports to the previously established Inland Ports General Authority under the Ministry of Transport. It was established based on the Presidential Decree No. 349 of 1996. It was amended to add Dry Ports by Presidential Decree No. 3005 of 2004, by replacing some items in the 1996 decree. In addition to the identified inland ports at borders with neighboring countries, the authority will manage and develop any other inland or dry ports that will be established by a presidential decree. At present, however, there is no dry port officially supervised and managed by the Inland and Dry Ports Authority. All the existing, what so called dry ports, are general depots with customs clearance services provided by the Ministry of Finance.

To legalize the establishment of dry ports, as sea ports not as depots, in order to efficiently fulfill their assumed functions, the presently drafted Unified Transportation Law includes a special section on the establishment and functions of dry ports to have similar tasks and

provide similar services as sea ports. On the other hand, the new Customs Law will include dry ports as facilities that provide customs clearance services for export and import freight the same as services provided at sea ports and air ports.

In the near future, the establishment of a dry port that includes customs clearance services will require an approval by the Ministry of Transport as a new dry port to be managed by the Inland and Dry Ports Authority. In addition, and for the customs clearance procedures, another approval from the Customs Authority under the Ministry of Finance should be obtained.

8.5.2 Vision of Inland and Dry Ports Authority (IDPA)

The inland ports are managed and supervised by the Inland and Dry Ports Authority since its establishment 1996. Tasks regarding the dry ports, which are newly introduced under the authority, are still not yet settled as many legislative issues are being investigated and prepared. The authority's vision regarding the dry ports can be summarized as in the following sections.

(1) Present Legislation and Planning Tasks

a) To establish the legislative system for dry ports as public utilities and allowing the private sector to participate in building and operating dry ports,

b) To review previous studies on dry ports and their locations,

c) To carry out marketing process with governorates explaining dry ports functions and importance for an efficient and economic logistics system so IDPA can acquire land (free-of-charge) for Dry Ports, and

d) To coordinate with other agencies under MOT (such as GARBLT, ENR) for optimum locations with direct accessibility to roads and railways.

(2) Expected Implementation Process:

a) To acquire governorate land to one or more of the holding companies under Ministry of Investment, such as "Port Said Container and Handling Co.", that can develop dry ports, and

b) To attract private sector that can participate in the development of dry ports, after preparing the required legalization for treating dry docs in same way as sea ports.

(3) Benefits of transferring Existing Depots into Dry Ports:

Existing depots are working now under the supervision of only one authority which is the Customs Authority (MOF). If transferred into Dry Ports, they will be working under two authorities by adding the Inland and Dry Ports Authority. However, the following benefits are expected:

a) As a Dry Port, it will be internationally authorized as an origin or destination port so its containers will not be opened at the customs of sea ports.

b) The responsibility of the sea-transport company ends at the opening point of containers (at sea ports at present), so this responsibility will be extended till the Dry Ports.

c) Savings in time and efforts for the procedures required to transfer containers from

sea ports to dry ports, as this task will be done automatically.

d) With the increase in demand, value-added services and industries can be established to provide more services to users of Dry Ports.

8.5.3 Functions of LC

Chapter 5 provides information on the concept, facilities of logistics centers (LC) in general in addition to assessment of the existing dry ports in Egypt. Based on the international standards and experience in different countries, the functions of LC are established based on the need for value-added logistics (VAL) services in addition to its basic functions. Basic functions include transport, storage, customs clearance and delivery, while VAL activities may include:

- Receiving goods, breaking shipments, preparing for shipment, returning empty packaging,
- Simple storage, distribution, order picking,
- Localizing and customizing, adding parts and manuals,
- Assembly, repair, reverse logistics,
- Quality control, testing of products,
- Installing and instruction, and
- Product training on customer' premises.

In Japan, the use of value-added service facilities has been on the rapid increase, featuring a prominent and prevalent development pattern. Beginning in the late 1970s, when the Port Island was developed first in the Port of Kobe, the development of logistics centers spread widely in other countries in the ESCAP (Economic and Social Development in Asia and the Pacific) region. Since the mid 1980s, China have constructed logistics centers behind port areas due to the increasing demands for international logistics sites, which conventional ports had difficulties coping with.

Although the level of services provided and the size of logistics centers may differ among countries in the ESCAP region, there are recent signs that this trend is gaining more and more momentum. Table 8.5.1 compares major logistics centers and activities performed at logistics centers in selected economies of the ESCAP region, taking into consideration that customs clearance is performed at all centers.

Table 8.5.1 Major Logistics Centers in ESCAP Region

Economies		Major Functions	
Singapore		Storage, processing, assembly, classifications, consolidation, labeling, transhipment, packaging, inspection, etc. [Manufacturing is partially allowed]	
China	Main Land China	Manufacturing, storage, processing, assembly, consolidation, labeling, packaging, exhibition, sampling. Export and import, intermediate trade, finance and logistics.	
	Hong Kong	As a free port, all functions are allowed, including manufacturing, storage, processing, assembly, classification, exhibition, sampling and transhipment.	
	Taiwan	Export Processing Area	Manufacturing, processing, assembly, packaging and labeling,
		Science Industrial Area	Research and Development, Manufacturing support and education for high-tech products.
		Special Area	Trade, warehousing and transport for building international logistics centre in Asia Pacific Region.
Japan		Foreign Access Zone	Storage, classification, inspection, testing, processing, assembly, labeling, packaging and exhibition of imported goods.
		Free Trade Zone	Manufacturing, assembly, processing, storage, inspection, testing, transformation, packaging, labeling, export and exhibition.
Korea		Material handling, storage, exhibition, distribution, processing, repair and other international logistics activities.	

Source: Korea Maritime Institute.

8.5.4 6th of October LC

The proposed LC at the industrial area of 6th of October City is recommended to be established in the short-term plan either as expanded version of the existing dry port of SOSDI, after relocating it, or as a completely new center that can be established under BOT scheme. It should have the following functions at its initial stage. Functions may increase with future increase in demand and activities.

Proposed Functions of 6th of October LC:

- Customs clearance, inspection, storage, classification, consolidation, assembly, transport, door-to- door services, export and import.

Proposed Location of 6th of October LC:

- The LC should have direct access to both main roads and freight railway access link, with available space that covers all the functions' needs with possible future expansion. It can be located at the north-western outskirts of the industrial area as a part of the northern expansions near the green belt.
- Based on the planned freight corridor, the LC should be directly accessed to both the railway northern link for freight coming from Alexandria, and also to the railway Oasis Line for freight coming from ports and industrial areas to the east of the Nile River through Maraziq Bridge.

Preliminary Information on Project Implementation:

A detailed feasibility study is required to investigate the economic and financial viability of the LC. This LC is recommended to be completely constructed and operated by the private sector which has experience in all required activities. From the legislation point of view it requires two approvals from:

- Inland and Dry Ports Authority, Ministry of Transport, and
- Customs Authority, Ministry of Finance.

The two authorities will supervise the LC activities to assure its efficiency and secure its operational process.

Expected major cost items are those of:

- Land,
- Administration Buildings,
- Warehouses,
- Storage Facilities,
- Handling Equipment, and
- Other Equipment.

In case of applying BOT or PPP schemes, arrangements may be done to provide the required land through the Inland and Dry Ports Authority.

8.5.5 Financial Issues

(1) Initial Capital Provision

An LC may be funded totally by the public sector or totally by the private sector or by a combination of both. The advantages and disadvantages of various combinations are analyzed below.

a) Total public sector funding

With this option, development funds would be provided through a public sector organization such as the Inland and Dry Ports Authority under MOT. The government would retain direct control over operations, revenues and transport modes. Though efficiency of the LC may be restricted under such scheme, it could offer greater equality in treatment to all users, and more equitable distribution of freight among various modes within a centrally planned transport policy.

Theoretically, it may have the advantages of minimizing the chances of malpractice, such as profiteering, unreasonable tariffs, discrimination among user agencies, etc. Disadvantages may be related to the experience of government functioning against private sector business practices. In addition, it may be difficult to allocate sufficient funds through the public sector depending on prevailing national priorities.

b) Total private sector funding

The development of container handling facilities in the least developed countries of Southern Africa indicates a predominance of private sector investment at present. Under this option, the greatest advantage is the mobilization of private resources in the national transport infrastructure. All the direct benefits flowing to the national economy through such private investments makes it an attractive proposition. Private management can sometimes be more flexible and responsive to trade, particularly as concerns changes in tariff structures, quick response to altered pattern of operations is expected.

c) Joint public and private funding

Here, the public sector provides some facilities, for example land, railhead and main container hoists, while the private-sector provides other facilities. The provision of capital intensive equipment can be done by the public-sector as they represent a longer term investment than other site facilities. However, there is the danger that other facilities will be provided with no real development and management plans.

(2) Marketing Philosophy

Logistics centers, as well as dry ports, in developing countries often form part of transport development that are centrally planned with the main objective of speedily and economically facilitating the flow of freight to suit the requirements of customers. Such facilities become ineffective if the targeted freight throughputs do not materialize or if the transport infrastructure is unsatisfactory. The door-to- door transport requires integration of all transport sectors, and a weakness in any link affects the entire chain of activities.

Marketing, therefore, involves close association and coordination with all of the agencies involved in the making up of the total logistics chain. The ability to understand clearly the market forces which dictate the future requirements of the users of logistics centers in terms of both facilities and services is an important aspect in long-term planning. It can be said that the concept of marketing the services is more complex than it might first appear. In addition, the role of marketing is not limited to the local areas because even if local exporters and importers are willing to use the services offered, freight could not flow without multi-modal transport operators being persuaded that containers should be moved to it and appropriate documents issued.

"Who is the customer?" is an important question as to identify how payments will be generated to the logistics center. Generally, the services of the logistics center will be paid for by all or some of the following entities

- The multi-modal transport operator or an agent who pays for container lifting, storage, packing and unpacking,
- The freight forwarder who pays for cargo related charges,
- The railway freight company or authority which is responsible for train- related charges, and

- Various tenants in the logistics center offices that bear occupancy related charges.

However, ultimately the cost of all charges is borne by the cargo exporter or importer, with whom the logistics center will have little direct contact.

8.5.6 Possible Private Sector Participation (BOT/PPP Scheme)

At present, logistics centers (or dry ports as presently called in Egypt) are being legalized as public utilities under the Inland and Dry Ports Authority, to have the same status as any other sea port in the country. Laws on awarding public utility concessions for BOT projects do exist for some particular sectors such as roads, ports, airports and recently for railways. As for Dry Ports, such law is being requested by the Inland and Dry Ports Authority. Public utilities have the four main characteristics of:

- A project of public benefit such as the provision of public services for the satisfaction of public needs,
- It shall not be meant basically to reap a profit, though profit is not a discarded end if the public utility is operated by means of private sector,
- It shall be operated, organized, or its operation is supervised by a public administrative entity, and
- Building and operating the public utility may be assigned to individuals or private sector companies under a public utility concession contract.

The issuance of such law will make it possible to establish dry ports or logistics centers under BOT schemes. In addition, as there is no particular PPP Law yet that can be applied to develop such logistics centers, the PPP option is still valid based on structuring a scheme agreeable by the government. The last option is to implement the center through private sector finance without governmental support.

Here, this project is proposed to be implemented by the private sector under a BOT scheme. Under this scheme, the government, presented by the Inland and Dry Ports Authority can provide the required land and some other infrastructure facilities, if providing such funds is possible. Land can be obtained from local governorates, even free of charge for public utility projects. On the other hand, the private company provides all other required facilities and operates and maintains the LC for a concession period to be identified based on the cash-flow analysis of the project. After completing this period, the ownership of the whole facility will be transferred to the Authority. The BOT Company may continue operating the LC after completing the concession period based on a new lease agreement with the Authority.

Chapter 9

Logistics Development Strategy in Egypt

Chapter 9 Logistics Development Strategy in Egypt

9.1 Approaches to Strategy Formulation

The JICA Study precedes the formulation of a master plan based on the following vision, mission, and strategies:

9.1.1 Vision

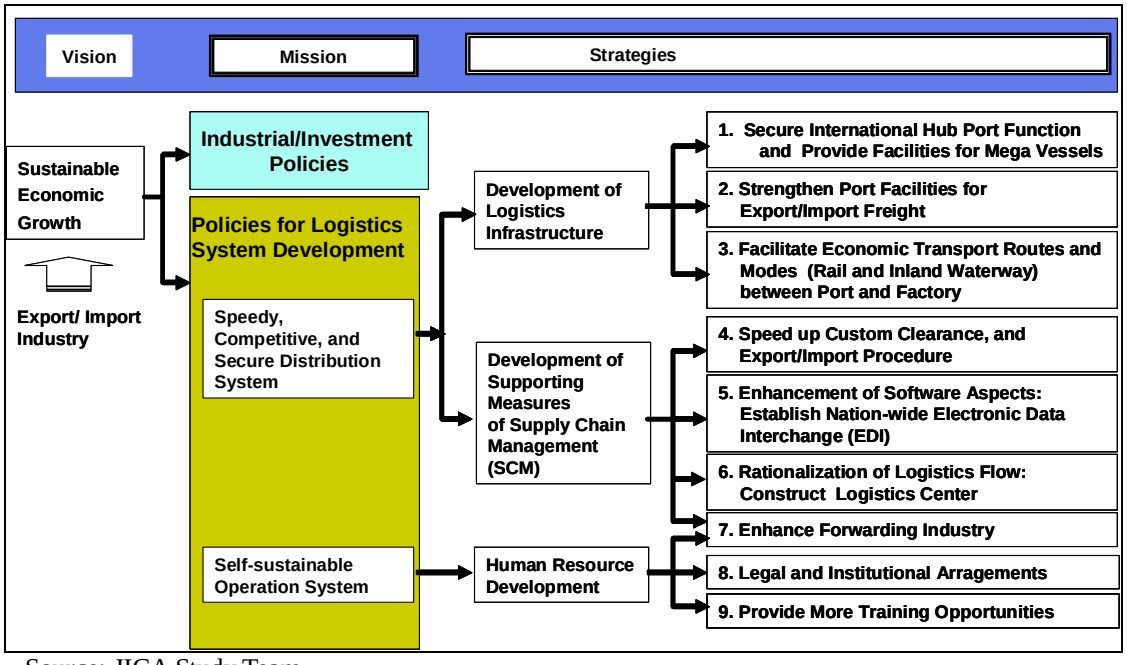
The final vision that the JICA Study seeks through this Logistics Master Plan is "Sustainable Economic Growth", where a self-driven mechanism is built into the economy, which provides the benefit of higher living standards.

In case of Egypt, the government has aligned the policy efforts to an export-led growth that inevitably entails foreign direct investment and a huge import volume of input materials, and an improvement in the investment environment is also required. This is why the efficient logistics system i.e. freight transportation system of speedy, competitive and punctual distribution system, is crucial determinant for the economic development of Egypt.

9.1.2 Mission

The mission of the JICA Study is to improve total logistics efficiency by providing a speedy, competitive and punctual delivery system in both international and domestic freight flows, and thereby stimulating the Egyptian export industry.

The government and its investment policies will be core determinants of industrial performance in the future, however this can be achieved to its full extension only when an efficient logistics system is guaranteed.



Source: JICA Study Team

Figure 9.1.1 Formulation of Logistics Master Plan

As illustrated in Figure 9.1.1, policy focus for achieving "Sustainable economic growth" should fall on an industrial and investment policies since with a system to guarantee efficient freight flows, industrial policy can function to its full extension.

Another important policy focus is on "Policies on Logistics System Development", which covers two fields: "Speedy, competitive and secure distribution system" and "Self-sustainable operation system". Of which, "Speedy" means a shortest lead time i.e. a necessary duration from when the order is issued and to when the products is received, "Competitive" means the cheaper or cheapest cost, and "Secure distribution system" means a just-in-time delivery system that guarantees a delivery at an exact time when the shipper and/receiver requests in advance. "Self-sustainable operation system" relates with human resource development.

9.1.3 Strategies

The JICA Study Team pays attention to three aspects in making the logistics development master plan, after assessing the actual situation, selected nine (9) strategies to be tackled in the JICA Study, as shown in Figure 9.1.1.

- Hardware aspect: Development of logistics infrastructure,
- Software aspect: Development of supporting measures of supply chain management (SCM), and
- Human resource development aspect.

These three aspects feature various strategies that would cause serious loss of business opportunities and benefit for Egypt if the implementation were to fail.

(1) Hardware Aspects: Development of Logistics Infrastructure

Logistics Infrastructure: Maritime Sector

The world maritime sector is now in the midst of a huge transformation of vessels from medium size vessels to mega vessels. Actually some shipping alliances have plans to replace the current Panamax level vessels (up to 5,000 TEU, berth depth of 14.0 m) with bigger Post-Panamax (8,000 TEU, berth depth of 15.0~16.0 m) or Super Post-Panamax container vessels (over 8,000 TEU, berth depth of 16.0~18.0 m). However, the appropriate berth depth is not available at Port Said Port (West), which faces the risk of losing its function as an international hub port. This loss would also result in a breakage of direct economic logistics routes with the industrial zones in the hinterland since freight from the Middle East and/or Asia have to come a very long way round via European ports.

Strategy 1: To secure international hub port functions in Egypt

Development of deep berths is an urgent and indispensable task to secure the status of international hub ports for the transhipment business targeting the EU market and the emerging market in East Europe via the Bosporus Strait.

Urgent action is required, within two or three years at latest at some ports, to cope with the requests of shipping alliances. Once the hub port status is lost, it will be difficult to restore.

Strategy 2: To strengthen the port function for export/import freight

This has been requested especially for Damietta Port and Port Said Port (West, East). At these ports, a linkage with the hinterland industrial zones should be strengthened to fulfill the needs of companies in the industrial zones and encourage them to use the international trunk shipping routes available at Damietta Port and/or Port Said Port (West, East).

This is also required to cope with the constraint on developing freight handling capacity at Alexandria Port, and alternative port facilities should be further developed in a suitable time frame.

Logistics Infrastructure: Inland Transport Sector

An efficient and smooth freight transport service could be a major factor for export-led industrial development in Egypt. Utilization of existing freight transport modes should be promoted by facilitating more efficient access to the industrial zones. This should be followed by a shift from a door-to-door service with one big truck to a new multi-modal transportation service via a logistics center.

The JICA Study also focuses on measures to improve routes from the Upper Egypt to potential foreign markets.

Strategy 3: To facilitate economic transport routes and modes (railway and inland waterway services) between ports and factories

The current overwhelming share of road transport (more than 95% of all traffic) is attributable to a) the wide gap in service quality, b) the low price of fuel, which is subsidized by the government, and c) the convenient nature of door-to-door truck services without re-loading. However, negative effects such as traffic congestion, air pollution and the heavy financial burden of the national budget have been apparent.

The JICA Study Team suggests that the railway and inland waterway services be fully utilized to their potential capacities since they feature some or all the advantages of "punctuality", "massive volume transportation", and "environmental-friendliness" if operated properly. Considering in-efficient logistics flows around the Greater Cairo Region, these features, together with measures of cost reduction for users, can be realized by using logistics centers to facilitate the necessary accessibility, and this can be true especially for the export/import freight of consumption commodities.

(2) Software Aspects: Development of Supporting Measures for Supply Chain Management

Strategy 4: Speed-up custom clearance, and export/import procedures

Efforts have been made by the Customs Authority to speed up customs clearance and procedures, which have progressed remarkably in the last two or three years, by establishing a single window system and a computerized information system at major seaports between 2005 and 2007.

However, it is suggested that the inspection by Customs Authority and the export/import registration by the General Organization for Export and Import Control (GOEIC) should

be modified to be parallel procedures. In addition, a computerization gap between the dry ports and seaports is apparent, and is in need of improvement. Measures such as continuous up-dating works of web site of Customs Authority to improve public relations are also necessary to attract more foreign direct investment.

Strategy 5: Enhancement of software aspects of logistics industry

Logistics activities can be conducted by the freight forwarding industry, with the help of an information network such as a logistics electric data interchange (EDI) system. So, facilitation of EDI is indispensable to minimize lead time (time from order to arrival of freight) and cost. The greater the number of forwarding companies and shippers/receivers that install and connect EDI facilities, the more the logistics performance can be improved. Therefore, the JICA Study Team paid attention to measures required to promote the use of EDI. Capacity enhancement of staff in maintenance and operation by means of training and seminar as well as a financial support for the forwarding companies are also crucial matters.

Strategy 6: Rationalization of logistics flow: construct logistics centers

At present, neither logistics centers nor container depots are available even around the Greater Cairo Region (GCR). Irrational freight flows in the hinterland of seaports naturally followed to overcome the constraint of the truck ban, which also causes the build up of truck convoys on the roads around the GCR, as they have to wait for the truck ban to lift. With a logistics center, large line-haulers shuttle between the ports and the distribution center while small trucks move between the logistics center and the origins and destinations for collecting and delivery of the freight. In implementing this plan, various policy alternatives with facilities such as dry ports should be explored.

It is also suggested that the potential of logistics centers at the seaports (Port Said Port East and Alexandria) be evaluated in relation to the production activities in the industrial zones adjacent to the seaports.

Strategy 7: Enhancement of the forwarding industry

The overall logistics efficiency is dependent on the quality of service of the forwarding industry, which plays the role of integrating all the logistics activities. However, many of the forwarding companies in Egypt are suffering from insufficient facilities such as old trucks and no electronic data interchange (EDI) equipment. Limited capability of staff also constrains the business chances. So enhancement of the forwarding industry is crucial for further export/import development. Some supporting measures are suggested as well as measures for human resource development in this industry.

(3) Human Resource Development

Strategy 8: Legal and Institutional Arrangements

At present, no government organization has responsibility for formulating and implementing national logistics policies. However, it is apparent that almost all the plans for logistics infrastructure and facilities require policy coordination among sectors. The government should be responsible for the legal framework and formation of logistics

development policies. As with many logistics advanced countries, the government has to take a leadership role in preparing logistics plans and their execution.

To design a development plan that is convenient for users and able to be implemented smoothly, the JICA Study Team suggests that the burden is shared between the government and private sector by setting up a representative core organization to coordinate policy development in the area.

Strategy 9: Human Resource Development: Provide More Training Opportunities

The human resource development focuses on two aspects: capacity enhancement of policy makers i.e. government staff, and capacity enhancement of actual staff who engage in the logistics business.

Logistics organizations such as the forwarding industry are required to have sufficient knowledge and be equipped with operational skill. Some incentive measures should be explored for this purpose.

9.2 Strategy for Development of Logistics Infrastructure

9.2.1 Strategy 1: Securing International Hub Port Function

Port Said Port (West) and Damietta Port are facing the risk of losing their status as international hub ports. This is because those ports do not have sufficient facilities for large container vessels of more than 8,000 TEU, which will commence service within two or three years. Without fulfilling this urgent need of increasing the berth depth, the shipping alliances might shift their hub port functions to the ports of foreign countries. Port Said Port (West) is short of a deep berth of more than 16 meter, and Damietta Port is suffering from a shallow and narrow navigation channel as well as a sedimentation problem.

Development of a potential deep berth at Port Said Port (East) requires another 10 years and 15 years at least. Once this kind of hub port function is removed, it will be difficult for Egypt to easily restore the international hub port status. It means that the major part of the revenue source of the port authority attributable to transhipment containers (96% of total container handling volumes in 2006) will be lost, and the revenue source will be limited to only export/import container handling (4% in 2006).

