

In the Industrial Estate, therefore, new types of service should be provided to the factories with information-related facilities in addition to the usual production facilities and the controlling facilities. In other words, the value-added of the industrial estate should be raised and its enterprises will be diversified by providing industry supporting facilities, such as an information system, and by offering an environment for efficient production. For instance, the questionnaire taken in Japan indicates the need for information-related services such as personal computer network, POS (Point of Sales) system, and databases.

The following are the examples of the services and facilities possibly provided in the Industrial Estate.

a) Advanced information facility

Information exchange system

The enterprises which operate in the Industrial Estate do not belong to the same industry. Plants of many different industries will be constructed. Even under these conditions, it is possible to establish a region-oriented information exchange network by obtaining the consensus of the enterprises.

The characteristic of such an information exchange network is that every member can be an information sender. The one who acquires the advantages by providing information will be a sender, and at the same time he can be a catcher of another information. This is a system expected to benefit both senders and receivers of information.

This system is expected to produce new business chances by circulating information among the enterprises of different industries. For example, it is possible to use some idle time of a factory for subcontracting another

factory. This system enables a factory to control its production and saves it from producing beyond its capacity, when it needs a temporary subcontract by other factories. This is an advantage which arises when many different kinds of enterprises are located in one industrial estate.

The details of the network can be suggested as a bulletin board system, an electronic mail system, and a teleconference system.

On the other hand, as the interrelationship becomes tighter, there will be a need to support the direct connection of the computers and the terminals to facilitate the exchange of information. It will be important to build a network by connecting computers, terminals and communication control equipments distributed throughout the Industrial Estate.

The bulletin board system and the electronic mail system can be used through a relatively simple network composed of telephone lines and switches. For the data linkage among computers, however, a data network with high-speed and high reliability based on optical fiber is necessary. Furthermore, the CATV network is needed for wide band information services, such as image data.

The components of the network will differ according to the kinds of services needed in the Industrial Estate. Therefore, the first step is to clarify the contents of the information service; the second step is to arouse the interest of the users and evaluate their needs; the third step is to expand the network together with the increase of enterprises in the estate, the full operations and maturing of enterprises.

- b) The establishment of the jointly-used facilities of communication and information

In order to improve productivity and to rationalize enterprises, various information and communication machinery must be applied to designing, technical calculations and communications.

It is, however, often too costly and inefficient for each enterprise to acquire such equipments individually. Therefore, it is effective for small companies to share this equipment at a common office because the purchase prices and maintenance costs of the equipment are high.

The following is the equipment suggested for the joint office.

- . Teleconference room - the international teleconference service
- . Computers - the establishment of the joint business management center/data processing center using computers.
- . Telex
- . High speed facsimile
- . CAD/CAM
- . Database terminals

It is possible to use these facilities not only within the industrial complex but also to contribute to the neighboring communities.

In addition to these facilities, the establishment of the following should be examined.

. Software laboratories

. Industrial information center

c) The management system within the Industrial Estate

Each enterprise in the Industrial Estate should take care of the security management (prevention of crimes and fire) and the energy control (electricity, water and gas). At the same time, a collective management system can be established in order to reduce each enterprise's task in management.

Another service in consideration is to provide information of the Industrial Estate itself, such as reservations of facilities within the Estate.

Another service is to make a list of users classified by enterprises and terminals and operation data of joint facilities. These lists contain the number of computers and joint facilities used, and these figures are useful for making bills and detailed statements.

d) Future countermeasures

The present situation of the information network systems is yet to be evaluated. For the Industrial Estate to keep its appeal in the long run, one key is the flexibility to the expansion and intensification of the information network system according to the needs. For this reason, cable ducts for the establishment of the communication circuits facilities and space to set up communication control facilities, such as switches, should be fully maintained in the Estate, even if these are not needed in the initial stage.

b. Information systems of the port area

The main function of present ports is to circulate goods. There is a growing demand for connecting and integrating all the stages of circulation, including loading, sorting, storage and distribution. These are necessary for the fast and low-cost handling of a large quantity of products with different characteristics and sizes. As a result, the improvement of the transportation system is important, connected with the commercial transaction system and the information system. It is becoming necessary to accumulate port functions and commercial functions at the base of information systems. Also, the world-wide trend is toward establishing information systems for port control, port-related official procedural matters, and trades between port-related enterprises. Such a system should be quickly developed in the future.

A system is needed to reduce and simplify the port-controlling activities, to use the port effectively, and to provide information on the port to the users. The details of the port controlling information system are as follows.

a) The shipping information system

. The information regarding the embarkation and disembarkation of ships (the shipping control, the berth control, the fee calculation, etc.) will be controlled collectively by computers, thus making the controlling office more efficient.

. The objectives: the normalization of marine activities relating to embarkation and disembarkation, the fast, accurate and efficient use of the port facilities by

integrating various pieces of information, the provision of information to related offices, the timely publication of various statistics.

b) The facility controlling system

- . More efficient and easy control of facilities by jointly controlling the port facilities (warehouses, stocking areas), which are now controlled individually by wharf offices.
- . The objectives: more effective and easy control of wharfs, the improvement of the information service, more effective facility control, the automation of the fee calculation, more effective lists and statistics of controlling systems.

c) The fee calculation system

- . Control of embarkation fees, port facility fees, etc.
- . A system with these functions should be established. It should be separated from the communication system within the Industrial Estate.

This port system is requested to have a data link to the other network systems within the Estate and provide transportation information.

5) The future of Laem Chabang EPZ/GIE seen from the aspect of communication and information

We have looked into the structure of the Industrial Estate based on the arrangement of the information service. This leads to the concept of the teleport. One way is to think of the development of the Laem Chabang EPZ/GIE as a step toward the establishment of a teleport, thinking of it as the future goal of the Industrial Estate.

a. Teleport plan

The teleport is a fast and economical information disseminating system, which deals with the advancement of the international relations and trades. The teleport will establish the area as a base for the exchange of information and eventually as a multilateral international information network, taking note of the promotion and integration of the functions of the teleport and its environment. Also, the core of the teleport plan is to set up the nodes of the international communication network, such as a satellite earth station. The concept of the teleport has recently become very popular.

The reasons for this plan are as follows: the need