<u>Urgent Countermeasures:</u>

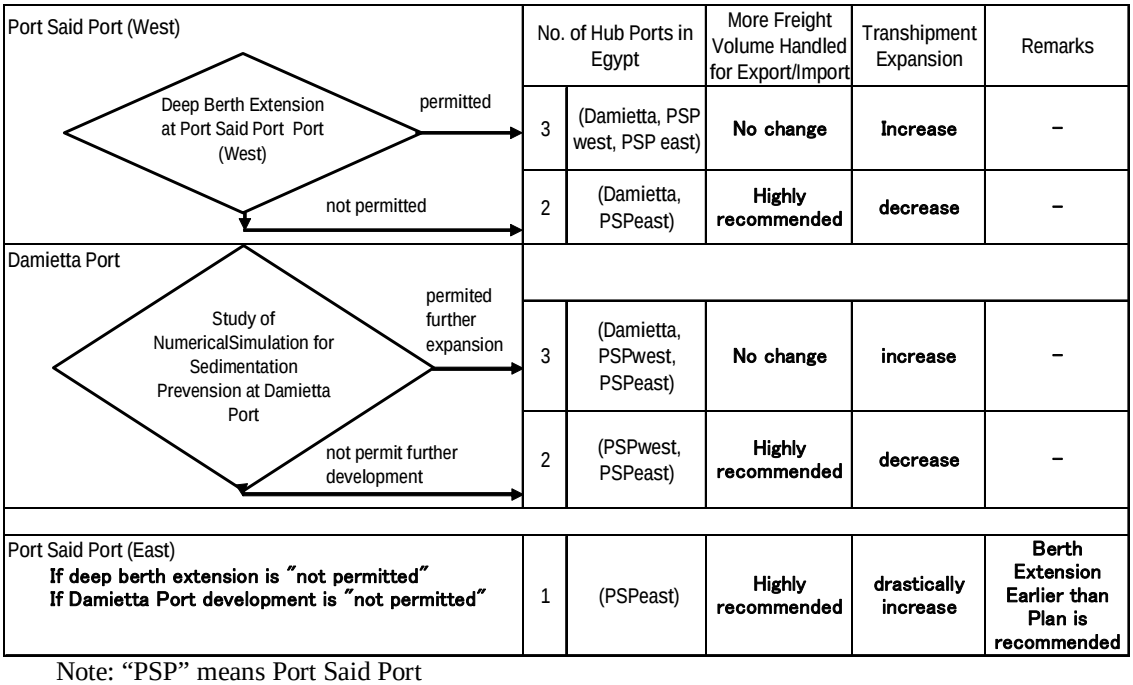
- Port Said Port (West): Construction an additional deep berth (400 m in length, 16 m in depth), and
- Damietta Port: Execution of a numerical study for sedimentation prevention, and preparation of a definite development plan as well as assessment of project feasibility. If approved, the development plan should be executed at an earliest timing.

<u>Long-term Countermeasure:</u>

- A development plan for Port Said Port (East), to especially include the development of a deep berth (after 3rd phase development), that can handle the freight handling overflows of Port Said Port (West) and Damietta Port.

Figure 9.2.1 shows the diagram of the planning procedure. If the deep berth extension at Port Said Port (West) is not executed in an appropriate timeframe, the function of hub port will go into a decline. If the sedimentation prevention measures for Damietta Port are not executed, Egypt may lose another international hub port, leaving only one in Egypt.

In Figure 9.2.1, the JICA Study Team presents the possible ramifications of new roles/functions and the corresponding development necessity of each port.



	No. of Hub Ports in Egypt		More Freight Volume Handled for Export/Import	Transhipment Expansion	Remarks
Deep Berth Extension at Port Said Port Port (West): permitted	3	(Damietta, PSP west, PSP east)	**No change**	**Increase**	–
Deep Berth Extension at Port Said Port Port (West): not permitted	2	(Damietta, PSPeast)	**Highly recommended**	**decrease**	–
Damietta Port					
Study of NumericalSimulation for Sedimentation Prevension at Damietta Port: permited further expansion	3	(Damietta, PSPwest, PSPeast)	**No change**	**increase**	–
Study of NumericalSimulation for Sedimentation Prevension at Damietta Port: not permit further development	2	(PSPwest, PSPeast)	**Highly recommended**	**decrease**	–
Port Said Port (East) **If deep berth extension is "not permitted" If Damietta Port development is "not permitted"**	1	(PSPeast)	**Highly recommended**	**drastically increase**	**Berth Extension Earlier than Plan is recommended**

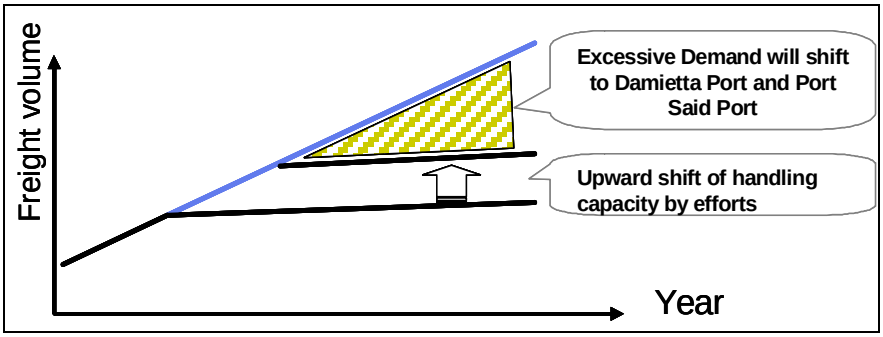
Note: "PSP" means Port Said Port
Source: JICA Study Team

Figure 9.2.1 Planning Flows of Port Development

9.2.2 Strategy 2: Strengthening Port Facilities for Export/Import Freight

Figure 9.2.1 indicates that each port has to play various roles in any case that are not expected when the port was constructed, and has to share the same roles and burdens. This necessitates a wide range of policy coordination to avoid a duplicated and/or extravagant investment among the ports. However, this coordination requires a strong leadership and rationale reasoning in allocating new roles to the ports which are usually formulated in the development master plan by sector. For instance, Damietta can not accept a role of regional hub port and abandon a role of international hub port, and therefore the rational scientific guidance and its role and significance should be defined in a framework of overall national plan by sector.

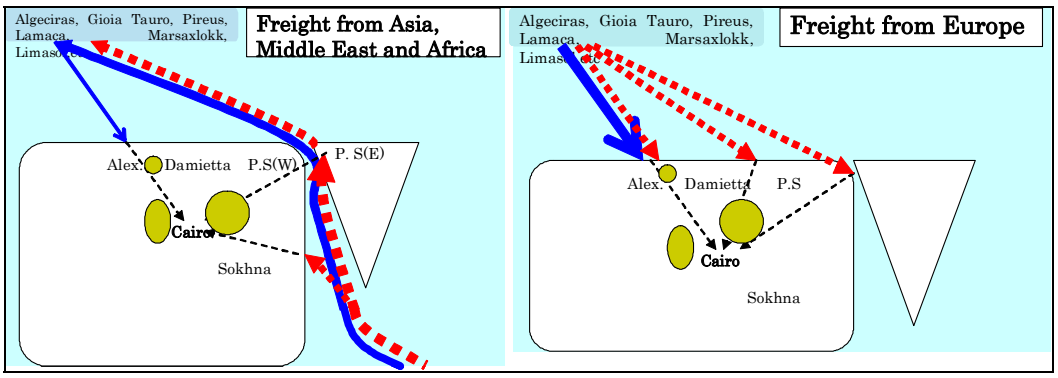
Limited capacity of Alexandria Port is other reason to call for a role adjustment among major ports.



Source: JICA Study Team

Figure 9.2.2 Shift of Excessive Demand at Alexandria Port to Other Ports

Alexandria Port has handled approximately 63% in 2005 (ton base) of the imported freight, and about 40% of exported freight. However, because of narrow space of the port, the freight handling capacity at Alexandria Port has already reached the maximum handling capacity under the present conditions of facilities and equipment. Possible best efforts of efficiency improvement of freight handling are indispensable. However, as Figure and 9.2.2 and Figure 9.2.3 show, Damietta and Port Said Port (W) should have to play a supplementary role to the Alexandria port and have to accept an excessive demand of freight handling from EU. Damietta and Port Said Port originally aim at serving transhipment freight, but now these ports have to pay more attention on how to enhance the handling capacity of import freight at the port and to facilitate the strong transport linkage with the hinterland i.e. industrial zones and/or mega-consumer area such as 10th of Ramadan and Cairo if necessary.



Source: JICA Study Team

Figure 9.2.3 Role Sharing among Main Ports

Accordingly, all the port development plans should correspond with this new expected role and also the policy coordination by proper authorization is also indispensable among individual port development plans. The best measure to facilitate this requirement is an implementation of maritime sector master plan study, and the JICA Study Team suggests an execution of "Study for Coordination of Development Plans for Egyptian Ports".

9.3 Strategy 3: Facilitate Economic Transport Routes and Modes between Port and Factory

This section deals with Strategy 2 and 3 ("Strengthening Port Facilities", and "Facilitation of Economic Transportation Routes and Modes between Ports and Factory") together after integrating port and its hinterland transportation routes/modes into logistics corridor.

Strategy of effective transportation improvement will be suggested by corridor. The JICA Study Team identifies five current freight corridors and two potential corridors necessary for regional development in the future. The characteristics and features are different for each corridor, and thus the required logistics development policies are summarized by corridor.

Those corridors are:

(1) Inland Freight Corridor 1: Alexandria Port – Cairo,

(2) Inland Freight Corridor 2: Damietta Port - 10th of Ramadan/Cairo,

(3) Inland Freight Corridor 3: Port Said Port (West) - 10th of Ramadan/Cairo,

(4) Inland Freight Corridor 4: Port Said Port (East) - 10th of Ramadan/Cairo/6th of October,

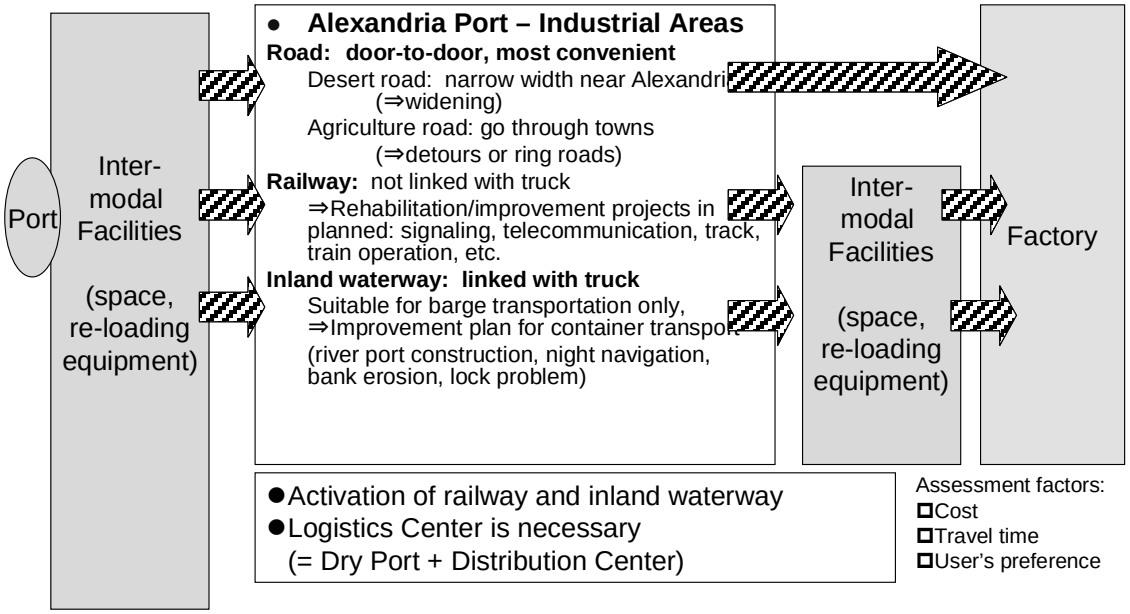
(5) Inland Freight Corridor 5: Sokhna Port - 10th of Ramadan/Cairo/6th of October,

(6) Inland Freight Corridor 6: Qena – Safaga Port, and

(7) Inland Freight Corridor 7: Upper Egypt – Cairo.

9.3.1 Inland Freight Corridor 1: Alexandria Port – Cairo

Logistics routes available considered in assessing and solutions are presented in Figure 9.3.1.



Source: JICA Study Team

Figure 9.3.1 Planning Diagram for Inland Freight Corridor 1: Alexandria Port – Cairo

(1) Status Quo

Inside Alexandria Port: This old and historical port has insufficient space to further expand facilities and extend the berth length, and thus logistics improvements should be focused on making the freight handling more efficient.

Inland Transport:

- The wide gap in the amount of freight serviced by each transport mode is the most apparent feature. Actually truck transport accounts for an overwhelming 95%, leaving railways and inland waterways far behind, which is reflected in the service quality.
- Freight transportation flows around the Greater Cairo Region are not efficient because of traffic jams and the long idle time of trucks waiting for the truck ban to end. This is partially attributable to lack of logistics center/container depot.
- Freight traffic can flow from/to Alexandria to/from the Greater Cairo Region; however, freight transportation has to use the gridlocked road, resulting in a loss of time and opportunity cost.

(2) Aims

The overall aim is the improvement of freight transportation capacity and transport efficiency:

- **Port section:** Improvement of freight handling efficiency at Alexandra Port,
- **Inland section:** Promotion of rail and inland waterway services, and
- **Other consideration:** Improvement of freight flow efficiency.

(3) Solutions

a) Port section

Alexandria Port can achieve this by introduction of new gantry cranes and RTGs together with container yard pavement improvements. Use of the land just behind the AICT container terminal is also recommended.

As for Dekheila Port, the JICA Study Team recommends a consolidation of the current container yards that are used inefficiently, and construction of a new container yard by using the currently empty land areas in and adjacent to the port. The JICA Study Team concludes that the new AICT development plan does not help with improving the container handling efficiency. Installation of a conveyor system for bulk cargo is also recommended.

b) Inland section

- **Construction of a new railway access line for export/import of freight to the 6th of October industrial zone**

The railway freight service along this corridor can be promoted by constructing a new railway short-cut access line directly connecting with the 6th of October industrial zone and the Oasis line instead of going the long way round through Helwan. Usage of

the current freight exclusive line can favour users who are sensitive to punctual delivery. In addition, loading/unloading space and equipment should be provided at the industrial zone to contribute to an improvement in the railway freight services.

- **Improvement of existing river ports and construction of a new river port near 6th of October**

The River Transport Authority has already completed the canal improvements and it is now ready for use for container transportation during the daytime, so the JICA Study Team recommends the construction of a new public river port near 6th of October and improvement of the current two river ports in the Greater Cairo Region. The canal will be most suitable for cost sensitive freight.

- **Road network development**

This can be achieved with a good coordination between passenger traffic and domestic freight traffic. However, the closure of the western part of the current Ring Road and the construction of a Regional Ring Road will contribute to alleviating the through traffic and congestion. Civil works and detailed study are already in progress, as of September 2007.

c) Other Consideration

The JICA Study Team recommends the construction of a key logistics facility i.e. logistics center (composed of a customs clearance facility, distribution/processing facilities, container depot, truck terminal etc.), which can store freight for value added activities such as labeling, re-packing, and so on, and can release the freight to final destinations at appropriate times regardless of the truck ban restriction. The JICA Study Team suggests that the two current dry ports in 6th of October be merged into one and moved to a more appropriate wider area near the industrial zone, a proposed rail access line, and a river port.

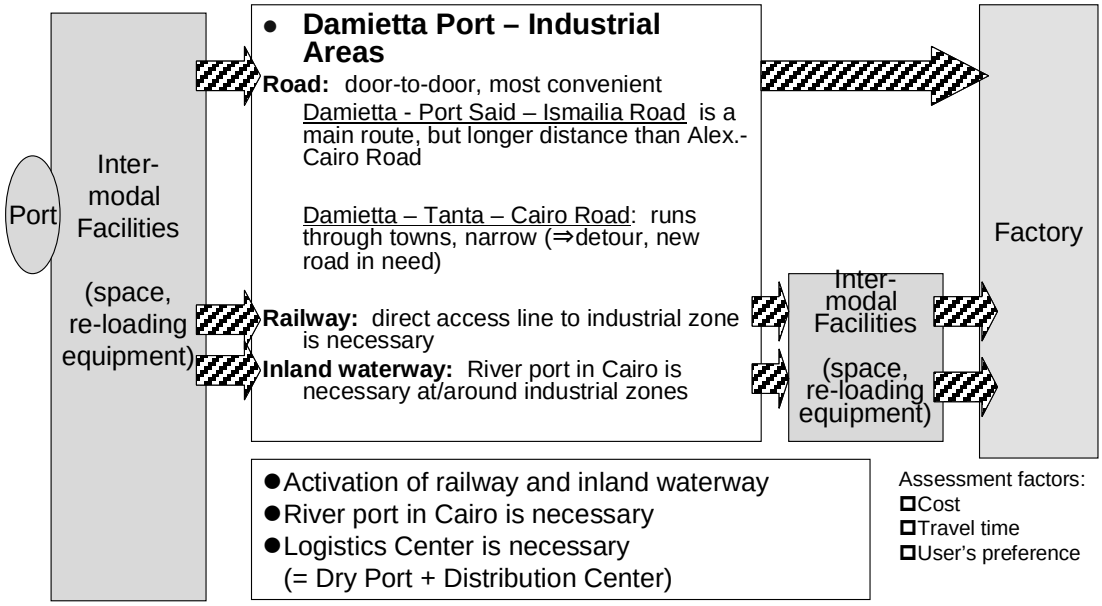
Table 9.3.1 summarizes the present situation and expected situation in the future by sector (road, railway, and inland waterway) with some solutions.

Table 9.3.1 Alexandria Port – Industrial Zones (6th of October, 10th of Ramadan) Corridor

	Road	Railway	Inland Waterway
Present	1. Heavy and deteriorating traffic congestion in/around Cairo 2. In-efficient freight transportation attributable to track ban and no truck terminal/distribution centers suggested in "Transportation Master Plan and Feasibility Study of Urban Transport Projects in Greater Cairo Region in the Arab Republic of Egypt (CREATS), (JICA, 2002)".	1. No freight train diagram has been prepared and on-demand-operation is prevailing in Egypt. 2. There is no direct access line to the 6th of October and other industrial zones or can not be used for loading/unloading. 3. Shortage in locomotives makes it difficult to meet the demand of freight transportation by railway. 4. No loading/un-loading facility	1. Canal clearance and rehabilitation works have been completed for container transportation (day-time only) 2. No public river port is available around Cairo. 3. River port development plans: 1) Development of Athar El-Nabi Port has been deadlocked because of re-settlement problem. 2) El-Tebin has been left without any maintenance.
Future	1. Congestion ratio (traffic volume/road capacity, V/C) exceeds 1.3, and further aggravation of traffic congestion is expected in 2022.	1. Railway is expected to perform freight transport generated/attracted at the 6th of October industrial zone, and will contribute to activate.	1. It is expected to play a more important role of bulk and container transportation, and will contribute to activate. 2. Inland waterway can serve for the freight from Upper Egypt.
Solution	1. Road widening and upgrading 2. Construction of logistics center (= dry port + distribution center) 3. Private participation in logistics centre construction and management can be expected.	1. Construction of new access railway line to the 6th of October industrial zone, and form new freight rail network between 6th of October and 10th of Ramadan. 2. Construction of new access railway lines to Sadat City, and Burg El-Arab. 3. Private sector participation into the operation/management of freight services.	1. Construction of new public river port near the 6th of October industrial zone. 2. Execution of El-Tebin port when Regional Ring Road will be opened

9.3.2 Inland Freight Corridor 2: Damietta Port - 10th of Ramadan/Cairo

Logistics routes available considered in assessing and solutions are presented in Figure 9.3.2.



Source: JICA Study Team

Figure 9.3.2 Planning Diagram for Inland Freight Corridor 2: Damietta Port - 10th of Ramadan/Cairo

(1) Status Quo

Inside Damietta Port: The main activity at this port is transhipment business, which accounts for 83 % while the export/import for only 27 %. This port has been an international hub port, however sedimentation problems and the shallow access channel prevent this port from keeping this status in spite of increasing demand. No valid solution has yet been formulated based on scientific data but nevertheless a container yard development plan is progressing.

Inland Transport: The majority of export/import freight is transported to 10th of Ramadan industrial zone and Cairo by truck via Port Said Port and Ismailia. Improvement of the inland waterway is expected to complete by the end of 2007 at latest.

(2) Aims

The overall aim is improvement of freight transportation capacity and transport efficiency.

- **Port section:** Guarantee the international hub port function and improve the freight handling capacity at Damietta Port,
- **Inland section:** Strengthen overall inland transportation of this corridor, and provide rail and inland waterway services, and
- **Other consideration:** Improvement of the efficiency of freight flow.

(3) Solutions

a) Port section

In the first place, a numerical simulation study for sedimentation prevention is

recommended. After confirming the most effective solution for sedimentation control and a feasibility assessment, various projects should be implemented. For the purpose of guaranteeing the international hub port function, the construction of a new breakwater and an upgrading (widening and deepening) of access channel to two channels and a depth of 17 meter might be suggested depending on the results of the proposed numerical study. Expansion of the KGL terminal is also required to handle containers more efficiently and to increase the handling capacity.

b) Land section

- **Strengthening of road capacity**

The route of Damietta – Port Said Port – Ismailia – 6th of October/Cairo accounts for almost all the inland freight transportation from Damietta Port to the industrial zone. Beside this circuitous route, a shorter truck route is required and the road expansion between Mansura - Zagazig – 10th of Ramadan is thus recommended in the long term.

- **Construction of new railway access line for export/import**

At present, there is no freight railway service along this freight corridor because of the lack of a direct access line to the 10th of Ramadan industrial zone. By constructing a new direct access line to 10th of Ramadan (Bilbeis – 10th of Ramadan – Al Robeki Station on the Suez – Ain Shams line), the new railway freight service would attract a greater demand for freight transportation along this corridor.

The freight service on this new railway access line can be further promoted by constructing a new railway line that runs in parallel to the Regional Ring Road and directly connects with the 10th of Ramadan industrial zone and 6th of October Industrial zone via Helwan. The current railway line between Zagazig – Damietta Port is not busy, and the freight train can be operated to a set timetable, which will be attractive for users who are sensitive to the punctuality of freight delivery.

- **New river port construction near Bilbeis on Ismailia Canal**

This can be studied from the long-term perspective and aimed at transporting freight from the Upper Egypt to the 10th of Ramadan industrial zone. From the Upper Egypt, heavy mining-related products can be sent to the industrial zone in 10th of Ramadan via this river port. When the reefer container can be available, agro-products can join this freight flow for further processing in the industrial zone. New truck transportation is additionally needed from the river port to the industrial zone. The feasibility study of the logistics center should focus the transportation cost of the freight by commodity and container, and necessary duration of transportation. In addition to the construction of river port, this project should include the following works for freight ship navigation.

i) Dredging of the canal between Cairo and Bilbeis (about 50km), and

ii) Rehabilitation of Sariakos Lock and EI Sahlia Lock.

On the other hand, the JICA Study Team was informed by government officials that Suez Canal Authority was of the opinion that the operation of barges would endanger

the navigation of other large ships and thus opposed to improve the canal for the full opening, and the residents in Ismailiya City also opposed the idea strongly. Based on the suggestion, the full opening of Ismailiya Canal is not included in the proposed projects.

c) Other Consideration

The JICA Study Team recommends the construction of a logistics center in 10th of Ramadan, to serve the industrial zone and mega consumption area. This has the same purpose and facility components as those in 6th of October. The JICA Study Team suggests that the two current dry ports in 10th of Ramadan be also merged into one and have a rail access line.

Table 9.3.2 summarizes the present situation and expected situation in the future by sector (road, railway, and inland waterway) with some solutions.

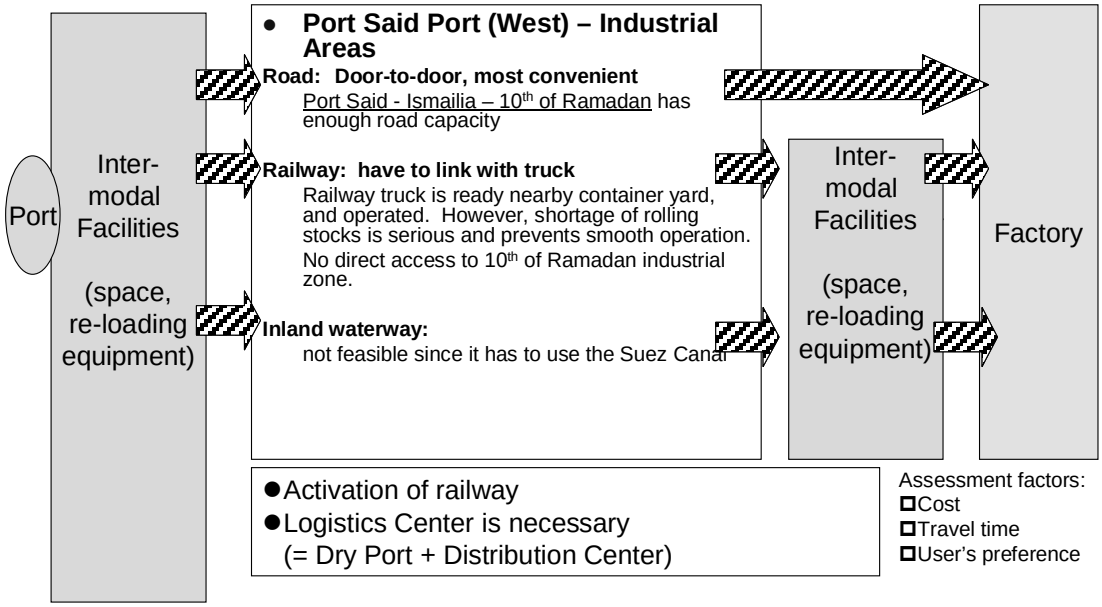
Table 9.3.2 Inland Freight Corridor 2: Damietta Port - 10th of Ramadan/Cairo

	Road	Railway	Inland Waterway
Present	<u>Damietta – 10th of Ramadan/Cairo</u> 1. Route is a Damietta – PSP – Ismailia – 10th of Ramadan line. Usage of other roads is limited. <u>Damietta – Cairo</u> 2. Mansura - Zagazig section: facing land acquisition problem. 3. Mansura-Tanta-Cairo section: This section runs though town areas, therefore, is not suitable for industrial road.	1. There is no access line to 10th of Ramadan industrial zone. However, railway service is available at the section of Damietta – Talkha – Sandub – Zagazig – Sehbaen El Kanater (near 10th of Ramadan) – Kalyoub - Cairo 2. Study for rehabilitation/ improvement is under progress as of June 2007.	1. Canal cleaning/rehabilitation work for container vessels has been completed (daytime navigation only) Work between Mansura ~ Damietta is to be completed by the end of 2007. 2. There is no river port on the way from Damietta to Cairo.
Future	1. Congestion ratio (vehicle volume/road capacity = V/C) is expected 1.5. （Damietta-Mansura section）	1. Railway is expected to share more burden of transportation related with 10th of Ramadan industrial zone.	1. It is expected to play a more important role of bulk and container transportation.
Solution	1. Construction of logistics center is required in 10th of Ramadan industrial zone.	1. Construction of direct access line to 10th of Ramadan industrial zone. This line is expected to form a new freight transportation network around the delta region (Alexandria – Cairo – Damietta/Port Said).	1. New river port near 10th of Ramadan industrial zone on Ismailia Canal.

Note: PSP means Port Said Port.

9.3.3 Inland Freight Corridor 3: Port Said Port (West) - 10th of Ramadan/Cairo

Logistics routes available considered in assessing and solutions are presented in Figure 9.3.3.



Source: JICA Study Team

Figure 9.3.3 Planning Diagram for Inland Freight Corridor 3: Port Said Port (West) - 10th of Ramadan/Cairo

(1) Status Quo

Inside Port Said Port (West): This port has operated in a similar manner to Damietta Port, and faces a similar risk of losing its status as an international hub port because it will not be capable of coping with future large vessels i.e. insufficient length and depth of berths. The shift of deep berth services from Port Said Port (West) to Port Said Port (East) is anticipated in the future. However, the complete shift to the east port will take a long time and will not be an effective measure to cope with the urgent demand from various shipping alliances for deep berths. In addition, the container yards are long but too narrow, and are poorly arranged, resulting in low container handling capacity and efficiency. This situation is degraded further by an insufficient supply of equipment.

Inland Transport: The majority of freight transport from Port Said Port (West) has been performed by trucks using the same route as from Damietta Port, while transit freight moves from port to port.

(2) Aims

- **Port section:** Guarantee of international hub port function, and an improvement of freight handling capacity and efficiency,
- **Inland section:** Promotion of rail service, and
- **Other consideration:** Improvement of freight flow efficiency.

(3) Solutions

a) Port section

The JICA Study Team concludes that the provision of a deep berth is urgently required to keep and validate the status of this port as an international hub port, and recommends the construction of a deep berth (400 m, -16m) at least prior to the completion of the 3rd, 4th, and 5th development plans for Port Said Port (East). This should be implemented together with an expansion of the container yard that includes the reallocation of the public road and the main gate of the port.

b) Inland section

This is similar to that for the Damietta Port – 10th of Ramadan/ Cairo corridor. Since Port Said Port has to handle a greater volume of export/import freight to the industrial zones and mega consumption area, the promotion of rail freight services by constructing a new access line between Bilbeis – 10th of Ramadan industrial zone – Al Robeki Station is indispensable. Furthermore, its extension to 6th of October should be studied in depth to make sure that it can cope with the freight flow between Port Said Port (West) and 6th of October industrial zone.

c) Other consideration

The JICA Study Team recommends the construction of a logistics center in the 10th of Ramadan in the same way as that in the 6th of October industrial zone. This logistics center is used for the freight from/to Port Said Port, Sokhna Port too.

Table 9.3.3 summarizes the present situation and expected situation in the future by sector (road, railway, and inland waterway) with some solutions.

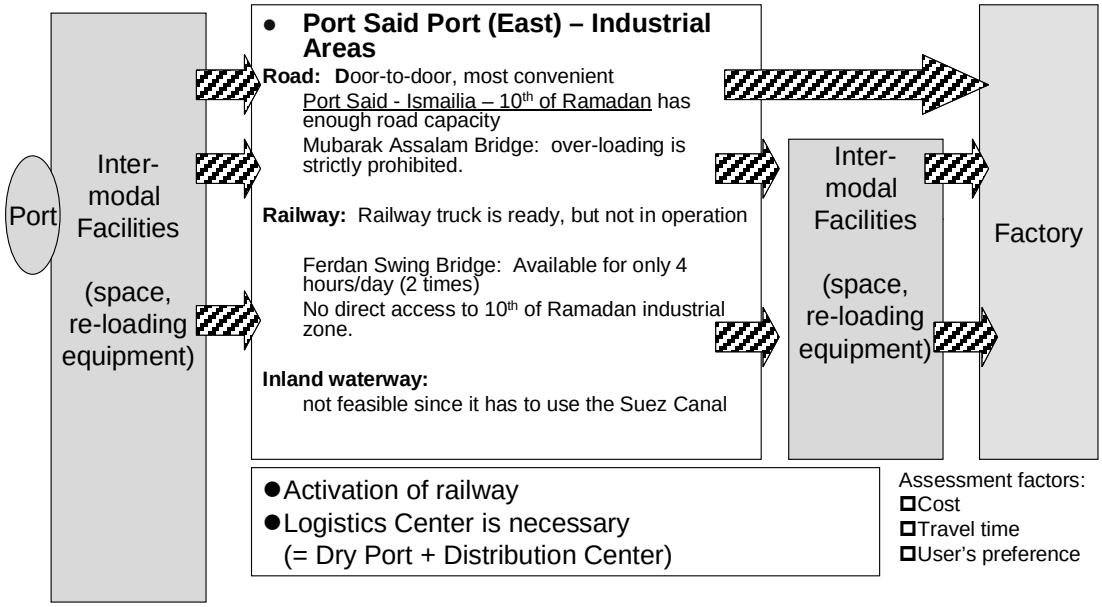
Table 9.3.3 Port Said Port (West) ~ 10th of Ramadan and Cairo Corridor

	Road	Railway	Inland Waterway
Present	No issue can be found on this route（PSP* – Ismailia – 10th of Ramadan – Cairo – 6th of October）	1. There is no direct access line to the 10th of Ramadan. 2. Direct access line to Cairo is available: PSP* – Ismailia - Zagazig – Sehbaen El Kanater (near 10th of Ramadan) – kalyoub - Cairo	1. Navigation service is not available. Rehabilitation plan is available, but its execution is not yet planned. 2. The barge vessel navigating in the Suez Canal raises a safety issue. 3. Inhabitants in and around Ismailia have been against the rehabilitation/improvement work of Ismailia canal.
Future	1. Demand forecast of JICA Study Team suggests no traffic problems by 2022. 2. More efficient and smooth freight flow should be explored.	1. Railway is expected to share more burden of transportation related with the 10th of Ramadan industrial zone.	1. This route can provide a container transport to Cairo if the canal will be rehabilitated.
Solution	1. Construction of logistics center in the 10th of Ramadan industrial zone.	1. Construction of direct access line to the 10th of Ramadan industrial zone. This line is expected to form a new freight transportation network around the delta region (Alexandria – Cairo – Damietta/Port Said).	Nothing necessary

Note: *: PSP means Port Said Port.

9.3.4 Inland Freight Corridor 4: Port Said Port (East) - 10th of Ramadan/Cairo/6th of October

Logistics routes available considered in assessing and solutions are presented in Figure 9.3.4.



Source: JICA Study Team

Figure 9.3.4 Planning Diagram for Port Said Port (East) – 10th of Ramadan Corridor

(1) Status Quo

Inside Port Said Port (East): A deep berth and a container yard with sufficient space are possible at this port, and further expansion is planned to provide up to 200 km length of deep berth. The major business is transhipment of containers and this accounts for 96 % of the total handling container volumes. This port is expected to link closely with an industrial zone planned for an area just behind the port.

Inland Transport: Freight transport from Port Said Port (East) has been very limited and negligibly small as of 2006. Crossing the Suez Canal could be a constraint on freight transport from this port in the future. However, there are three infrastructures serving the transport demand from Port Said Port (East) to the industrial zones around Greater Cairo Region: the Mubarak Assalim Bridge and Ahmed Hamdi Tunnel for trucks, and the Ferdan Swing Bridge for railway transportation.

(2) Aims

Although a drastic increase in freight transport demand can be expected from this Port to 10th of Ramadan/Cairo/6th of October, no specific extra transport development is required up to 2022. However, after the transportation demand exceeds the current transport capacity as a whole after 2022, some infrastructure development might be required when the industrial zone just behind the port area develops into a manufacturing center.

- **Port section:** Smooth implementation of port development plan,
- **Inland section:** None up to 2022, and
- **Other consideration:** Improvement of the transhipment function of the port.

(3) Solutions

a) Port section

Review of the current port development master plan is recommended since it is apparent that the planned water area for the turning basin and approach channel is too narrow for the expected number of vessels. In addition, the layout planned for the road network in the industrial zone might cause traffic jams and result in inconvenient traffic flows.

b) Inland section

It is apparent that the current railway bridge is inconvenient to use as it can only be used two times a day and only for three hours for each time. In the future, a new tunnel under the Suez Canal might be necessary for the railway, but it is anticipated that this will not be necessary until after 2022 and far later.

c) Other consideration

The JICA Study Team suggests the construction of a logistics center in Port Said Port (East) when the industrial development adjacent to the port will progress. This is because the development master plan of industrial zone is not yet established and therefore the demand forecast of logistics center is still vulnerable in establishing the base for forecasting the demand of the logistics center.

Table 9.3.4 summarizes the present situation and expected situation in the future by sector (road, railway, and inland waterway) with some solutions.

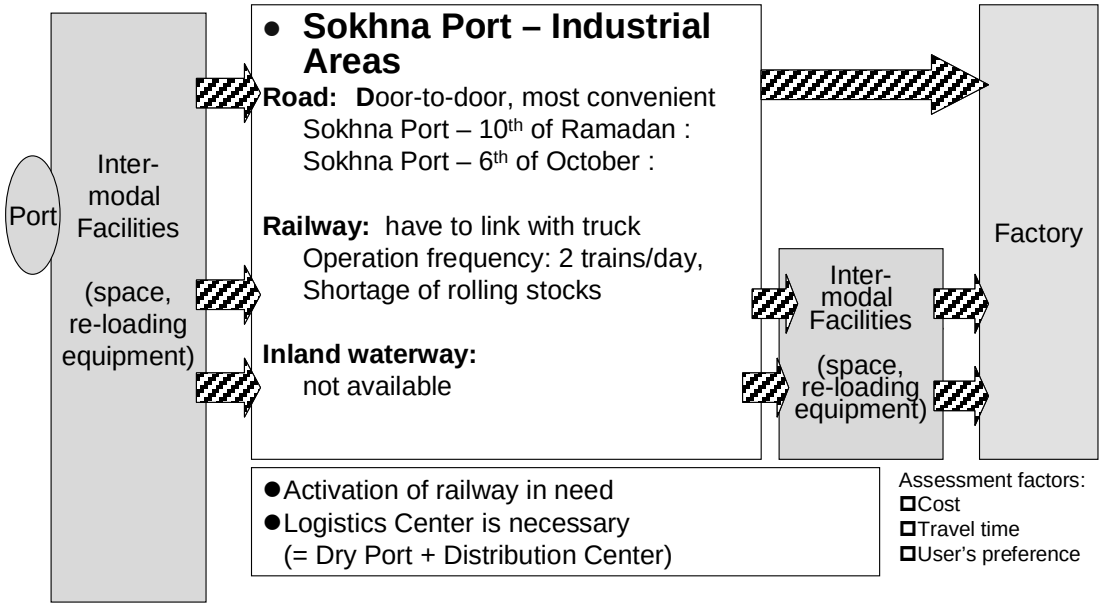
Table 9.3.4 Port Said Port (East) ~ 10th of Ramadan Corridor

	Road	Railway	Inland Waterway
Present	No obstacle to serve the traffic volume. However: 1) Over-loading of truck should be strictly restricted at the Mubarak Assalam Bridge. 2) Sufficient road capacity at the Ahmed Hamdi Tunnel under the Suez Canal and ferry services to meet the freight transport demand.	1. No demand of railway service at present, and therefore there is no railway freight services even though railway track is facilitated. 2. No direct access line to 10th of Ramadan 3. The Ferdan Swing Bridge is open to the railway only for two hours per one time and two times per day.	1. Navigation service is not available. Rehabilitation plan is available, but its execution is not yet planned. 2. The barge vessel navigating in the Suez Canal raises a safety issue. 3. Inhabitants in and around Ismailia have been against the rehabilitation/improvement work of Ismailia canal.
Future	1. No problem is expected since future traffic volume is less than the road capacity. 2. More efficient and smooth freight flow should be explored.	1. Direct access line to 10th of Ramadan is necessary Railway service is available between PSP – Ismailia - Zagazig – Sehbeen El Kanater (near to 10th of Ramadan) – kalyoub – Cairo	1. This route can provide a container transport to Cairo if the canal will be rehabilitated.
Solution	1. Construction of logistics center is required in the 10th of Ramadan industrial zone.	1. Construction of direct access line to the 10th of Ramadan industrial zone. This line is expected to form a new freight transportation network around the delta region (Alexandria – Cairo – Damietta/Port Said).	Nothing necessary

Note: *: PSP means Port Said Port.

9.3.5 Inland Freight Corridor 5: Sokhna Port - 10th of Ramadan/Cairo/6th of October

Logistics routes available considered in assessing and solutions are presented in Figure 9.3.5.



Source: JICA Study Team

Figure 9.3.5 Planning Diagram for Sokhna Port - 10th of Ramadan, Cairo, and 6th of October Corridor

(1) Status Quo

Sokhna Port deals with export/import freight and a few transit containers. Loading/unloading has been performed efficiently at the port. Freight destinations are 10th of Ramadan industrial zone, Cairo, 6th of October and other industrial zones around the Greater Cairo Region. The main transportation mode is by truck because of the well-developed trunk road network. However, there are no railway linkages between this port and the major industrial zones around the Greater Cairo Region.

(2) Aims

However, after the transportation demand exceeds the current transport capacity as a whole after 2022, some infrastructure development might be required when the industrial zone just behind the port area develops into a manufacturing center.

- **Port section:** None,
- **Inland section:** Promotion of rail service, and
- **Other consideration:** None.

(3) Solutions

a) Port section

There are no specific suggestions for improvement of logistics at Sokhna Port. The management of the first stage development have been flexible in the way they have implemented the best measures to fulfill the demands of users.

b) Inland section

The construction of a new railway line between Bilbeis and Al Robeki Station on the Suez – Ain Shams line can provide a direct access route to 10th of Ramadan industrial zone, on the way to Alexandria Port or Damietta Port.

If the line between Suez and Ain Shams is open to the freight trains as had been in the 1970s, Sokhna Port has more easy access to the mega-consumption area that receives an influx of consumer goods, and this railway line can play a great role to transport the consumer commodities from Sokhna Port.

Furthermore, with new railway line along the Regional Ring Road up to Helwan, the freight train can have access to the 6th of October and the Upper Egypt area and the Sadat industrial zone as well as Burg El-Arab in Alexandria/Port. The JICA Study Team recommends that a study be carried out on a new freight link network between 10th of Ramadan (Al Robeki Station) and Helwan (Maraziqu Bridge) to investigate the rationality of the railway network for container freight, which runs around the Nile Delta, and to see if this link, if constructed, would provide an economic and short route from Sokhna Port to the 6th of October industrial zone. In this proposed study, the potential for the private sector to take part in the freight transport service should be also explored.

Table 9.3.5 summarizes the present situation and expected situation in the future by sector (road, railway, and inland waterway) with some solutions.

Table 9.3.5 Sokhna Port - 10th of Ramadan, Cairo, and 6th of October Corridor

	Road	Railway	Inland Waterway
Present	1. Smooth access to 10th of Ramadan is guaranteed. 2. Northern part of Cairo Ring Road is used to access 6th of October.	1. There is no direct access to the 10th of Ramadan industrial zone nor to the 6th of October industrial zone. 2. Long waiting time is necessary to collect sufficient number of the containers for railway.	No canal or river available
Future	1. No issues are expected on the road traffic from Sokhna Port. 2. More efficient and smooth freight flow should be explored.	1. New access line to the 6th of October is necessary. 2. New access line to 10th of Ramadan is necessary to connect Damietta Port, extending railway service from/to Upper Egypt. 3. Procurement of more locomotives is necessary.	None
Solution	1. Construction of logistics center is required in the 10th of Ramadan industrial zone.	1. Preparation (Feasibility study and land acquisition) of access line to 6th of October is suggested	None

9.3.6 Inland Freight Corridor 6: Qena – Safaga Port

(1) Status Quo

The Upper Egypt region has plenty of mining resources, and the region along the River Nile has inherited a vast fertile land area suitable for agriculture. Mining resources and their processing products have, in the past, been transported to the Greater Cairo Region and been exported via Alexandria Port and Safaga Port. These days, large-scale agricultural projects by individual companies are progressing and their success might inspire further agro business in this region. The JICA Study Team suggests creating a new freight corridor, with the aim of making a breakthrough in the promotion of new agricultural development by providing a new logistics route/facilities and access to new markets, especially countries in the Middle East.

(2) Aims

- **Port section:** Development of container transportation,
- **Inland section:** Promotion of road transportation, and
- **Other consideration:** Supporting regional development.

(3) Solutions

a) Port section

To transport fresh agro-products requires expensive reefer containers to keep vegetables fresh. The Safaga multi-purpose berth development project aims at making it possible to handle reefer containers for export.

b) Inland section

The Egyptian National Railway should provide a reefer container transport service by purchasing railway wagons for reefer containers under the program: reefer container transport service. The road improvement project for the Qena – Safaga section can also contribute to smooth and safe transportation of reefer containers.

c) Other consideration

Collection and packing of agro-products requires speedy and meticulous handling and skills. A local collection and packing system should be established together with development of the logistics infrastructure. Such systems have been introduced by large agro-business companies and farmers' cooperatives around the world, and thus no difficulty is anticipated for Egypt when introducing this system. An agricultural logistics study for a specific area might be worthwhile.

9.3.7 Inland Freight Corridor 7: Upper Egypt – Cairo

(1) Status Quo

The major freight transport mode along this corridor, in 2006, was truck (about 78%), followed by railway (21%) and inland waterway (1%). Almost all the products are heavy mining-related products that are more cost sensitive than time sensitive. The loading/unloading of heavy freight can be difficult work and for this reason truck

transportation takes an overwhelming share to reduce unloading/reloading steps. It can be argued that heavy freight should be shifted from transportation by truck to railway and inland waterway to prevent road deterioration, and also that dual transport modes should be developed for this long freight transportation route.

(2) Aims

When the transportation demand exceeds the current transport capacity as a whole after 2022, some infrastructure development might be required. In addition, if more cheaper transportation services can be offered, the further development of current industries of mining resources and new industry such as agriculture can be encouraged and can contribute to reduce earning differentials between this region and other regions.

- **Inland section:** Promotion of railway and inland water service for freight transportation and promotion of road transportation to/from industrial zones, and
- **Other consideration:** Supporting regional development.

(3) Solutions

a) Inland section

At present, there is no large scale river freight transportation service for the public use. This is attributable to the lack of river ports for freight. The distance between Aswan and Cairo is 960 km and the river can be competitive in transportation cost with other transportation modes. So river freight services could be favoured by cost sensitive users. Especially, this could be an appropriate mode in the case of heavy freight. The JICA Study Team recommends that there should be a feasibility study on the River Nile freight transportation. The feasibility study would explore the rationality of the Qena river freight port construction plan, and the El Hadid and El Solb river freight port construction plans (Aswan).

As for the industrial zones scattered along the River Nile, some have failed to attract investors because of the lack of suitable access roads connecting to the truck road. The JICA Study Team suggests that paved roads should be constructed to access any future new factories.

b) Other consideration

This corridor development aims at accelerating regional development, not at improving the efficiency of logistics in this corridor. So even a lower investment return, measured by the value of the economic internal rate of return, can be accepted to allow implementation.

There is a town development plan called “Toshka Project” near Aswan and Abu Simbel, which plans to create 2.8 million new job opportunities in this desert area, and the production of 1.2 million tons is expected for export, and 2.2 million tons for the use in other governorates in Egypt by 2017. However, this plan holds vulnerability in its nature; it is apparent that the export activities of this region will be disadvantageous in competing with other areas in terms of transportation cost and time.

Therefore the JICA Study Team limits the potential impact of this project and necessary logistics development that requires when a full scale development will be under way.

9.4 Development of Supporting Measures of Supply Chain Management (SMC)

Supply chain management is a management system that has been practiced by company to optimize the distribution/supply process by trimming inventories down to minimum level, and also by promptly adjusting their production system to meet a change in demand. Therefore, important task of logistics system is to shorten a lead-time i.e. total time between a day of order issue and a day of receiving products.

This strategy for supporting supply chain management consists of four (4) planning issues to shorten the lead time. Lack of these functions has been obstacles to practice a supply chain management, and the following three c) items can play a crucial role to improve the effectiveness of supply chain management in Egypt. They are:

Strategy 4: Speed-up custom clearance and export/import procedure,

Strategy 5: Establish nation-wide electronic data interchange (EDI),

Strategy 6: Construction logistic center / dry port, and

Strategy 7: Enhancement of forwarding industry/truck transport industry.

9.4.1 Strategy 4: Speed-up Custom Clearance and Export/Import Procedure

(1) Status Quo

At present, customs clearance and procedures are carried out at seaports and in the hinterland far away from seaports. The time to release freight at the port has, up until recently, been long and, up to the early 2000s, the slow procedure was a major obstacle to a faster logistics flow. However, the Customs Authority has made a great effort to establish a single window system and to install an electronic data interchange (EDI) system, which is now functioning well.

Furthermore, the Egyptian Customs Authority is conducting its reform in the following fields:

- New simplified tariff,
- Provision of online customs service,
- Implementation of post release auditing,
- E-payment of duty and deferred payment system,
- Radioactive inspection, and
- Launching of Egyptian Customs Authority website.

However, there still remains some room to improve customs clearance at the ports. On the other hand, procedures at the dry port are in general carried out manually, which results in low efficiency and inconvenience for users, diminishing the demand for the use of dry ports. This situation is the opposite of that originally intended and the existing dry ports are not effective at enhancing the freight handling capacity of the seaports. Some countermeasures are required.

(2) Aim

- To simplify the procedure, and to improve the efficiency of customs clearance and procedure, and
- To shorten the release time of freight and increase the freight handling volume at the ports.

(3) Solutions

The introduction of EDI and the single window system has been completed. However, historical experiences in the world indicate that maintenance and continuous operation sometimes causes other serious problems. So it is suggested that the system be monitored and necessary countermeasures applied immediately when problems are discovered. **EDI connectivity** within the ports is performing well, however, it has not yet been connected to forwarding companies and the truck industry. This is also a subject for improvement.

World experience suggests allowing **a parallel procedure of customs clearance works and GOEIC procedures** instead of the present serial procedure. Another suggestion from the world experience is to allow **the use of a copy of the B/L** instead of the original one.

Many of dry ports have not yet installed an EDI system, or even a computerized procedure, and the manual procedure results in lower efficiency than that at the seaports. This gap can negate the function of dry port. In addition, the number and allocation of dry ports should be reviewed to be more rational, and generally based on the principle of one dry port in per area.

Public relations of the current performance in shortening the release time for customs clearance and procedure could be used to advantage for attracting new foreign direct investment in Egypt.

9.4.2 Strategy 5: Enhancement of Software Aspects: Establishment of Nation-wide Electronic Data Interchange (EDI) System

(1) Status Quo

Electronic data interchange (EDI) is a computer-to-computer communication of business documents such as orders, confirmations and invoices, in a standardized format, between two or more companies on the web sites.

By replacing paper documents, four key benefits can be realized:

- Accuracy is increased, since human intervention (the acts of entering and re-keying data) is eliminated,
- Timely and/quick communication tool is facilitated (the electronic transmission of forms eliminates the delays inherent in conventional mail, or even fax),
- Customer service is improved, and
- Bottom line costs are reduced.

However, introduction of EDI is still limited to the organizations within a custom clearance office. This should be connected with forwarding companies, truck transport companies as well as all the consignees and consigners.

(2) Aims

- To enhance the business capability of the logistics industry,
- To improve the service quality of the logistics industry to fulfill the users satisfaction, and
- To make it easier for the company to conduct a supply chain management operation.

(3) Solutions

Progress has been made with the **introduction of EDI** in the custom office at the seaports, while many of the dry ports in industrial zones are well behind in this trend. Connectivity to the EDI system is also urgently required by the forwarding industry and truck transport industry. A cheap web-EDI is suggested. This system can also contribute to improving the service quality. However, as many of these companies are small- or medium-scale companies and their financial base is vulnerable, some financial support should be introduced to promote the EDI system in the logistics industry.

This **financial support** should be promoted together with a training system for operators. In addition, EDI can be a pre-condition of the forwarding business so that the basic quality of forwarding companies can be raised and kept sufficient to satisfy users.

Training system is also indispensable for users of web-EDI system especially for new participants to the system. Associations of forwarding industry and truck transportation industry are suitable to carry out this responsibility. This activity can benefit the participating companies and offer more business chances to them, resulting in service improvement, business expansion of the member companies.

9.4.3 Strategy 6: Rationalization of Logistics Flow - Construction of Logistics Center/ Dry Port

Logistics Center Development

The JICA Study Team recommends the construction of two logistics centers near the Greater Cairo Region.

(1) Aims

To make freight flows more efficient and convenient for users by evolving the function that the logistics center can provide: those are a) punctual collection and delivery of freight, b) provision of value added activities such as repacking, labelling, bar-coding, light assembly, and quick and simple customs clearance.

Most export/import freight has a destination or origin in the Greater Cairo Region and its outskirts, and the proposed logistics center should serve the two major functions of a logistics center: First is the bonded customs clearance function for industrial freight. Second is the collection and delivery function from/to the mega market for consumer goods. Some value added activities are possible for both.

(2) Solutions

The JICA Study Team recommends the construction of the 6th of October logistics center and the 10th of Ramadan logistics center.

a) Access Improvement:

- At the 6th of October industrial zone, because of the current inconvenient railway access from Alexandria, the JICA Study Team recommends a project for the construction of the 6th of October direct access line, which diverges at around Barkash or Manashy stations, directly to the 6th of October industrial zone and the connecting to the Oasis line.

  Construction of a river port would also contribute to attract cost sensitive and punctuality sensitive freight rather than speed sensitive freight. This new river port should be located near the industrial zone.

- Also the 10th of Ramadan industrial zone is not connected with railway services in spite of the railway line running near the industrial zone. The 10th of Ramadan direct access line construction project (Bilbeis – 10th of Ramadan) is recommended to promote railway freight transportation between this industrial area and Damietta Port, Alexandria Port as well as Port Said Port.

  The construction of a new river port at around Bilbeis would also improve access by inland waterway from Damietta Port to this industrial zone. However, intermodal transhipment is necessary and the transport distance of each mode might be rather shorter than the economic distance, so a careful examination of the feasibility should be conducted.

b) Secure of Sufficient area:

The size of the logistics center is dependent of the volume of containers, however, average figures range from 100-150 ha to 400-500 ha since it requires space for a management office, customs clearance facilities, train handling space, container freight station, truck terminal, warehouses, vehicle repair facilities, and so on. The minimum area of 100 ha is equivalent to about six to eight times as wide as the existing two dry ports in 6th of October, and four times that in 10th of Ramadan.

c) Facilitation of Sufficient Equipment:

- Sufficient numbers of loading/unloading equipment should be provided for both railway and truck containers by the logistics center management, and offered at a cheap price to attract more freight containers.

- The logistics center is required to facilitate Electronic Date Interchange (EDI) system and replace all hand-written documents with digital ones to simplify and speed up the registration as well as quick communication and equipment arrangement. It is recommended that the Customs Authority ensures that this is an integral part of the logistics center.

d) Relation with Exiting Dry Ports:

It is suggested that the existing two dry port companies merge into one, and become part of the new logistics center management company. By doing this, all the equipment can be utilized without additional investment. The new location will provide a larger space in/near the industrial zone with a railway line connection.

(3) Charge Setting and Subsidy

Container handling charges should be set low enough to attract more users. The company should increase the total revenue by attracting more users. The public-private-partnership method can contribute to reduce the financial burden of the new logistics center company during the initial stages. This can be justified because this facility could induce regional development.

(4) Action Plans

The processes for project implementation are as follows:

- Preparation of the logistics center development concept by the government,
- Necessary legal arrangement by the government,
- Establishment of the business entity i.e. company,
  (Core entities should be existing dry port companies, ENR or private railway freight company regardless to nationality. Other private investors are welcomed.)
- Selection of the new site/land,
- Social and environmental impact study,
- Land acquisition,
- Selling the land of the existing dry ports,
- Construction of the logistics center and installation of equipment, and
- Construction of the direct railway access line.

(5) Other Logistics Centers

In the case of many factories located in the industrial zone, they prefer keeping their imported materials at the public logistics center and receiving delivery of appropriate volumes at frequencies that are required by the factory. That way, stock management costs can be reduced and more of the financial burden is attributable to the logistics activities themselves.

a) Port Said Port (East) Logistics Center:

The necessity of the logistics center at Port Said Port (East) is dependent of the progress of the industrial zone development just behind this port site. It is now in a planning stage and, at present, there are no factories.

The most desirable timing for the logistics center construction is anticipated to be after the 3rd stage or 4th stage of the port development plans. Progress of industrial development should be carefully observed.

The concept is that the logistics center should be in the port site or bonded area near the port so it would attract more factories into the industrial zone behind the port,

earlier than anticipated. However, a logistics center company might suffer some financial deficiency during the initial stages.

b) Alexandria Port Logistics Center:

There is a medium scale industrial zone (800 ha in 2006) near the port, and its production value is about equivalent to one third of the 10th of Ramadan industrial zone, and two third of the 6th of October industrial zone. Agro-products collected in the Delta region could also be handled for export at the logistics center. Indications are that there would be sufficient volume to justify a logistics center in this zone.

However, it is suggested that the necessity or feasibility of the logistics center be studied carefully since the majority of import freight can be directed to the Greater Cairo Region and can be handled at the 6th of October logistics center or at the 10th of Ramadan logistics center.

Dry Port Development

(1) Status Quo

A dry port is designed to shorten the dwell time of a container within the seaport by skipping customs clearance at the seaport, doing it instead at the inland customs office distant from the seaport. The ultimate purpose of a dry port is to enhance the export/import handling capacity of Egypt for promoting the foreign trade of Egypt.

However, over supply and irrational allocation have been controversial and clear-cut criteria for the establishment and allocation of dry ports are necessary.

(2) Aims

To allocate the appropriate number of dry ports around the country, and to enhance the operational performance of each dry port. By doing these things, the aim is to optimize the resource allocation for dry ports at present and in the future.

(3) Solutions

The following criteria have been applied for assessing the dry port construction plan.

a) One dry port in one industrial area

Each industrial zone has one dry port even though there is another dry port in a neighbouring industrial zone. In the worst case, there are two dry ports in one industrial zone. In an area, one big dry port is more convenient than many dry ports that cannot be utilized to the full extent of their capacity.

It is recommended that duplicated dry ports in the neighboring industrial zones be phased out or be merged into one bigger dry port. In principle, one dry port in one municipality is recommended.

b) Establishment of dry port necessary for two governorates: Beni-Suef and Aswan

The container volumes estimated for export/import at each governorate in the future indicate governorates where a dry port is necessary. These figures are estimated based on the OD matrix in 2022 and the container conversion ratio,

c) Converted into logistics centers

Some dry ports should be converted into more comprehensive logistics facilities where various value added activities can be provided. The criteria are the need to have both a distribution center and a dry port in one place.

9.4.4 Strategy 7: Enhancement of Forwarding Industry

(1) Status Quo

The forwarding industry in Egypt, in general, has provided customs clearance services, however their service areas and facilities are very limited. The arrangement of transportation modes and intermodal transhipment have not been conducted very quickly or effectively, freight transportation operation is dependent on the rented trucks, and their operations have not yet been connected with an electronic data interchange (EDI) system. In general, their business capability is rather limited and inefficient compared with the international standard. Since individual factories or companies, except the large ones, cannot afford to have and operate a logistics department within their own company, an enhancement of forwarding industry is a crucial task for further development of export industry.

(2) Aims

To enhance the capability of forwarding industry to perform all the forwarding activities efficiently and attract more users of the manufacturing industry for export/import.

(3) Solutions

a) Facilities

The limited service range of the forwarding industry is attributable to a lack of **information and communication technology (ICT) systems**, especially a lack of connectivity with a nation-wide EDI system. In order to promote the introduction of EDI, other IT equipment and computer software such as web-EDI, the JICA Study Team suggests the provision of a subsidy for the forwarding companies to adopt such IT systems.

Implementation of a Radio Frequency Identification (RFID) pilot project for cargo traceability and security is also suggested to widen the service range of the forwarding industry. Without this kind of freight tracing system, forwarding companies cannot be competitive in the international market.

Handling fees should be regulated by a rule that should be provided by the logistics center dry port. This treatment should aim at reducing the financial burden on small and medium logistics companies. Construction of a logistics center can also contribute to more efficient operations through the help of an EDI system.

Furthermore, the forwarding industry is apt to employ an **old truck** aged more than 20–30 years, and their operation result in a heavy environmental burden and damage of freight. So there should be a policy guideline to promote the replacement of those trucks. This can be implemented by adopting an official licence system for

forwarding companies.

b) Financial incentive

It is anticipated that many companies will face financial difficulty in purchasing the equipment and systems for the development their facilities. Since many forwarding companies are small- and medium-enterprises, it is suggested that the government provide a subsidy to assist their purchasing of the required IT equipment and software. This is closely related to the financial arrangements of the government so that details of this assistance will be left to the government and the authority concerned. The JICA Study Team recommends a financial incentive program by the government.

c) Human resources

In spite of the great efforts of various education and training institutes, the availability of training for the staff of the forwarding industry is still limited. This is partly attributable to the fact that no system has been established to enforce forwarding companies to train their staff by enrolling them in seminars and training courses. Also, there is no specific incentive to encourage forwarding companies to invest in training.

It is suggested that some of the important training should be a pre-condition of the business approval and license of the forwarding industry, under the jurisdiction and supervision of the Ministry of Transport and/or its institute. The seminars/trainings should cover the law and regulation of forwarding activities, training in EDI or web-EDI operation, traffic regulations and the latest technology and equipment and so on. These policy suggestions are the most effective for enhancing the knowledge and operation skills of the forwarding industry.

Table 9.4.1 Qualifications for Forwarding Industry Staff: Japan's Case

Title of Qualification	Purpose	Responsible Authority	Application Procedure
International Logistics Master	Be certified semi-formally as a highly capable logistics manager	Authorized by highly credited private association	Lectures and examination (once a year)
Registered Customs Specialist	Can be attorney of Custom Officer	Authorized by the Government	Examination (once a year)

Source: Japan Institute of Logistics Systems (JILS)

9.5 Strategy for Human Resource Development

Necessity of this kind of human resources development is already recognized in any fields of human beings. With a consideration of peculiar character of Egypt, the JICA Study Team lists up two planning issues.

9.5.1 Strategy 8: Legal and Institutional Arrangement

(1) Status Quo

At present, there is no law that clearly stipulates the necessity to consider transportation planning/projects in relation to issues of logistics efficiency. Even the national 5-year development plan is not an exception, as it does not require the development of the transport networks/projects for the purposes of logistics. So the impacts of logistics improvements on industrial development and the daily life of the people are not fully assessed in transport planning.

There is no government organization that is fully responsible for logistics development policy and policy coordination, however, the Transport Planning Authority (TPA), Ministry of Transport has conducted various intermodal improvement studies and dry port development studies, and has taken the initiative on logistics development planning in Egypt. However, even the TPA does not have designated staff or a department for logistics planning.

(2) Aims

To establish a national logistics policy, and to create an environment where the implementation of necessary logistics policies can be done smoothly, and to align all the efforts to materialize projects and programs that a national logistics policy recommends.

(3) Solutions

a) Determination of national logistics policy and continuous up-dating

At present, no comprehensive national policy on logistics development has been authorized. Once established, such policy would require continuous up-dating work to reflect shifts in emphasis or urgency of the national development policy as well as traffic/economic conditions. It is suggested that there should be establish a an advisory council composed of representatives from government, private sector (forwarding industry) and university to reflect the opinions and needs of major stakeholders. In many countries, an **international logistics competitiveness study group** is bearing this heavy load of tasks.

The new task of policy coordination between various ministries should come under the Ministry of Transport, as the ministry responsible for logistics development.

b) Legal arrangement

No regulation for freight forwarders has been established yet, resulting in logistics services that are rather inferior to the international standard. The regulations required cover a wide range such as business license, essential qualification of staff and equipment (completion of authorized seminars, EDI connectivity and authorized qualification in logistics business etc.), authorization and supervision of logistics

seminars/training, subsidy provision to promote an EDI system and equipment, and so on.

Enforcement of seminar/training participation by law is also suggested to further improve the service level of industry as a whole.

Laws and regulations are also necessary for the newly proposed logistics centers and dry port licenses.

c) Institutional arrangement

The Transport Planning Authority, Ministry of Transport is now the most suitable government organization to take charge of the logistics development plan. However, it does not have a department specialized in the logistics planning or trained staff. So it is suggested that there should be a new department formed to specialize in logistics development planning. This can work together with the proposed international logistics competitiveness study group and take an initiative in coordinating this group.

With plenty of pooled experience, the advisory council and the department of TPA would, in the future, be the core of the new independent logistics planning institute. That is considered realistic since logistics policy development involves many ministries and the new organization would be responsible for policy coordination between them and execution of the policy.

(4) Enhancement of policy-making capability

Logistics, and/or its development policy, is a new concept for the government and the individual policy makers and supporting staff have not yet had any overall planning experiences in logistics.

So opportunities should be offered to the policy makers and supporting staff to absorb the latest situation of logistics planning and its actual application in foreign countries. **Observation-cum-study tours** are suggested both for the policy makers and for the support staff. As the proverb says, seeing is believing and the most efficient and quickest way of getting acquainted with new knowledge. Training of policy makers and training of government staff are suggested as a part of the administrative capability enhancement program based on the participation to the various training courses and the overseas inspection. Invitation of specialists from the donor countries can also be one of the practical measures.

Professional advisors, helped with official development aid from various donor countries, can be invited for short or medium periods in the initial planning stages. In the first place, it is suggested that a dry port specialist be invited.

9.5.2 Strategy 9: Provision of More Training Opportunities

(1) Status Quo

Logistics itself is a rather new concept in Egypt, and the government and many staff have not yet acquired sufficient expertise in logistics, in terms of, both national policy and operation of the private sector. In the case of the private sector, their lack of expertise in

the logistics business and vulnerable financial foundation constrain the training opportunities for staff, resulting in a low level of service.

Government staff and private sector staff need to have their planning and/or business capability in logistics enhanced by means of various seminars and training programs; however many of private companies in this industry are suffering from a weak financial foundation and business structure and training opportunities have been very limited.

(2) Aims

- To up-skill with the latest knowledge to facilitate the current logistics planning by the government, and to enhance the capability of public administration staff,
- To enhance the capability of forwarding companies and their staff at both the management and operator levels,
- To produce well trained and efficient workers, and to raise service levels of the logistics industry in general, and
- To support the manufacturing industry to become sufficiently competitive in the international market.

(3) Solutions

In establishing a policy framework and enacting the necessary law, the government staff will have to become better informed about current policy planning techniques and policy instruments in use for logistics development. This enriching and deepening of logistics knowledge is required both for policy makers and supporting staff. **Inspection tours** to logistics advanced countries would be the most effective way to accomplish this purpose in a short time. **Inviting logistics specialists** to work in the offices together with government staff would be an alternative measure. An approach should be made to logistics advanced countries for support in these areas.

Operators and workers should be provided with opportunities to attend various training programs and seminars.

A government-authorized qualification should be a legal requirement for a business permit, and the training and seminar program could be a pre-requisite for the qualification. In this way, an incentive would be given to the trainees.

As a result, the human resources element in logistics activities should be enhanced. Since the Egyptian forwarding industry is composed of small and medium companies and these kinds of compulsory measures are necessary to raise the level of human resources and to guarantee the service quality as a whole.

In summary, it is suggested that enforcement measures and incentives be applied to encourage the private sector to take part in the capacity enhancement program, with some financial support from the government. **Some seminars and training can be pre-conditions for a company's entry into the logistics business** to secure the minimum level of services. Those seminars should be well integrated with current trends in logistics management know-how, current regulations, logistics facilities at

seaports/logistics centers/dry ports, knowledge on how to use them, traffic law, and so on. Introduction of a new national qualification system might be useful to drive this kind of human resource enhancement. A subsidy system has been suggested to assist with implementation and to ensure satisfactory results.

This kind of human resource development and its supporting program is the most fundamental and reliable policy to induce a human resource development progress, so it can surely contribute to raise a level of current seminars and training programs.

9.6 Promotion Policy for Logistics Center/Freight Services of Railway and Inland Waterway

(1) Status Quo

Railway and inland waterway transport services have been left behind by the overwhelming share of truck services in freight transportation.

For the main freight corridors between Cairo and the seaports, the stagnating performance of railway and inland waterway services is attributable to the relatively high transportation cost and inferior freight handling services. These factors had led to the further decline in operation and service levels, thus resulting in a vicious cycle.

With regards to truck services, it is apparent that road development alone could not solve the inefficient freight flows around the GCR. Without the logistics center and the supplementary contribution of railway and inland waterway services, it is difficult to accelerate the modal shift targeted by the government.

Furthermore, the current dry ports have not successfully worked to handle the truck influx and freight flows to the GCR. Dry ports in the 6th of October industrial estate, for instance, have not facilitated the digital (in other words, paperless) procedure supported by EDI system. Thus, the port users face troublesome and time-consuming manual registration for customs clearance and procedure, which keeps their service level far below those in the seaports. Likewise, an immediate application of the same tax rate on the same product has not been completely assured. These conditions result in the declining trend for freight handling volume. Unless the digital procedures are introduced and the actual application of the customs procedures is improved, any dry port (with one-window system) can not function efficiently and attract the users as expected. Now Egypt is in such a situation that requires a break-through and policy implementation for it.

(2) Aims

Supporting policies aim to make the newly proposed logistics centers (including customs office) practical and acceptable for users, and to transform the current freight flows into smoother and efficient systems. For this purpose, up-to-date facilities and highly qualified services are necessary.

The government's support can play an important role and be the most effective in translating this plan in reality.

Establishment of the logistics centers also aims to improve the forwarding services. This requires the logistics center to intervene in a process of door-to-port continuous transport services that consist of line-haul truck services and pick-up/delivery services. This makes possible the value added activities at the logistics center and more efficient truck operations, and the users can get the products in the combination they require. Consequently, freight flows could be more efficient and convenient to use in general.

(3) Solutions

a) Promotion policies for logistics center services

In attracting more users to the logistics centers, the improvement of the service levels of

the logistics centers is indispensable. Necessary policies for facility improvement of the logistic center and its customs office, which the government can contribute to, include the following:

(i) Support for revealing the users' preference

A feasibility study is suggested to clarify the preference of user companies, and this study should cover the selection of the most convenient location, necessary services/equipment/facilities they want to use, transportation connectivity/network, the freight volume and commodity to be handled and so on. This is an indispensable step to reflect all the users opinions in preparing design/facility of logistics center to increase the users. TPA can be the executing agency for the study.

(ii) Support for establishing the project framework

A committee should be established to prepare the detailed project framework for execution. This committee shall consist of representatives of all major organizations concerned such as the ministries, government agencies, forwarding industry/truck transport service companies, and user companies (including manufacturing companies, wholesale companies, etc.). This committee can also be managed by TPA. The project framework covers the final selection of site, land acquisition process and its funding method, other government support measures, an advertisement of companies that will invest the logistics center company and user companies, selection of project type and capital formation scheme (including Build-Operate-Transfer, or Public-Private Partnership), preparation of necessary legislations, etc..

Related infrastructure development in the vicinity of the logistics centers, such as access roads, new access railway line/station and the new river port, should also be studied and/or reviewed by this committee as well as other related policy coordination.

(iii) Support for logistics center management

The logistics center management company should be responsible for the facility allocation or layout, and management/operation. Some governmental supports are very useful to secure sound financial management. These supports are expected to make the center attractive to investors and users:

- A tax exemption/reduction measure: this can be applied at the initial stage of the project operation, and can be effective for several years for:
  - ✓ Imported equipment/vehicles used inside the logistics center
  - ✓ Corporate tax, and so on.

(iv) Support for facility improvement of the customs office within the logistics center

- Modernization of communication network system, equipment for customs clearance and procedure. Special attention should be paid to solve the facility and service gaps from those in the seaports. This can be executed through a digital registration system, aiming to make registration quicker and simpler. This requires the policy efforts of the Customs Authority.

(v) Support for accessibility improvement of the logistics center

- In the short term, access road development around the logistics centers with due consideration to the access to the center of GCR.
- In the short or medium term, construction of the railway access line to the logistics center together with the station and container yards within the center. Activation of railway services will help in increasing the freight handling volumes.
- Over the long term, the new river port near the logistics center (6th of October), should be constructed, including provision of additional truck services.

b) Promotion policy for line-haul/delivery truck services, and for the forwarding industry

Introduction of a new business registration system is suggested for the vehicles and companies that use the logistics center, and engage in line-haul truck services (long-distance route) and pick-up/delivery service (relatively short distance). Qualifications for registration can be i) the age and maintenance conditions of the vehicle, and ii) participation to various seminars/trainings for trucking companies which are organized under the supervision by the Ministry by Transport. Sizes of pick-up/delivery vehicles can be also controlled by this registration system. Government control by legislation on the size of pick-up/delivery trucks in the GCR is strongly recommended.

Similar business registration and qualification system can be applied to the forwarding industry, especially those who are stationed at the logistics center. Minimum knowledge about the registration procedure and regulations concerned can be provided at the seminars/training supervised by the government, and an authorized qualification will be given to the participants. This qualification can also be effective the participants to apply for financial support from the government in introducing digital equipment and operation for information network. These can enhance the capability of the forwarding industry and can contribute to make their freight-handling operations smoother.

c) Well-coordinated implementation program of promotion policies

Implementation of the policies should be well-coordinated since any single policy may not be sufficient to promote the services of both freight railway and the logistics center. In particular, the policies listed in a) and b) above would be an advantageous combination.

- Further strengthening of the crackdown on overloading of freight vehicles,
- Tightening the enforcement of automobile emissions control,
- Raising the toll rate for trucks and other freight vehicles, and
- Construction of a railway station in the logistics center with container yard and loading equipment and/or construction of new river ports close to the logistics

center.

In the case of Japan, all these policies are well-coordinated among the organizations concerned, especially among government organizations. Related legislations (that cover site selection, financial burden sharing of fund, tax exemption measures at the initial stage, construction of access roads/railways and so on) and plan preparation can be executed to harmonize with the progress of planning and construction of the logistics center.

9.7 Social and Environmental Consideration

9.7.1 Legal Process on Social and Environmental Consideration in Egypt

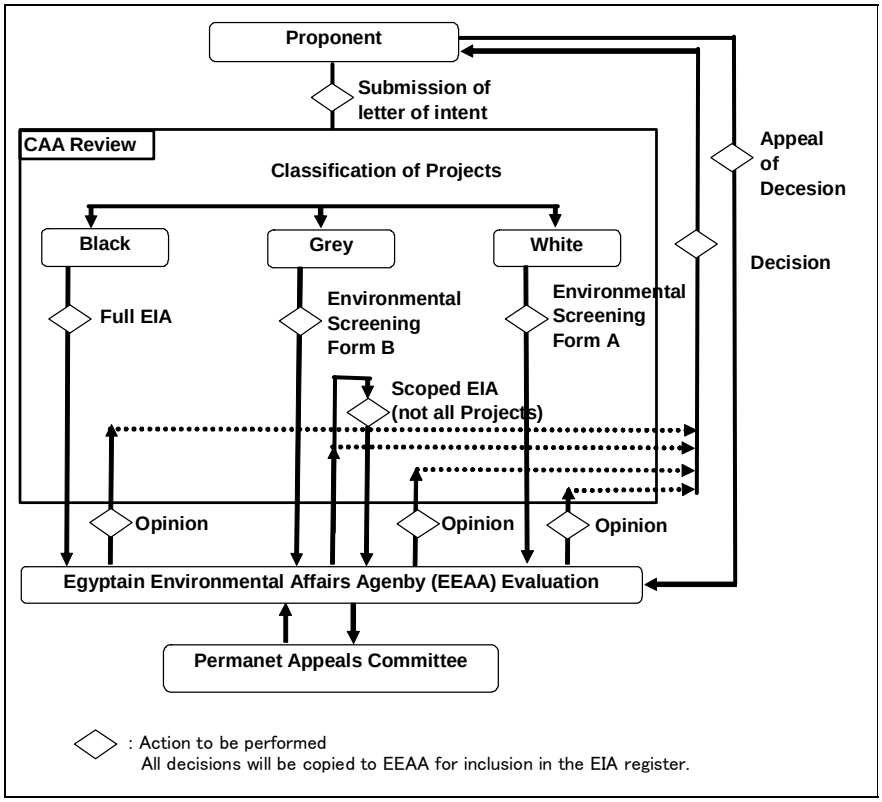
Egyptian Law No.4 requests that the environmental impact of certain establishment or project must be evaluated before any construction works are initiated or a license is issued by the competent administrative authority or licensing authority.

Law No.4 refers four (4) principles to decide the establishments or projects, and they are:

- Type of activity performed by the establishment,
- Extent of natural resources exploitation,
- Location of the establishment, and
- Type of energy used to operate the establishment.

All the projects will be classified into three groups, and each list project will be preceded as Figure 9.7.1 indicates:

- White list projects with minor environmental impact
- Grey list projects which may result in substantial environmental impact
- The proponent has to fill out Environmental Screening Form "B". The procedure consists of two stages: (1) a screening (filling out form B) possibly followed by (2) a scoped Environmental Impact Assessment on certain identified impacts/processes.
    - ✓ Mass transit systems and express ways of length 50kms or less,
    - ✓ The expansion or modification of an existing road that would lengthen or widen such road by more than 15%,
    - ✓ Railway lines of a length 50kms or less, and
    - ✓ Steel shipyards, fry docks, floating docks and ship maintenance.
- Black list projects which require compete Environmental Impact Assessment
    - ✓ Mass transit systems and express ways (more than 50kms), and
    - ✓ New railway lines more than 50km long.



Source: Guideline for Egyptian Environmental Impact Assessment, Egyptian Environmental Affairs Agency (EEAA), Environmental Management Sector

Figure 9.7.1 EIA System and Application Processing Flow

9.7.2 Social and Environmental Consideration of the Master Plan Components

The master plan on Multimodal Transport and Logistics System of Egypt is consisted of mainly the following sector projects:

- Maritime Freight Transportation,
- Inland Export and Import Freight Transportation,
- Speed-up of Custom Clearance and Procedures,
- Enhancement of Software Aspects,
- Rationalization of Logistics Flow, and
- Enhancement of Forwarding Industry.

(1) Maritime Freight Transportation

Securing international hub port function and strengthening of facilities for export/import freight are identified as major development needs in the master plan. In this regards, dredging of existing ports, extension of container birth, extension of existing container terminal, and development of new container terminal would be required to meet the development needs.

In the view of social and environmental consideration issues, the following aspects shall be taken into account on the project evaluation:

- Involuntary resettlement for expansion of container terminal, and
- Water quality / tidal flow direction for dredging and channel works.

(2) Inland Export and Import Freight Transportation

Strengthening freight transportation capacity between port and inland logistic parks would be required to meet the further demand increase of freight transportation. It is generally considered to facilitate road and railway as the transportation measures. The widening of existing road and upgrading and extension of railway corridors would be required as master plan components.

In the view of social and environmental consideration issues, the following aspects shall be taken into account on the project evaluation:

- Involuntary resettlement and land acquisition for widening and extension of road and railway corridors,
- Air pollution, noise and vibration by widening road,
- Natural environmental impacts such as plant, ecosystem and CO2 emission increase by widening of road,
- Air pollution, noise and vibration by extension of railway, and
- Natural environment impacts such as plant, ecosystem by extension of railway, but positive effects on CO2 emission decrease by modal shift from track to railway freight transportation.

(3) Speed-up of Custom Clearance and Procedures

This would be one of the main components of master plan, which are also basically not for the construction activities without heavy environmental impacts. The assumed project for speed-up of custom clearance and procedures are introduction of EDM system and parallel procedures of custom clearance works instead of present serial procedures.

In the view of social and environmental consideration issues, social issues by reduction of employment required would be expected. It is also needed to assess for social vulnerable group, which depends on the work opportunities under the current system.

(4) Enhancement of Software Aspects

As mentioned in (3) above, introduction of Electronic data interchange (EDI) is a key issue to enhancement of software aspects, which will greatly contribute to speed-up custom clearance and other logistic processes for freight transportation. It is required in particular to facilitate and strengthen EDI system at dry ports, which are in general to be at bottle-neck on data transmission by the system.

There would be no significant aspects in environmental consideration, but as pointed out in (3) above, securing employment for the existing workers at dry port would be necessary as many of workers are not well familiar with the computer operation and the required man-power will be decreased by introduction of EDI.

(5) Rationalization of Logistic Flow

Development of logistic centers at appropriate locations is recommended for rationalization of logistic flow. The logistic center has multi-function such as custom clearance, inspection, packing and opening and distribution functions. Generally development of logistic centers near the industrial park is quite attractive to rationalize the logistic flow with less time consumption.

For the logistic center development, social and environmental consideration would be highly required particularly in the following aspects:

- Involuntary resettlement and land acquisition,
- Natural environmental impacts such as plant and ecosystem,
- Air pollution, noise and vibration due to increase of traffic volume from/to logistic center, and
- Positive impact to create job opportunities in logistic center.

(6) Enhancement of Forwarding System

The recommended measure in master plan is again to strengthen EDI system and information and communication technology (ICT) system. In the view of social and environmental consideration, secure of employment of the existing workers should be well considered by means of provision of training program and so on.

9.7.3 Assessment on CO_2 Emission by Modal Shift of Freight Transportation

Global environmental issue is recently focused in the world, particularly in terms of CO_2 emission which caused by global warming. In this section, the volume of CO_2 emission is compared for the freight transportation from major ports to Cairo by road and railway.

The JICA Study Team estimated that the CO_2 emission decreases by modal shift from truck to railway within the existing railway capacity as described in Table 9.7.1.

It is understood that the current railway capacity will be almost full by freight transportation from/to major ports and Cairo. The capacity to shift from truck to railway freight is estimated only 9 million tons/year, which is 6% of total freight volume by truck.

The value of CO_2 emission decrease is estimated based on the global market price on emission trading scheme. The trading value fluctuate from 1 to 23 US$/$CO_2$ 1000kg depending on the market condition. In the JICA Study, 5 US$/ CO_2 1000kg is tentatively applied.

The estimated value on CO_2 emission decrease is then calculated on 2.7 million US$/year without any additional investment on railway infrastructure.

In the view of global warming issue, activation of railway is effective but strengthening of railway corridors should be taken into account to encourage significant change of share between truck and railway freight transportation.

Table 9.7.1 Estimated CO2 Emission Decrease by Modal Shift from Truck to Railway

No.		Item	Unit	Major Ports in Egypt				Total	Remarks
				Alexandria	Damietta	Port Said	Sokhna		
1	a)	Distance from Cairo	km	220	200	200	140	760	Table 3.3.24
2	b)	Freight Volume in 2022	000 ton/year	82,920	50,059	15,084	11,483	159,546	Table 3.3.16
3	c)	Freight Handling Volume by Truck	000 ton/year	75,190	47,221	14,167	10,701	147,279	Table 3.3.16
4	d)	Freight Handing Volume by Railway	000 ton/year	6,940	2,682	917	782	11,321	Table 3.3.16
5		CO_2 Emission by Track							
	e)	Number of 25-ton-track/day	Nos./day	8,240	5,175	1,553	1,173	16,140	c) x 1,000/25/365
	f)	Fuel Efficiency of 25-ton-truck	km/liter	3.1	3.1	3.1	3.1	3.1	Esimated by JICA Study Team
	g)	Daily Fuel Consumption	000 liter/day	5,620	3,208	963	509	38,026	a) x e) x f) /1,000
	h)	Diesel Energy Conversion	Gigajoule/liter	0.0371	0.0371	0.0371	0.0371	0.0371	
	i)	CO_2 Emission Rate	kgCO2/	74.01	74.01	74.01	74.01	74.01	
	j)	Daily CO_2 Emission	ton/day	15,430	8,810	2,643	1,397	28,281	g) x h) x i)
6		CO_2 Emission by Railway (Diesel Lovomotive)							
	k)	Fuel Efficiency of Diesel Locomotive	liter/ton-km	0.0128	0.0128	0.0128	0.0128	0.0128	
	l)	Daily Fuel Consumption by Railway (Diesel Locomotive)	000 liter/day	54	19	6	4	83	a) x d) x k) / 365
	m)	Diesel Energy Conversion	Gigajoule/liter	0.0371	0.0371	0.0371	0.0371	0.0371	
	n)	CO_2 Emission Rate	kgCOs/	74.01	74.01	74.01	74.01	74.01	
	o)	Daily CO_2 Emission by Railway (Diesel Locomotive)	ton/day	147	52	18	11	227	l) x m) x n)
7	p)	Total CO_2 Emission by Freight Transportation in	ton/day	15,577	8,861	2,661	1,408	28,507	j) + o)
8	q)	Daily Railway Capacity	ton/day	21,600	12,600	18,000	3,600	55,800	Estimated by JICA Study Team
	r)	Annual Railway Transport Volume	000 ton/year	7,884	4,599	6,570	1,314	20,367	q) x 365 x 1,000
	s)	Freight Volume to be Shifted from Truck to Railway	000 ton/year	944	1,917	5,653	532	9,046	r) - d)
	t)	CO_2 Emission Decrease by Modal Shift	ton/day	174	321	946	62	1,556	
	u)	Value on CO_2 Emission Decrease based on Emission Trading Scheme [1)]	US$/year	317,054	585,317	1,726,029	113,705	2,742,105	Unit value on emission trading scheme: US5/ton. [2)]

Note: 1) For instance, in January 2005, the European Union Greenhouse Gas Emission Trading Scheme (EU ETS) commenced operation as the largest multi-country, multi-sector Greenhouse Gas emission trading scheme world-wide. The scheme is based on Directive 2003/87/EC, which entered into force on 25 October 2003.

2) Unit price has been fluctuating from 3-8 Euro per ton of CO2 to 20 Euro in these days. US$5 per ton can be a lowest level of the possible range.

Source: JICA Study Team

Chapter 10

Priority Projects and Implementation Program

Chapter 10 Priority Projects and Implementation Program

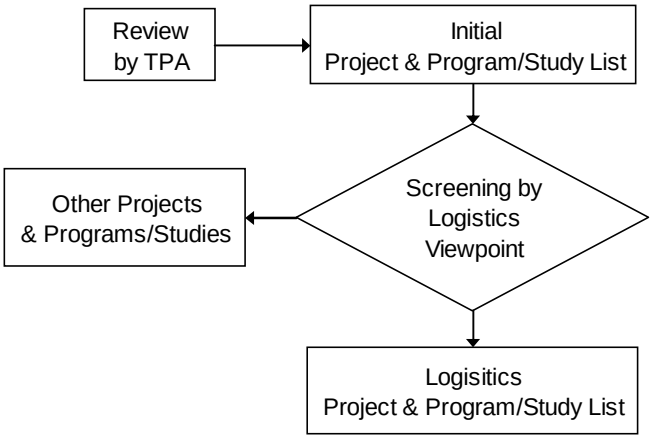
10.1 Approach to Formulate Implementation Program

The logistics master plan is a fifteen-year plan up to the year 2022 to strengthen international competitiveness for export/import industries. The plan must tackle both infrastructure and institutional bottlenecks with effective countermeasures as mentioned in previous chapters. In this chapter, the countermeasures are compiled as a logistics project & program/study list. The projects and programs/studies were prioritized and formulated as an implementation program on the basis of the following policies:

- To establish a modern logistics system to provide an efficient transport service in line with a modal shift from trucks to railways/IWT and to facilitate multimodal transport,
- To promote containerization by developing a logistics-related infrastructure encompassing seaports, dry ports, logistics centers as a logistics hubs in collaboration with the private sector to meet the needs of the international market, and
- To strengthen the governmental body and industrial sector in the field of logistics with a focus on human resource development.

10.2 Identification of Logistics Projects and Programs/Studies

Figure 10.2.1 illustrates the framework to identify logistics projects and programs/studies for the logistics master plan for the planning period up to the year 2022.



Source: JICA Study Team

Figure 10.2.1 Framework for Identification of Logistics Projects & Programs/Studies

10.2.1 Preparation of Initial Project and Program/Study List

Based on the analysis of existing data and concluded projects and programs/studies, an initial project & program/study list i.e. a long list of the projects was prepared and finalized through review at the Steering Committee meetings. In the JICA Study, “project” was defined as development/installation of infrastructure and facilities/system, while “program/study” was defined as training, engineering study, capacity development and so on. The status of the initial project and program/study list was classified as follows:

Table 10.2.1 Status Classification

Status	Description
1. On-going	"On-going" means under construction.
2. Committed	"Committed" means: - The fund has been allocated, and - The project or program/study was included in the Sixth Five-Year Plan.
3. Planned	"Planned" means that the project or program/study is proposed by governmental agencies or other planning studies.
4. New (Proposed)	"New" means that the project or program/study is proposed by JICA Study Team.

Source: JICA Study Team

10.2.2 Preparation of Logistics Project and Program/Study List

In order to select the projects and studies/programs to be included in the logistics master plan, the initial project and program/study list i.e. a long list of the projects/studies was divided into two groups by screening from the logistics point of view. Under this process, other projects and programs/studies, which were not related to logistics such as passenger transport projects, minor road development projects, etc., were excluded. As a result, the logistics project and program/study list was prepared and categorized by the status and sector.

Prior to prioritization and evaluation, it was necessary to exclude on-going and committed projects. Since those projects are already being implemented or will be implemented soon, they do not require any prioritization and evaluation to formulate an implementation program.

The list of ongoing/committed projects is shown in Table 10.2.2 and 10.2.3. The locations of ongoing/committed projects on the Nile Delta and Upper Egypt are illustrated in the maps of Figure 10.2.2 and 10.2.3, respectively. These projects are also categorized by sub-sector, as follows:

I.	Port	(1) Container yards/terminals improvement/rehabilitation (4 projects)
		(2) Development of other port related infrastructures (3 projects)
II.	Road	(1) Widening/improvement of roads (18 projects)
		(2) Upgrade/development of expressways (9 projects)
III.	Railway	(1) Installation/rehabilitation of locomotives/vehicles (3 projects)
		(2) Signaling (2 projects)
IV.	Inland Waterway Transport	(1) Waterway development/improvement (7 projects)
		(2) River port developments (1 project)
V.	Dry Port	(1) Dry port developments (3 projects)

Table 10.2.2 Ongoing/Committed Projects (1/2)

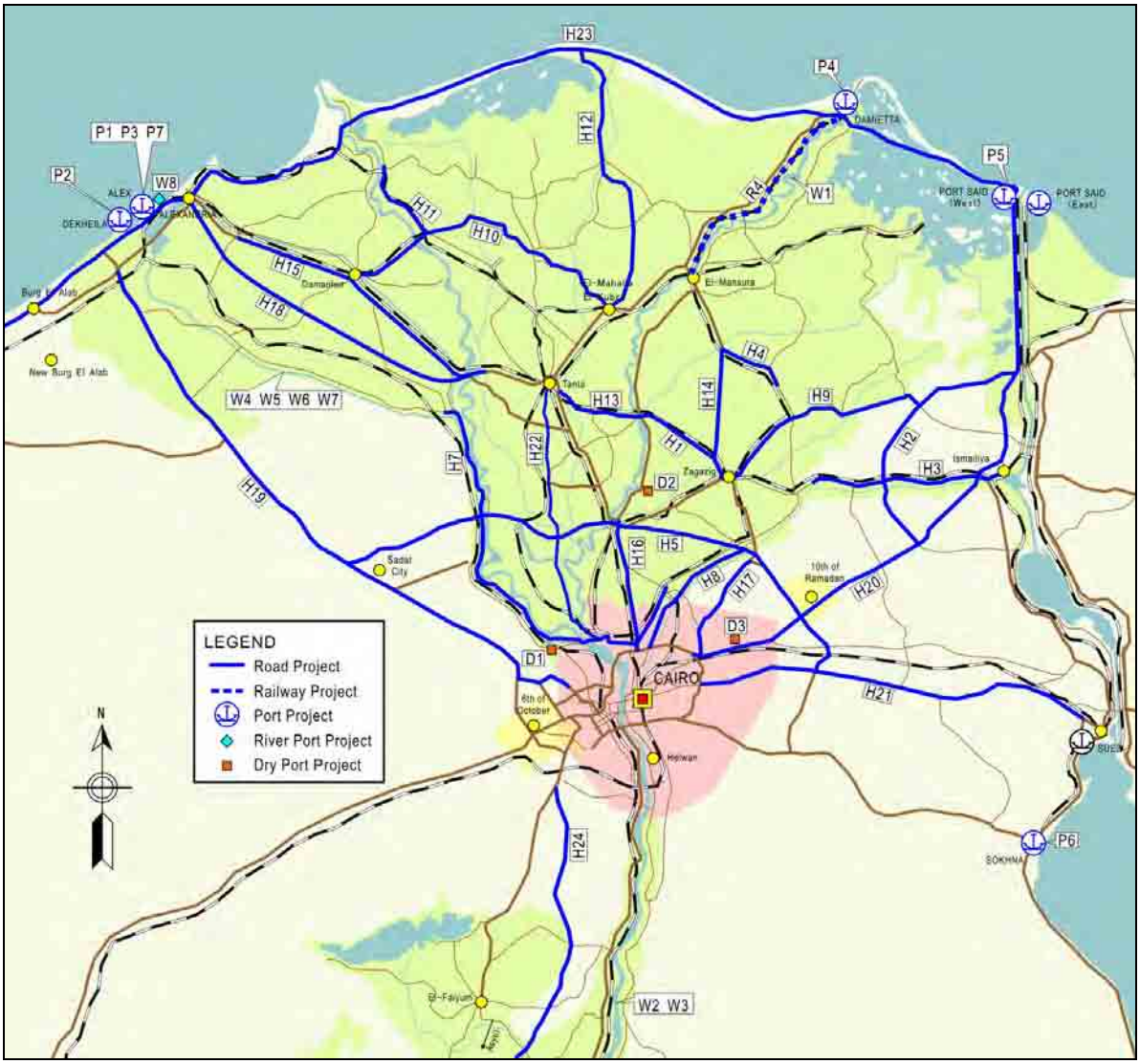
Project No.	Project Name	Status	Implementing Agency	Project Cost (million LE)	Fund Source
I. Sea Port					
P1	Warehouses Upgrading Project at Alexandria Port	Ongoing	Alexandria Port Authority	20	GOE
P2	Flyover Construction Project at Dekheila Port (from Development Road)	Ongoing	Alexandria Port Authority	300	GOE
P3	Container Yard Construction Project at AICT Alexandria	Ongoing	AICT	30	PPP
P4	Container Yard Rehabilitation Project at Damietta Port	Ongoing	Damietta Container Handling Company	30	GOE
P5	Container Yard Expansion Project at Port Said Port (West)	Ongoing	Port Said Port Authority	200	PPP
P6	Basin 3 Terminal Construction Project at Sokhna Port	Ongoing	Sokhna Port Development Company	420	PPP
P7	Radar Tower Building Construction Project at Alexandria Port	Committed	Alexandria Port Authority	50	GOE
II. Road					
H1	Zagazig – Met Gamr Improvement Project	Ongoing	GARBLT	50	GOE
H2	El Kasasen – El Salihya Improvement Project	Ongoing	GARBLT	100	GOE
H3	Ismailia – El Kasasen – Abasa Improvement Project	Ongoing	GARBLT	120	GOE
H4	El Senbellawen – Kafr Sakr Improvement Project	Ongoing	GARBLT	120	GOE
H5	Regional Ring Road Development Project	Ongoing	GARBLT	1,500	GOE
H6	Baris – Darb El Abryen Construction Project	Ongoing	GARBLT	120	GOE
H7	Kanater – Khatatba – Tawfikya Improvement Project	Committed	GARBLT	250	GOE
H8	Cairo - Belbis Agriculture Road Improvement Project	Committed	GARBLT	60	GOE
H9	Kantara – El Salihya – Fakos – Abu Kber – Zagazig Improvement Project	Committed	GARBLT	350	GOE
H10	Talkha – Samanod – El Mahala – Kafr El Sheik – Desok – Damanhur Improvement Project	Committed	GARBLT	460	GOE
H11	Desok – Fooh – Metobas Improvement Project	Committed	GARBLT	200	GOE
H12	El Mahala – Baltiem Improvement Project	Committed	GARBLT	160	GOE
H13	Zefta – Tanta Improvement Project	Committed	GARBLT	50	GOE
H14	Zagazig – El Senbellawen Improvement Project	Committed	GARBLT	150	GOE
H15	Kafr El Dawar – Kafr El Zayat Improvement Project	Committed	GARBLT	150	GOE
H16	Shubra – Banha Expressway Development Project	Committed	GARBLT	710	GOE
H17	Cairo – Zagazig Expressway Development Project	Committed	GARBLT	350	GOE
H18	Kafr El Zayat – Hosh Essa – Alexandria Expressway Development Project	Committed	GARBLT	800	GOE
H19	Cairo - Alexandria Desert Road Upgrade Project	Committed	PPP	800	GOE
H20	Cairo - Ismailia - Port Said Road Upgrade Project	Committed	PPP	800	GOE
H21	Cairo - Suez Road Upgrade Project	Committed	GARBLT	500	GOE
H22	Kanater - Bagour - Shben El Kom - Tanta - El Mahala Section Upgrade Project	Committed	GARBLT	660	GOE
H23	International Coastal Road Upgrade Project	Committed	GARBLT	1,950	GOE
H24	Cairo - Asyut Desert Road Improvement Project	Committed	GARBLT	360	GOE
H25	Beni Suef - Menya - Asyut - Suhag Agricultural Road Improvement Project	Committed	GARBLT	600	GOE
H26	Qena - Safaga Improvement Project	Committed	GARBLT	240	GOE
H27	Toshka - Arken Road Construction Project	Committed	GARBLT	100	GOE

Note: Fund Source: GOE is Government of Egypt
Source: JICA Study Team based on data from various authorities

Table 10.2.3 Ongoing/Committed Projects (2/2)

Project No.	Project Name	Status	Implementing Agency	Project Cost (million LE)	Fund Source
III. Railway					
R1	120 Locomotives Rehabilitation Project	Ongoing	ENR	396	GOE
R2	120 Locomotives Installation Project	Ongoing	ENR	2,640	GOE, Qatar & Libya
R3	300 Vehicles Upgrading Project	Ongoing	ENR (Semaf Factory)	60	GOE
R4	Modernization Project for Signaling of Some Lines (Damietta – Mansura Line)	Ongoing	ENR	60	GOE
R5	Modernization Project for Signaling of Some Lines (Beni Suef – El Minia – Aswan Line)	Ongoing	ENR	1,700	GOE
IV. Inland Waterway Transport					
W1	Cairo - Damietta Waterway Development Project	Ongoing	River Transport Authority	260	GOE
W2	Cairo - Aswan Waterway Dredging Project	Ongoing	River Transport Authority	128	GOE
W3	Cairo - Aswan Waterway Navigation Development Project (Phase I)	Ongoing	River Transport Authority	67	GOE
W4	El Maleh Lock Construction Project	Ongoing	River Transport Authority	90	GOE
W5	Km 100 Lock Construction Project	On-going	River Transport Authority	322	GOE
W6	Bolin Lock Upgrading Project	Ongoing	River Transport Authority	2	GOE
W7	Km 61 Lock Construction Project	Ongoing	River Transport Authority	6	GOE
W8	River Port Development Project at Alexandria Port	Ongoing	Alexandria Port Authority	30	GOE
V. Dry Port					
D1	Bashtel Dry Port Development Project	Ongoing	Inland and Dry Ports Authority	25	PPP
D2	Sakr Dry Port Development Project	Ongoing	Inland and Dry Ports Authority	50	GOE
D3	El Obour Dry Port Development Project	Ongoing	Inland and Dry Ports Authority	68	Private

Note: Fund Source: GOE is Government of Egypt
Source: JICA Study Team based on data from various authorities



Source: JICA Study Team based on data from various authorities

Figure 10.2.2 Location Map of Ongoing/Committed Projects in Nile Delta

Source: JICA Study Team based on data from various authorities

Figure 10.2.3 Location Map of Ongoing/Committed Projects in Upper Egypt

The planned/new projects are categorized by sector as shown in Table 10.2.4 and 10.2.5. On the other hand, the planned/new programs/studies are shown in Table 10.2.6. The location maps of the planned/new projects on Nile Delta and Upper Egypt are illustrated in Figure 10.2.4 – 10.2.13. The projects are also summarized by sub-sector, as follows:

I.	Port	(1) Container terminal developments (17 projects) (2) Development of port facilities for general cargo & bulk cargo (6 projects) (3) Channel upgrades (2 projects) (4) Installation of equipment/systems (2 projects) (5) Development of other port related infrastructures (2 projects)
II.	Road	(1) New developments (1 project)
III.	Railway	(1) Electrification of signaling (3 projects) (2) Construction of new access lines (4 projects) (3) Improvement (1 project) (4) Installation of reefer container and facility (1 project)
IV.	Inland Waterway Transport	(1) Waterway development/improvement (1 project) (2) River port developments (4 projects)
V.	Dry Port	(1) Dry port development (1 project)
VI.	Logistics Center	(1) Logistics center developments (3 projects)
VII.	Customs	(1) Establishment of single window system (2 projects)
VIII.	Forwarding	(1) Installation of Radio Frequency Identification (RFID) system (1 project)

Table 10.2.4 Planned/New Projects (1/2)

Project No.	Project Name	Status	Implementing Agency	Estimated Project Cost (million LE)	Expected Fund Source
I. Port					
P8	Railway Yard Development Project at Alexandria Port	Planned	Alexandria Port Authority	4	GOE
P9	Multipurpose Terminal Development Project at Alexandria Port	Planned	Alexandria Port Authority	2,000	PPP
P10	International Container Terminal Development Project at Dekheila Port	Planned	Alexandria Port Authority	470	PPP
P11	Petrochemical Berth Construction Project at Dekheila Port	Planned	Alexandria Port Authority	120	PPP
P12	Grain Berth Extension Project at Dekheila Port	Planned	Alexandria Port Authority	120	PPP
P13	Billet, Coal & Coke and Dry Bulk Berth Development Project at Dekheila Port	Planned	Alexandria Port Authority	120	PPP
P14	Middle Port Development Project between Alexandria and Dekheila Ports	Planned	Alexandria Port Authority	12,000	PPP
P15	KGL Container Terminal Construction Project (Phase-1)	Planned	KGL (private company)	560	Private
P16	KGL Container Terminal Construction Project (Phase-2)	Planned	KGL (private company)	660	Private
P17	Access Channel Deepening Project at Damietta Port	Planned	KGL (private company)	132	Private
P18	Berth Conversion Project from General Cargo Berth to Container Berth at Damietta Port	Planned	Damietta Port Authority / Damietta Container Handling Company	30	GOE
P19	Deep Berth Construction (400m) Project at Port Said Port (West)	Planned	Port Said Port Authority	400	PPP
P20	Container Terminal Development Project at Port Said Port (East) (Phase-2)	Planned	Port Said Port Authority	2,500	PPP
P21	Container Terminal Development Project at Port Said Port (East) (Phase-3)	Planned	Port Said Port Authority	2,500	PPP
P22	Container Terminal Development Project at Port Said Port (East) (Phase-4)	Planned	Port Said Port Authority	2,500	PPP
P23	Container Terminal Development Project at Port Said Port (East) (Phase-5)	Planned	Port Said Port Authority	2,500	PPP
P24	Container Terminal Development Project at Sokhna Port	Planned	Sokhna Port Development Company	-	Private
P25	General Cargo Terminal Development Project at Sokhna Port	Planned	Sokhna Port Development Company	-	Private
P26	Bulk Terminal Development Project at Sokhna Port	Planned	Sokhna Port Development Company	-	Private
P27	Container Yard Expansion Project at Alexandria Port (AICT)	New	Alexandria Port Authority	15	PPP
P28	Gantry Cranes Renewal and Additional RTG Installation Project at Alexandria Port (Government)	New	Alexandria Port Authority	25	GOE
P29	Container Yard Pavement Upgrade Project at Alexandria Port (Government)	New	Alexandria Port Authority	125	GOE
P30	Container Terminal Consolidation Project at Dekheila Port	New	Alexandria Port Authority	10	PPP
P31	Additional Container Yard Construction Project at Dekheila Port	New	Alexandria Port Authority	25	PPP
P32	Additional Breakwater Construction Project at Dekheila Port	New	Alexandria Port Authority	250	GOE
P33	Conveyor System Installation Project at Dekheila Port	New	Alexandria Port Container & Cargo Handling Co.	175	Private
P34	Access Channel Upgrade Project at Damietta Port	New	Damietta Port Authority	1,200	GOE
P35	Container Yard Expansion Project at Port Said Port (West)	New	Port Said Port Authority	250	GOE
P36	Safaga Multipurpose Terminal Development Project	New	Red Sea Port Authority	100	GOE

Note: Fund Source: GOE is Government of Egypt
Source: JICA Study Team based on data from various authorities

Table 10.2.5 Planned/New Projects (2/2)

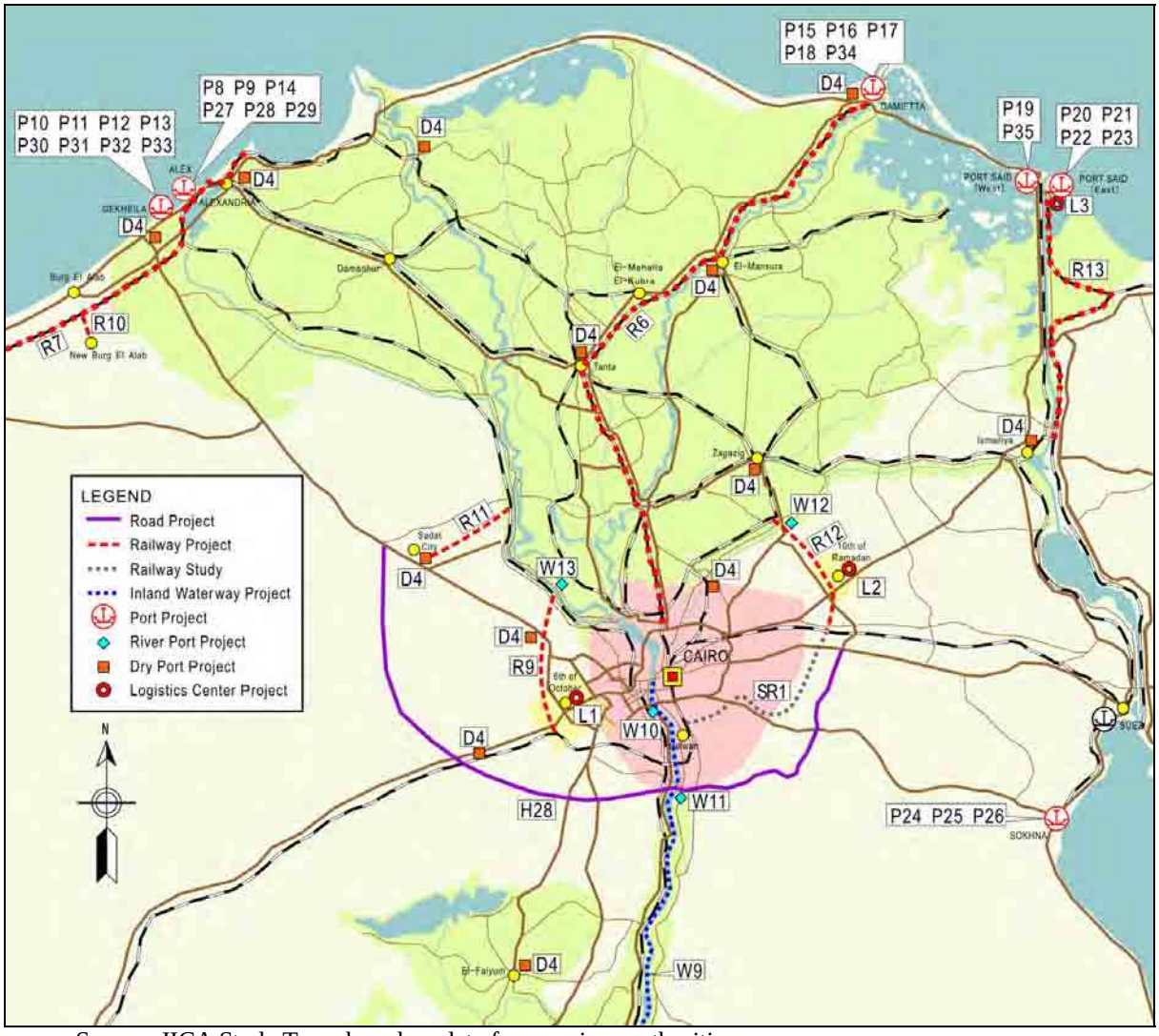
Project No.	Project Name	Status	Implementing Agency	Estimated Project Cost (million LE)	Expected Fund Source
II. Road					
H28	Regional Ring Road Development Project (South Arc)	Planned	GARBLT	1,500	GOE
III. Railway					
R6	Electrification of Signaling of Beni Shebin El-Qanater - El-Zagazig - El-Mansura - Damietta Line	Planned	ENR	734	GOE
R7	Electrification of Signaling for El-Rahm - Alexandria - Abu Qeer Line	Planned	ENR	1,116	GOE
R8	Electrification of Signaling for Beni Suef - El-Menia - Asyut Line	Planned	ENR	1,640	GOE
R9	6th of October Direct Access Line Construction Project	New	ENR	240	GOE
R10	Burg El-Arab Access Line Construction Project	New	ENR	750	GOE
R11	Sadat City Access Line Construction Project	New	ENR	190	GOE
R12	10th of Ramadan Direct Access Line Construction Project (Bilbeis - 10th of Ramadan)	New	ENR	250	GOE
R13	Railway Improvement Project (Ferdan - Port Said Port East)	New	ENR	550	GOE
R14	Reefer Container and Facility Project	New	ENR	10	GOE
IV. Inland Waterway Transport					
W9	Cairo - Aswan Waterway Navigation Development Project (Phase II)	Planned	River Transport Authority	33	GOE
W10	Athar El Nabi River Port Development Project	Planned	River Transport Authority	38	PPP
W11	El-Tebin River Port Development Project	Planned	River Transport Authority	60	PPP
W12	Bilbeis River Port Development Project	Planned	River Transport Authority	60	PPP
W13	New River Port Construction Project near 6th of October	New	River Transport Authority	60	PPP
V. Dry Port					
D4	Dry Port Development Project (17 location)	Planned/ New	Inland and Dry Ports Authority	720	PPP
VI. Logistics Center					
L1	Logistics Center Development Project (6th of October)	New	Inland and Dry Ports Authority	80	PPP
L2	Logistics Center Development Project (10th of Ramadan)	New	Inland and Dry Ports Authority	80	PPP
L3	Logistics Center Development Project (Port Said East)	New	Inland and Dry Ports Authority	80	PPP
VII. Customs					
C1	Single Window System Establishment Supplemental Project (Sea Ports)	New	Port Authorities	50	GOE
C2	Single Window System Establishment Project (Dry Ports)	New	Inland and Dry Ports Authority	10	GOE
VIII. Forwarding					
F1	Pilot Project on Radio Frequency Identification (RFID) system	New	Port Authorities	60	GOE

Note: Expected Fund Source: GOE is Government of Egypt
Source: JICA Study Team based on data from various authorities

Table 10.2.6 Planned/New Programs/Studies

Project No.	Program/Study Name	Status	Implementing Agency	Estimated Project Cost (million LE)	Expected Fund Source
I. Port					
SP1	Study for Coordination of Development Plans for Egyptian Ports	New	Maritime Transport Sector	10	GOE
SP2	Study of Numerical Simulation for Sedimentation Prevention at Damietta Port	New	Damietta Port Authority	10	GOE
SP3	Master Plan Supplemental Study at Port Said Port (East)	New	Port Said Port Authority	10	GOE
SP4	Study on Bunkering Service Station at Port Said Port (East)	New	Port Said Port Authority	10	GOE
II. Railway					
SR1	New Freight Link Study (10th of Ramadan - Helwan, Marazip Bridge)	New	ENR	30	GOE
SR2	Railway Freight Service Private Sector Management Study	New	ENR	10	GOE
III. Customs					
SC1	Simple and Quick Procedure Program	New	Customs Authority/ GOEIC	10	GOE
SC2	Public Relation Improvement Program	New	Customs Authority/ GOEIC	10	GOE
IV. Freight Transport Sector					
SF1	Financial Incentive Program	New	MOT/MOF	5	GOE
SF2	Forwarding/Trucking Industry Service Enhancement Program	New	MOT	5	GOE
SF3	Legal and Public Administration Framework Improvement Program	New	MOT	20	GOE
SF4	Policy Maker Training Program	New	MOT	2	GOE
SF5	Human Resource Development Program	New	MOT	20	GOE
SF6	Technical Training Program	New	MOT	2	GOE
SF7	Industrial Zone Access Roads Construction Study	New	MOT	5	GOE
SF8	Feasibility Study on the Nile River Freight Transportation	New	MOT	10	GOE
SF9	Study for Logistics Center Development	New	MOT	20	GOE

Note: Expected Fund Source: GOE is Government of Egypt
Source: JICA Study Team based on data from various authorities



Source: JICA Study Team based on data from various authorities

Figure 10.2.4 Location Map of Planned/New Projects in Nile Delta

Source: JICA Study Team based on data from various authorities

Figure 10.2.5 Location Map of Planned/New Projects for Upper Egypt

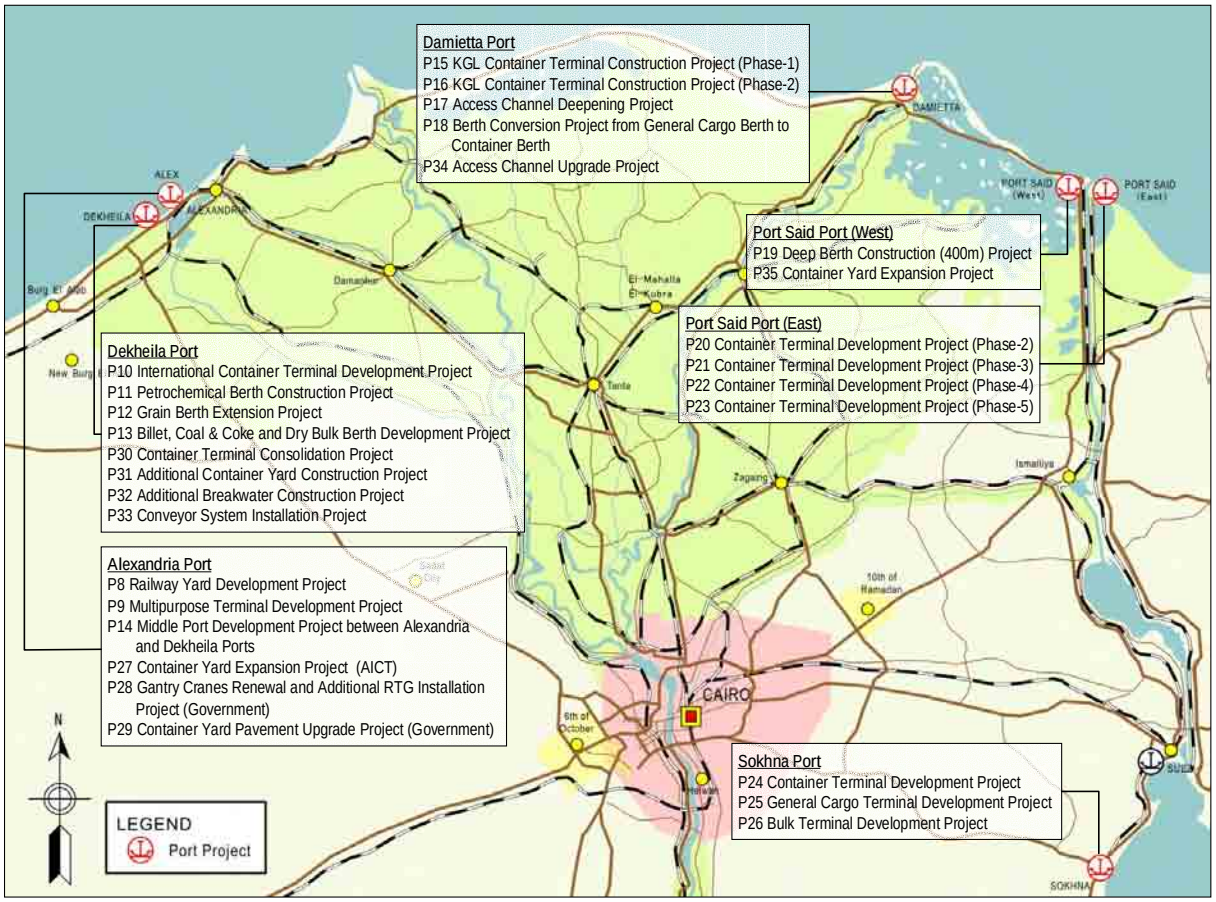


Figure 10.2.6 Location Map of Planned/New Projects for Maritime Sector (Nile Delta)

Figure 10.2.7 Location Map of Planned/New Projects for Maritime Sector (Upper Egypt)

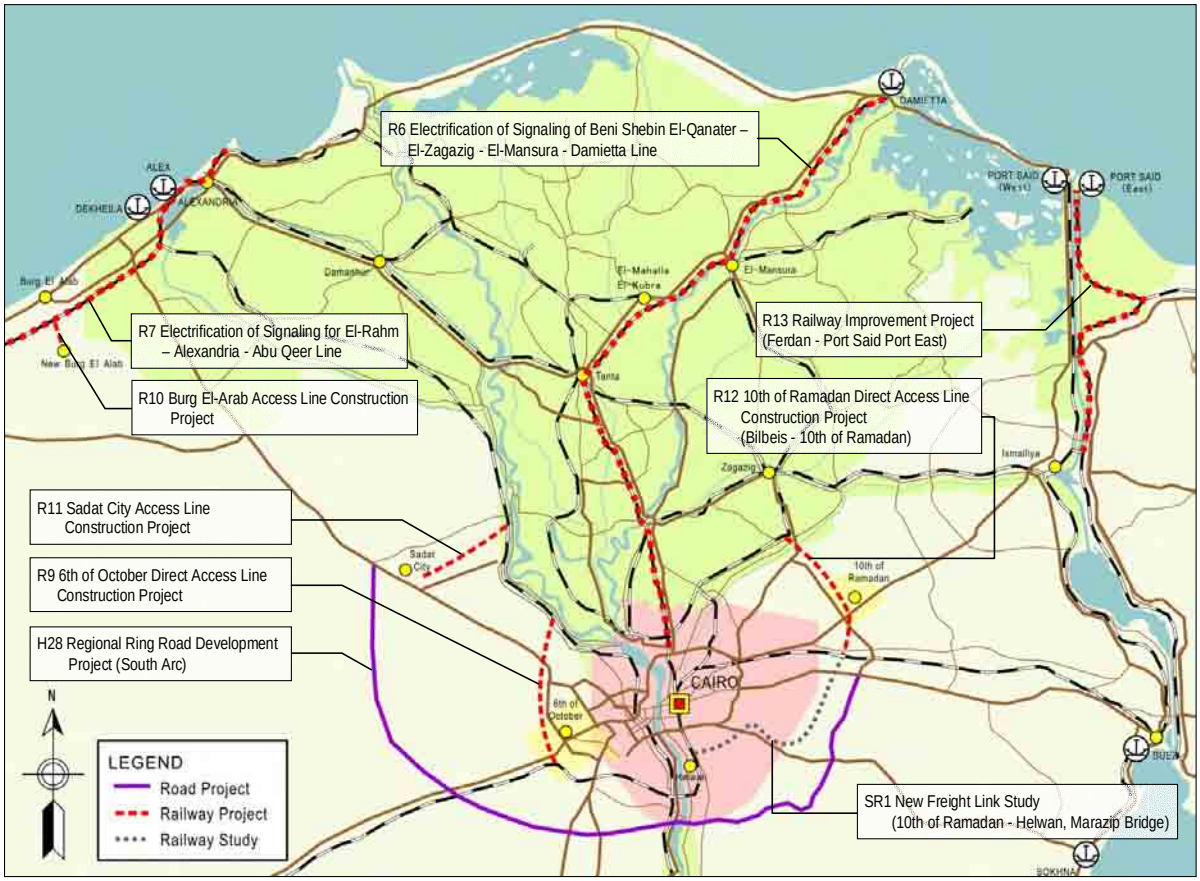


Figure 10.2.8 Location Map of Planned/New Projects for Road and Railway Sectors (Nile Delta)

Figure 10.2.9 Location Map of Planned/New Projects for Road and Railway Sectors (Upper Egypt)

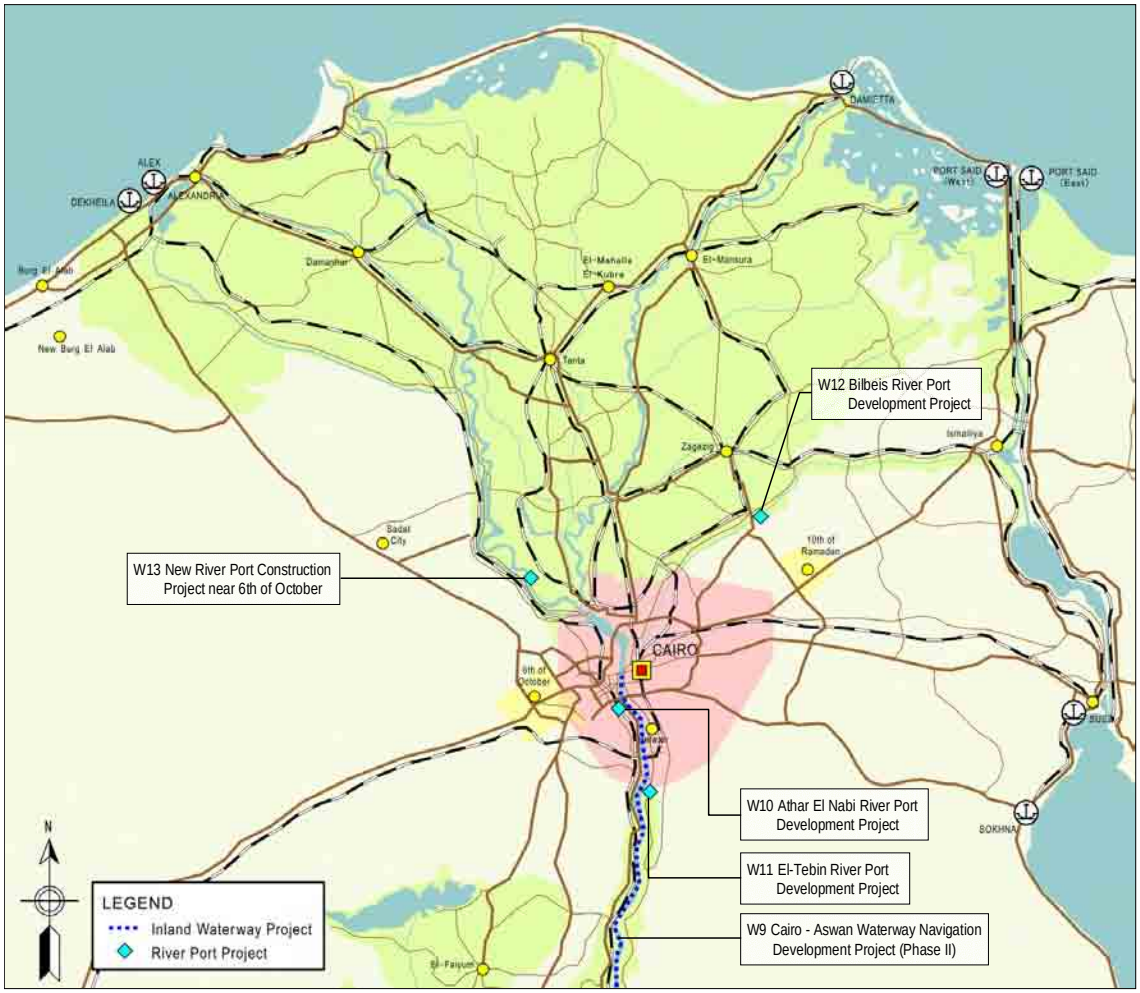


Figure 10.2.10 Location Map of Planned/New Projects for IWT Sector (Nile Delta)

Figure 10.2.11 Location Map of Planned/New Projects for IWT Sector (Upper Egypt)

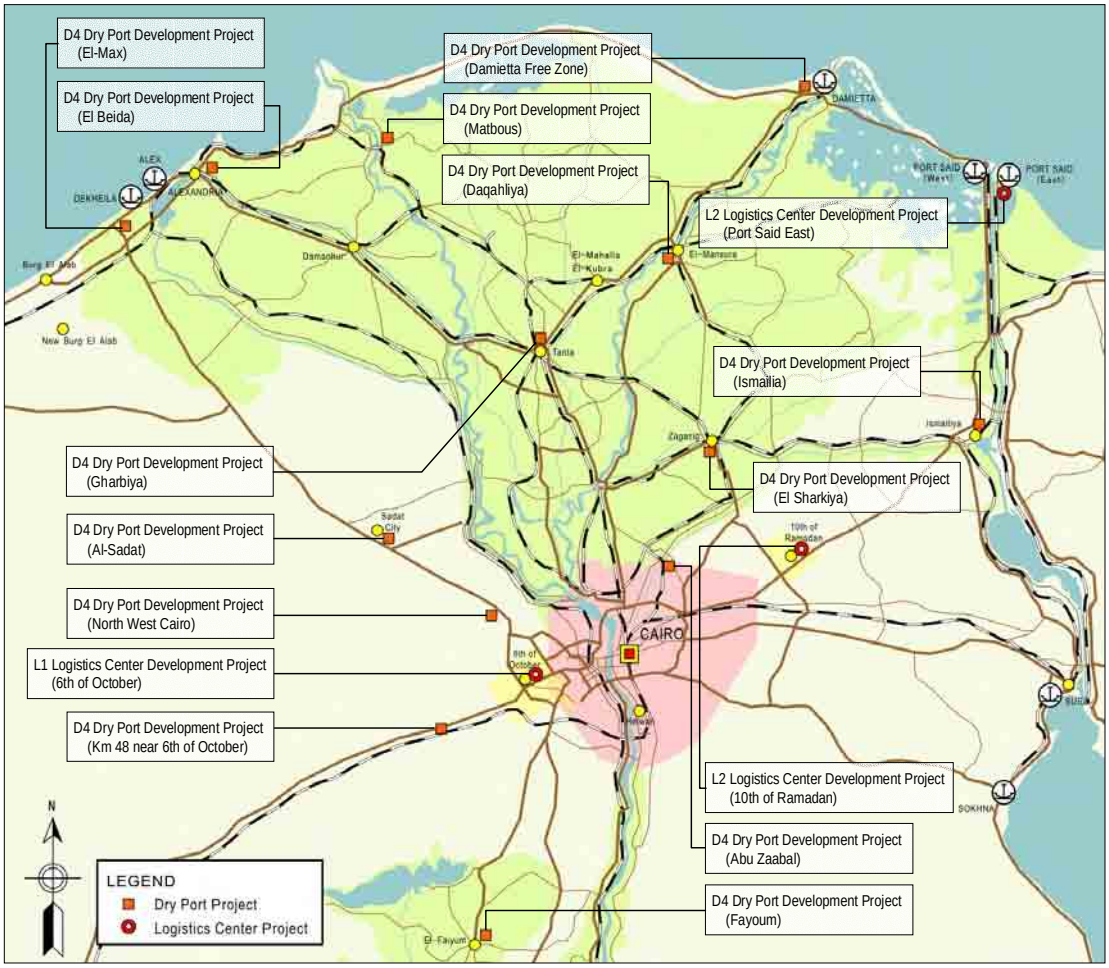


Figure 10.2.12 Location Map of Planned/New Projects for Dry Port and Logistics Center (Nile Delta)

Figure 10.2.13 Location Map of Planned/New Projects for Dry Port and Logistics Center (Upper Egypt)

10.3 Evaluation of Logistics Project and Program/Study List

10.3.1 Evaluation Criteria

Planned/new projects should be evaluated to determine to what degree each project contributes to the broad logistics field. Accordingly, each project was evaluated with the following indicators:

(1) Contribution to Corridor Development

This evaluates the contribution of the project to the corridor identified in the previous chapter. The project was evaluated on impacts that strengthen the main freight route and the connectivity for multimodal transport on the overall transport network.

(2) Just In Time

Since "Just in Time" is one of the most crucial factors to reliably make a profit from shipper's viewpoint, the project was evaluated on the degree of the improvement towards achieving punctuality.

(3) Contribution to Containerization

Containerization is a key to facilitate multimodal transport with a seamless distribution network of truck, railway and shipping. The degree of the contribution of the project to containerization was evaluated.

(4) Export/Import Freight Demand

The project was evaluated considering the existing and future export/import freight demand on the basis of the zoning system established in the JICA Study. In addition, the enhancement of handling or transport capacity was considered for this item, because for some projects the export/import freight demand was difficult to evaluate for some projects.

(5) Export Promotion and Foreign Direct Investment (FDI)

This evaluates the contribution of the project to promote the export industry and Foreign Direct Foreign Investment (FDI). The project was also evaluated from viewpoints of strategic location for export and the relationship with industrial zones.

(6) PPP Potential

This evaluates the potential of public private partnership to implement the project. The project is expected to recover the investment cost from the revenue and to reduce the governmental financial burden.

(7) Natural Environment

The project was evaluated on its impact on the natural environment and natural conditions such as air, water, soil, ecosystem, fauna and flora. For project prioritization, the following items are the most critical conditions:

- *Impact on national parks and natural protected areas*: To avoid developing in or near national parks and Ramsar sites with respect to biodiversity conservation.
- *Impact on archaeological, historical or cultural valuable areas*: To avoid developing in or near national monuments and world cultural heritage sites with respect to

protection of culturally important properties.

(8) Resettlement

The project was evaluated from the viewpoint of social impacts by looking at resettlement. Since people to be resettled involuntarily must be sufficiently compensated and supported by project proponents, etc, it is necessary to consider the project location to minimize resettlement and to avoid high-density residential areas or built-up areas.

(9) Maturity of Project

This evaluates the maturity of the project to implement or to proceed to the next step.

The planned/new projects were evaluated in view of each indicator and graded in accordance with the rating as shown in Table 10.3.1. The ratings were converted into the scores to prioritize the projects. The scores were summed up to calculate the total scores.

(10) Without Project (Zero Option)

According to the "JICA Guidelines for Environmental and Social Considerations" issued on April 2004, "without project (zero option)" has to be considered in the evaluation or alternative option. This "without project (zero option)" is assumed by each sector as follows:

- The present operation and maintenance for sea port are properly carried out and the cargo handling capacity remains unchanged without any improvement.
- The road and freight railway networks are maintained as it is without new development/construction.
- Any improvement or electrification for the freight railway is not implemented.
- The waterway between Cairo and Aswan is maintained as it is.
- New river and dry ports are not developed.
- Logistics centers are not newly developed at 6th of October, 10th of Ramadan and Port Said Port (East).
- Single Windows System is not improved at sea and dry ports and the present customs procedures remain unchanged.

In case that the projects are not implemented as mentioned above conditions, it will be expected the adverse impacts such as significant low logistics efficiency, limited handling capacity and so on. The adverse impacts in case of "without project" are applied as the evaluation criteria.

Table 10.3.1 Indicators for Project Prioritization

	Indicator	Rating	Score
1	Contribution to Corridor Development	a. High b. Medium c. Low d. No contribution	3 2 1 0
2	Just In Time	a. High improvement b. Medium improvement c. Low improvement d. No contribution	3 2 1 0
3	Contribution to Containerization	a. High b. Medium c. Low d. No contribution	3 2 1 0
4	Export/Import Freight Demand	a. High b. Medium c. Low d. No contribution	3 2 1 0
5	Export Promotion and Foreign Direct Investment	a. High b. Medium c. Low d. No contribution	3 2 1 0
6	PPP Potential	a. Full PPP b. Partial PPP c. Low potential for PPP d. No potential for PPP	3 2 1 0
7	Natural Environment	a. None b. Unknown (further study necessary) c. Expected moderate adverse impacts require detail survey in F/S or design stage d. Expected serious impacts	3 2 1 0
8	Resettlement	a. No resettlement b. Unknown (further study necessary) c. Expected a few resettlements require detail survey in F/S or design stage d. Expected significant resettlements	3 2 1 0
9	Maturity	a. High b. Medium c. Low d. None	3 2 1 0
10	Adverse Impact in case of "Without Project"	a. Serious adverse impact b. Moderate adverse impact c. Low adverse impact d. None	3 2 1 0

Source: JICA Study Team

The new programs/studies were evaluated by contribution to human resource development and international logistics competitiveness as shown in Table 10.3.2.

Table 10.3.2 Indicators for Program/Study Prioritization

	Indicator	Rating	Score
1	Contribution to Human Resource Development	a. High Effectiveness b. Medium Effectiveness c. Low Effectiveness d. No contribution	3 2 1 0
2	Contribution to International Logistics Competitiveness	a. High improvement b. Medium improvement c. Low improvement d. No contribution	3 2 1 0

Source: JICA Study Team

10.3.2 Assessment of Projects and Programs/Studies

Table 10.3.3 – 10.3.4 and Table 10.3.5 show the assessment of the planned/new projects and programs/studies for the logistics master plan, respectively.

Table 10.3.3 Assessment of Planned/New Projects in Order of Total Score (1/2)

Project No.	Project Name	(1) Corridor	(2) JIT	(3) Container-ization	(4) Demand	(5) Export/ FDI	(6) PPP	(7) Enviro-nment	(8) Resettle-ment	(9) Maturi-ty	(10) Without Project	Total Score
L1	Logistics Center Development Project (6th of October)	a	a	a	b	a	a	b	b	c	a	25
L2	Logistics Center Development Project (10th of Ramadan)	a	a	a	b	a	a	b	b	c	a	25
P15	KGL Container Terminal Construction Project (Phase-1)	b	a	b	a	c	a	b	b	a	a	24
P20	Container Terminal Development Project at Port Said Port (East) (Phase-2)	b	a	b	a	c	a	b	b	a	a	24
P16	KGL Container Terminal Construction Project (Phase-2)	b	a	b	a	c	a	b	b	b	a	23
P17	Access Channel Deepening Project at Damietta Port	b	a	b	b	c	a	b	b	a	a	23
P19	Deep Berth Construction (400m) Project at Port Said Port (West)	b	a	b	a	c	b	b	b	a	b	22
P21	Container Terminal Development Project at Port Said Port (East) (Phase-3)	b	a	b	a	c	a	b	b	b	b	22
R13	Railway Improvement Project (Ferdan - Port Said Port East)	a	a	b	b	a	d	a	a	c	c	21
R14	Reefer Container and Facility Project	a	a	a	c	a	d	a	a	c	c	21
C1	Single Window System Establishment Supplemental Project (Sea Ports)	b	a	a	b	a	d	a	a	c	c	21
F1	Pilot Project on Radio Frequency Identification (RFID) System	b	a	a	b	a	d	a	a	c	b	21
P24	Container Terminal Development Project at Sokhna Port	b	a	b	b	c	a	b	b	b	d	20
L3	Logistics Center Development Project (Port Said East)	b	a	b	b	a	a	b	b	d	c	20
C2	Single Window System Establishment Project (Dry Ports)	c	a	a	b	a	d	a	a	c	c	20
P18	Berth Conversion Project from General Cargo Berth to Container Berth at Damietta Port	b	a	b	b	c	b	b	b	b	c	19
P22	Container Terminal Development Project at Port Said Port (East) (Phase-4)	b	a	b	b	c	a	b	b	c	c	19
P23	Container Terminal Development Project at Port Said Port (East) (Phase-5)	b	a	b	b	c	a	b	b	c	c	19
R6	Electrification of Signaling of Beni Shebin El-Qanater - El-Zagazig - El-Mansura - Damietta Line	a	a	c	b	c	d	a	a	b	c	19
W11	El-Tebin River Port Development Project	a	b	b	c	c	a	b	b	b	c	19

Source: JICA Study Team

Table 10.3.4 Assessment of Planned/New Projects in Order of Total Score (2/2)

Project No.	Project Name	(1) Corridor	(2) JIT	(3) Container-ization	(4) Demand	(5) Export/ FDI	(6) PPP	(7) Enviro-nment	(8) Resettle-ment	(9) Maturi-ty	(10) Without Project	Total Score
P10	International Container Terminal Development Project at Dekheila Port	b	a	b	b	c	b	b	b	c	b	19
P28	Gantry Cranes Renewal and Additional RTG Installation Project at Alexandria Port (Government)	b	a	b	c	c	b	b	b	b	b	19
R8	Electrification of Signaling for Beni Suef - El-Menia - Asyut Line	a	a	c	c	c	d	a	a	b	b	19
R9	6th of October Direct Access Line Construction Project	a	a	b	b	a	d	b	c	c	b	19
R12	10th of Ramadan Direct Access Line Construction Project (Bilbeis - 10th of Ramadan)	a	a	b	b	a	d	b	c	c	b	19
W12	Bilbeis River Port Development Project	a	b	b	c	c	a	b	b	c	c	18
W13	New River Port Construction Project near 6th of October	a	b	b	c	c	a	b	b	c	c	18
P8	Railway Yard Development Project at Alexandria Port	b	b	b	c	c	c	b	b	a	b	18
P9	Multipurpose Terminal Development Project at Alexandria Port	b	b	c	b	c	b	b	b	b	b	18
P34	Access Channel Upgrade Project at Damietta Port	b	a	c	b	b	c	b	b	c	a	18
P36	Safaga Multipurpose Terminal Development Project	a	b	b	c	b	c	b	b	c	c	17
R11	Sadat City Access Line Construction Project	b	a	b	b	a	d	b	c	c	c	17
W9	Cairo - Aswan Waterway Navigation Development Project (Phase II)	a	b	c	c	b	d	b	b	a	c	17
W10	Athar El Nabi River Port Development Project	a	b	b	c	c	a	b	c	c	c	17
P25	General Cargo Terminal Development Project at Sokhna Port	b	c	d	b	c	a	b	b	b	c	17
P26	Bulk Terminal Development Project at Sokhna Port	b	c	d	b	c	a	b	b	b	b	17
H28	Regional Ring Road Development Project (South Arc)	c	b	c	a	c	c	b	b	b	b	17
R7	Electrification of Signaling for El-Rahm - Alexandria - Abu Qeer Line	c	a	c	c	c	d	a	a	b	c	16
R10	Burg El-Arab Access Line Construction Project	c	a	b	b	a	d	b	c	c	c	16
P12	Grain Berth Extention Project at Dekheila Port	b	c	d	b	c	b	b	b	b	b	16
P13	Billet, Coal & Coke and Dry Bulk Berth Development Project at Dekheila Port	b	c	d	b	c	b	b	b	b	b	16
P14	Middle Port Development Project between Alexandria and Dekheila Ports	b	b	c	a	c	b	b	c	d	c	15
P29	Container Yard Pavement Upgrade Project at Alexandria Port (Government)	b	b	c	c	c	c	b	b	b	c	15
P30	Container Terminal Consolidation Project at Dekheila Port	b	b	c	c	c	b	b	b	c	c	15
P32	Additional Breakwater Construction Project at Dekheila Port	b	a	c	c	c	c	b	b	c	c	15
D4	Dry Port Development Project (17 location)	b	b	b	c	c	a	c	c	c	c	15
P11	Petrochemical Berth Construction Project at Dekheila Port	b	c	d	b	c	b	b	b	c	b	15
P27	Container Yard Expansion Project at Alexandria Port (AICT)	b	b	c	c	c	b	b	c	c	b	15
P31	Additional Container Yard Construction Project at Dekheila Port	b	b	c	c	c	c	b	b	c	b	15
P35	Container Yard Expansion Project at Port Said Port (West)	b	b	c	c	c	c	b	c	b	c	14
P33	Conveyor System Installation Project at Dekheila Port	b	c	d	c	c	b	b	b	c	b	14

Source: JICA Study Team

Table 10.3.5 Assessment of Planned/New Programs/Studies in Order of Total Score

Project No.	Program/Study Name	(1) Contribution to Human Resource Development	(2) Contribution to International Logistics Competitiveness	Total Score
SP1	Study for Coordination of Development Plans for Egyptian Ports	b	a	5
SP4	Study on Bunkering Service Station at Port Said Port (East)	b	a	5
SC1	Simple and Quick Procedure Program	b	a	5
SC2	Public Relation Improvement Program	b	a	5
SF2	Forwarding/Trucking Industry Service Enhancement Program	b	a	5
SF3	Legal and Public Administration Framework Improvement Program	a	b	5
SF4	Policy Maker Training Program	a	b	5
SF5	Human Resource Development Program	a	b	5
SF6	Technical Training Program	a	b	5
SF9	Study for Logistics Center Development	b	a	5
SP2	Study of Numerical Simulation for Sedimentation Prevention at Damietta Port	c	a	4
SP3	Master Plan Supplemental Study at Port Said Port (East)	c	a	4
SR1	New Freight Link Study (10th of Ramadan - Helwan,	c	a	4
SF1	Financial Incentive Program	b	b	4
SR2	Railway Freight Service Private Sector Study	c	b	3
SF7	Industrial Zone Access Road Construction Study	c	b	3
SF8	Feasibility Study on the Nile River Freight	c	b	3

Source: JICA Study Team

10.4 Implementation Schedule

10.4.1 Confirmation of Budget Envelope for Transport Sector

It is necessary to confirm that the costs of all projects and programs/studies are within the possible budget envelope for the logistics sector until the year 2022. According to the Sixth Five-Year Plan (2007/2008 – 2011/2012), the investment for the transport sector by governmental bodies, except for the investment of administration and service, is estimated to be LE17.7 billion. Based on the assumptions that the GDP will grow at an average annual rate of 6.9% through 2022/2023 as described in Chapter 3, the amount of the investment budget for the transport sector by 2022 is estimated as LE85.3 billion.

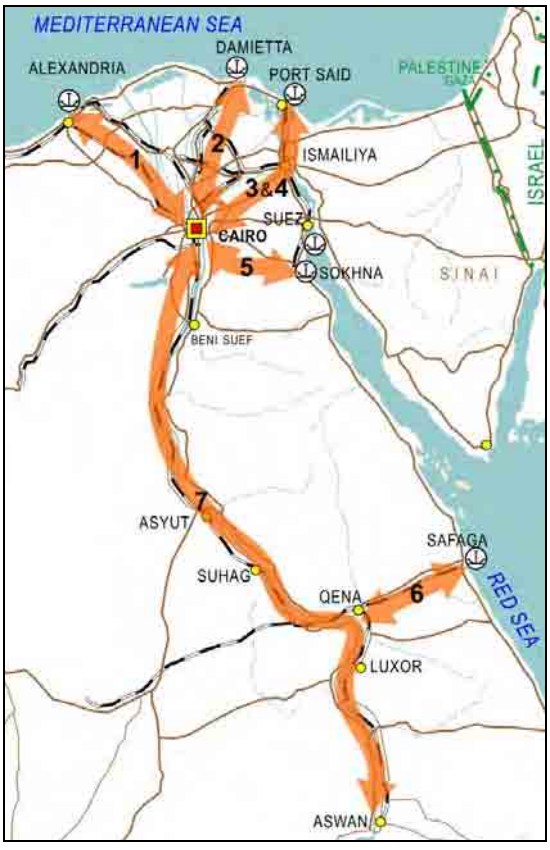
Under the JICA Study, the required budget for logistics projects and programs/studies including ongoing, committed, planned and new to be funded by governmental investment is estimated as LE 26 billion, which is 30% of the investment budget for the transport sector by governmental bodies. In addition, the budget required for projects and programs/studies that are expected to be financed by public private partnership (PPP) is estimated as LE 27 billion.

10.4.2 Implementation Schedule

Seven logistics corridors were identified in the JICA Study as shown below:

(1) Alexandria Port – Cairo Corridor,
(2) Damietta Port – Cairo Corridor,
(3) Port Said Port (West) - 10th of Ramadan / Cairo Corridor,
(4) Port Said Port (East) - 10th of Ramadan / Cairo Corridor,
(5) Sokhna Port - Cairo / 10th of Ramadan / 6th of October Corridor,
(6) Qena – Safaga Port Corridor, and
(7) Upper Egypt - Cairo Corridor.

The planned and new projects and programs/studies were categorized based on the logistics corridors and composed of packages of projects and programs/studies. In cases where the projects and programs/studies do not belong to the logistics corridors, they are categorized "others".



Source: JICA Study Team

Figure 10.4.1 Logistics Corridor

Considering the results of the evaluation, the packages are set up into short-term (2007/2008 – 2011/2012), medium-term (2012/2013 – 2016/2017), and long-term (2017/2018 – 2022/2023) implementation schedules as shown in Table 10.4.1 and Table 10.4.2.

Table 10.4.1 Implementation Schedule (1/2)

Corridor	Package	Project No.	Project/Program/Study	Short Term	Medium Term	Long Term
1. Alexandria - Cairo / 6th of October Corridor	Package I. Development of Port Facilities for Container	P9	Multipurpose Terminal Development Project at Alexandria Port		■	
		P10	International Container Terminal Development Project at Dekheila Port		■	
		P27	Container Yard Expansion Project at Alexandria Port (AICT)			■
		P28	Gantry Cranes Renewal and Additional RTG Installation Project at Alexandria Port (Government)		■	
		P29	Container Yard Pavement Upgrade Project at Alexandria Port		■	
		P30	Container Terminal Consolidation and Handling Efficiency Improvement Project at Dekheila Port		■	
		P31	Additional Container Yard Construction Project at Dekheila Port			■
	Package II. Development of Port Facilities for Bulk & General Cargoes	P11	Petrochemical Berth Construction Project at Dekheila Port		■	
		P12	Grain Berth Extension Project at Dekheila Port		■	
		P13	Billet, Coal & Coke and Dry Bulk Berth Development Project at Dekheila Port		■	
		P33	Conveyor System Installation Project at Dekheila Port	■ ■ ■	■ ■ ■	■ ■ ■
	Package III. Development of Port-related Infrastructure	P8	Railway Yard Development Project at Alexandria Port	■		
		P14	Middle Port Development Project between Alexandria and Dekheila Ports			■
		P32	Additional Breakwater Construction Project at Dekheila Port		■	
	Package IV. Enhancement of Multimodal Transport	R9	6th of October Direct Access Line Construction Project		■	
		R11	Sadat City Access Line Construction Project		■	
		W13	New River Port Construction Project near 6th of October			■
		L1	Logistics Center Development Project (6th of October)	■		
2. Damietta - Cairo / 10th of Ramadan Corridor	Package I. Development of Port Facilities for Container	P15	KGL Container Terminal Construction Project (Phase-1)	■		
		P16	KGL Container Terminal Construction Project (Phase-2)		■ ■ ■	■ ■ ■
		P17	Access Channel Deepening Project at Damietta Port	■		
		P18	Berth Conversion Project from General Cargo Berth to Container Berth at Damietta Port			■
	Package II. Upgrade of Access Channel	P34	Access Channel Upgrade Project at Damietta Port		■	
		SP2	Study of Numerical Simulation for Sedimentation Prevention at Damietta Port	■		
	Package III. Enhancement of Multimodal Transport	R6	Electrification of Signaling of Beni Shebin El-Qanater - El-Zagazig - El-Mansura - Damietta Line	■		
		R12	10th of Ramadan Direct Access Line Construction Project (Bilbeis - 10th of Ramadan)		■	
		W12	Bilbeis River Port Development Project			■
		L2	Logistics Center Development Project (10th of Ramadan)	■		
3 & 4. Port Said Port (West & East) - Cairo / 10th of Ramadan Corridor	Package I. Improvement of Port Said Port West	P19	Deep Berth Construction (400m) Project at Port Said Port (West)	■		
		P35	Container Yard Expansion Project at Port Said Port (West)		■	
	Package II. Improvement of Port Said Port East	P20	Container Terminal Development Project at Port Said Port (East) (Phase-2)	■		
		P21	Container Terminal Development Project at Port Said Port (East) (Phase-3)		■	
		P22	Container Terminal Development Project at Port Said Port (East) (Phase-4)			■
		P23	Container Terminal Development Project at Port Said Port (East) (Phase-5)			■
		SP3	Master Plan Supplemental Study at Port Said Port (East)	■		
		SP4	Study on Bunkering Service Station at Port Said Port (East)	■		
	Package III. Facilitation of Logistics Function	R13	Railway Improvement Project (Ferdan - Port Said Port East)		■	
		L3	Logistics Center Development Project (Port Said East)	■		

Note: ■ ■ ■ ■: The implementation schedule depends on private company's intention.
Source: JICA Study Team

Table 10.4.2 Implementation Schedule (2/2)

Corridor	Package	Project No.	Project/Program/Study	Short Term	Medium Term	Long Term
5. Sokhna Port - Cairo/10th of Ramadan /6th of October	Package I. Development of Sokhna Port	P24	Container Terminal Development Project at Sokhna Port	■ ■ ■	■ ■ ■	■ ■ ■
		P25	General Cargo Terminal Development Project at Sokhna Port	■ ■ ■	■ ■ ■	■ ■ ■
		P26	Bulk Terminal Development Project at Sokhna Port	■ ■ ■	■ ■ ■	■ ■ ■
6. Upper Egypt - Red Sea Corridor	Package I. Promotion of Containerization	P36	Safaga Multipurpose Terminal Development Project		■	
		R14	Reefer Container and Facility Project		■	
7. Upper Egypt - Cairo Corridor	Package I. Enhancement of Multimodal Transport	R8	Electrification of Signaling for Beni Suef - El-Menia - Asyut Line		■	
		W9	Cairo - Aswan Waterway Navigation Development Project (Phase II)			■
		W10	Athar El Nabi River Port Development Project			■
		W11	El-Tebin River Port Development Project		■	
		SF7	Industrial Zone Access Road Construction Study		■	
		SF8	Feasibility Study on the Nile River Freight Transportation	■		
8. Other	Package I. Strengthening of Transport Network	H28	Regional Ring Road Development Project (South Arc)		■	
		R7	Electrification of Signaling for El-Rahm - Alexandria - Abu Qeer Line		■	
		R10	Burg El-Arab Access Line Construction Project		■	
	Package II. Development of Dry Port	D4	Dry Port Development Project (17 location)	■ ■ ■	■ ■ ■	■ ■ ■
	Package III. Improvement of Customs Procedure	C1	Single Window System Establishment Supplemental Project (Sea Ports)	■		
		C2	Single Window System Establishment Project (Dry Ports)		■	
		F1	Pilot Project on Radio Frequency Identification (RFID) System	■		
		SC1	Simple and Quick Procedure Program	■		
		SC2	Public Relation Improvement Program	■		
	Package IV. Human Resouce Development	SF1	Financial Incentive Program	■		
		SF2	Forwarding/Trucking Industry Service Enhancement Program	■		
		SF3	Legal and Public Administration Framework Improvement Program	■		
		SF4	Policy Maker Training Program	■		
		SF5	Human Resource Development Program	■		
		SF6	Technical Training Program	■		
	Package V. Study for Logistics Infrastructure	SP1	Study for Coordination of Development Plans for Egyptian Ports	■		
		SR1	New Freight Link Study (10th of Ramadan - Helwan, Marazip Bridge)		■	
		SR2	Railway Freight Service Private Sector Management Study	■		
		SF9	Study for Logistics Center Development	■		

Note: ■ ■ ■ ■: The implementation schedule depends on private company's intention.
Source: JICA Study Team

Chapter 11

Conclusions and Recommendations

Chapter 11 Conclusions and Recommendations

Conclusions

The JICA Study concludes that:

(1) A total of 68 projects/studies are recommended for implementation.

All projects/studies are designed to promote logistics modernization in Egypt and their implementation based on the schedule shown in Table 10.4.1.

(2) International hub port function could be effective for the Egyptian economy.

It is noted that Port Said Port (West) and Damietta Port face the risk to be downgraded from the role and function of an international hub port. Should this happen, smooth and cheap transportation will be hampered and consequently, sales and procurement activities of the companies, especially those in manufacturing, will be adversely affected. Urgent actions and countermeasures, such as construction of a deep berth and the necessary study, are suggested to deal with this issue. In addition, strengthening the export/import facilities is also suggested.

(3) Two railway line projects are indispensable.

Two railway line projects are indispensable for freight network development and service enhancement of freight transport. These are i) the "6th of October Direct Access Line" and ii) the "10th of Ramadan Direct Access Line". In addition, a study entitled "New Freight Link Study (10th of Ramadan – Helwan) is also recommended. A new freight network between 10th of Ramadan and 6th of October, running around the southern edge of the GCR, would result in very large transport cost savings in 2022 if the "New Freight Link (10th of Ramadan – Helwan)" would have been constructed by 2022 based on the recommended study.

(4) Government should adopt a practical promotion policy to revitalize the railway and inland waterway services, especially in relation with the new access lines to the logistics centers.

It is recommended that the government extend various indirect policy supports to revitalize railway/inland waterway services and also to secure the financial feasibility of the "6th of October Direct Access Line" and the "10th of Ramadan Direct Access Line". The recommended policy supports include the following:

- Further strengthening of the crackdown on overloading of freight vehicles,
- Tightening of enforcement of automobile emissions control,
- Raising the toll rates for trucks and other freight vehicles,
- Construction of railway station in the logistics center with container yards, and loading equipment and/or new river ports close to the logistics center.

More direct policy supports such as tax exemption/reduction are not suitable in Egypt. However, it is necessary to consider the tax exemption/reduction in an exceptional case to enhance the logistics industry as an urgent issue.

(5) Construction of two logistics centers is a fundamental requirement for more efficient freight flows around the GCR.

Both logistic centers aim to rationalize the freight flows and are indispensable to handle the massive influx of freight to the GCR: one in the 6th of October industrial zone, and the other in the 10th of Ramadan industrial zone. The "Logistics Center" model is a new concept in Egypt, thus, the following tasks are suggested for the government to undertake, especially at the initial stages of the project. Actual design work and construction can be left to the investors.

a) Establishment of a responsible agency/committee for the logistics center project and policy coordination

Detailed explanation on the set-up of the agency/committee is presented in Item (9) of this section: Institutional arrangement: government committee and leading agency..

b) Execution of a study to reveal the user's preference

This user's preference study will be concerned with i) who wants to use the logistics center, ii) who will be a potential investor, and iii) expected service level (freight handling capacity, charge, maximum duration for registration/procedure, equipment, facility etc.).

c) Establishment of project framework

The project framework should cover the final selection of site, land acquisition procedure and its funding method, other government support measures, an advertisement of companies that will invest the logistics center company and user companies, selection of project type and capital formation scheme (including Build-Operate-Transfer or Public-Private Partnership), a preparation of necessary legislations, and so on.

Items b) and c) above can be conducted simultaneously in a feasibility study under the supervision of the agency/committee for the logistics center project.

d) Selection of appropriate location (near industrial zones) of an appropriate area (100 ~ 200 ha, or more). It is suggested that the government intervene in purchasing the land and all legal arrangements, if necessary.

e) Policy support for logistics center management

The management company, probably a private company, should be responsible for the facility allocation or layout of the logistics center. Some governmental supports are necessary, however, for its management/operation, which may include the following:

- A tax exemption/reduction measure at the initial stages of the project operation can be effective for several years;
- Participation in the public-private-partnership scheme for this logistics center

project.

f) Accessibility improvement to the logistics center

- Construction of convenient access roads from the commercial area in Cairo in the short term.
- Construction of a convenient access railway line in the short- or medium-term.
- Construction of a new river port near the logistics center and/or industrial zone over the long term.

(6) Facility improvement of the customs office inside the logistics center is crucial:

- The modernization of equipment by introducing a digital registration and procedure system supported by an EDI system is necessary. Special attention should be paid to solve the facility and service gaps from those in the seaports.

  It is noteworthy that unless the digital procedures are introduced and actual application of the customs procedures is improved, any logistics center or dry port (with a one-window system) can not function efficiently and attract the users as expected.

- Furthermore, the users of the existing dry ports have experienced various inconveniences. These can be avoided through the introduction of a registration system/procedure without any arbitrary settlement/application, such as uniform tax rates on the same product, a standardized export/import procedure based on the consistent interpretation of laws/regulations, 24-hour operations (if necessary), etc. An intensive training of the staff is very important. These can also reduce the wide gap of services at current dry ports compared with those at the seaports.

(7) Logistics centers at the Port Said Port (East) and Alexandria Port have high potentials to attract users if a substantial number of factories locate closer to the port or when the logistics center is not located near the industrial zone/mega-consumption area in the hinterland far from the seaport.

(8) Promotion of truck transportation companies and forwarding industry is vital:

A logistics center requires a transformation in the current services of truck transportation companies, and an enhancement of services of the forwarding industry. The logistics center will intervene in the process of an integrated door-to-port continuous transport services, thus, truck transportation companies are expected to extend their services to line-haul truck services and pick-up/delivery services.

To bring about this transformation and enhancement of services, introduction of the new business registration system is suggested for vehicles and companies that engage in line-haul truck services and pick-up/delivery services. Qualification of new business registration can be obtained after participating in seminars/trainings under the supervision of the Ministry of Transport.

A similar business registration and qualification system can be applied to the forwarding

industry, especially those who are stationed in the logistics centers. Minimum knowledge about registration procedures and related regulations can be provided at the seminars/trainings supervised by the government. These will enhance the capability of the forwarding industry and contribute to make freight handling services more efficient.

(9) Institutional arrangements: establishment of a government committee and leading agency is necessary:

The establishment of a new committee is recommended to manage the overall logistics improvement policy all over the country, and to coordinate the interests of various concerned entities. Members should consist of all major organizations such as the ministries, government agencies, forwarding industry/truck transport service companies, and user companies (including manufacturing companies, wholesale companies, and shop owners). The TPA is expected to play the role of leader in this committee.

This committee or sub-committee is suggested to play a central role in the execution of logistics center project. The project framework shall cover the final selection of site, land acquisition procedure and its funding method, other government support measures, an advertisement of companies that will invest on the logistics center company and user companies, selection of the project type and capital formation scheme (including Build-Operate-Transfer, or Public-Private Partnership), preparation of necessary legislations, and so on. Related infrastructure development around the logistics center, such as access roads and a new access railway line/station, as well as other related policy coordination, should also be studied and/or reviewed by this committee.

Recommendations

The JICA Study Team recommends that the following six highly recommended project groups be implemented as soon as possible. All have been urgently requested and/or are crucially important for the improvement of logistics efficiency for exports/imports of Egypt.

(1) Egyptian Port Master Plan Study

The main component is the study to coordinate the development plans for Egyptian ports, aimed to define the roles of each port and correspondingly formulate the national port development plan. There are two crucial issues: one is the action required to ensure that Egypt retains an international transhipment base i.e. hub port function, and the other is to confirm the feasibility of the Damietta Port development.

The component project is:

- SP1: Study for coordination of development plans for Egyptian ports.

Special emphasis falls on the two components (covered in SP1) below:

- SP2: Study of numerical simulation for sedimentation prevention at Damietta Port, and
- P19: Deep berth construction (400m) project at Port Said Port (West)

(2) Logistics Efficiency Enhancement for West Wing Delta

The main component is the construction of a "logistics center" in the 6th of October industrial zone, and other supplementary projects that should be implemented in an appropriate timeframe.

The component projects are:

- L1: Logistics center development project (6th of October),
- R9: 6th of October direct access line construction project,
- P8: Railway yard development project at Alexandria Port (included in the 5th five-year development plan),
- W13: New river port construction project near 6th of October, and
- SR2: Railway freight service private sector management study (Alexandria – 48 km station – Upper Egypt).
- SF9 Study for logistics center development

(3) Logistics Efficiency Enhancement for East Wing Delta

The aim and components are similar to "Logistics Efficiency Enhancement for West Wing Delta", but the target area is 10th of Ramadan.

The component projects are:

- L2: Logistics center development project (10th of Ramadan),
- R12: 10th of Ramadan direct access line construction project (Bilbeis – 10th of

Ramadan), and

- SF9 Study for logistics center development.

(4) Upper Egypt Logistics Improvement

This aims at stimulating economic development in the Upper Egypt region, by introducing reefer container services for agro-product transportation and exporting them from Safaga Port. Another destination for reefer containers is the Greater Cairo Region.

The component projects are:

- R14: Installation of reefer container project,
- IP36: Safaga multi-purpose terminal and facility project, and
- SF8: Feasibility study on the Nile River freight transportation.

(5) Improvement of Customs Procedures

This aims at implementing additional improvement measures to further shorten the release time of freight at seaports.

The components are:

- C1: Single window system establishment supplementary project (seaports),
- C2: Single window system establishment supplementary project (dry ports),
- SC1: Simple and quick procedure program,
- SC2: Public relations improvement program, and
- F1: Pilot project on radio frequency identification (RFID) system.

(6) Human Resource Development

This aims at enhancing the capacity of human resources in a wide range of fields:

The components are:

- SF1: Financial incentive program,
- SF2: Forwarding/trucking industry service enhancement program,
- SF3: Legal and public administration framework improvement program,
- SF4: Policy maker training program,
- SF5: Human resource development program (including enhancement of logistics education in universities and colleges in Egypt), and
- SF6: Technical training program.

(7) Development of Logistics Demand Forecast Model

The demand forecast model in this study are developed based on available reports and statistics provided by TPA and other agencies. The model introduced many assumptions to supplement the data in the reports and statistics. Although the model was good enough to formulate conceptual logistics plan, the more reliable demand forecast model will be

needed to implement the proposed projects and studies. To develop such model, additional studies and data will be necessary. For example,

a) Nationwide roadside O/D survey: To obtain freight movement by truck, a nation wide roadside O/D survey will be necessary.

b) Industrial statistics by zone: Production and consumption volumes by commodity type by zone for export and import will be necessary for the new model.

c) Statistics of truck terminals and warehouses: This includes (i) the areas of truck terminals and warehouses and (ii) the number of employees of them by zone.

d) Time-series traffic volume data by vehicle type on the major roads

e) Mode preference survey for forwarders for modal split model

f) Freight movement survey at ports

As for the implementation of projects and studies, it is recommended to conduct a detail environmental impact assessment according to the regulations in Egypt such as "Guidelines for Egyptian Environmental Impact Assessment" (Egyptian Environmental Affairs Agency, Cabinet of Ministers).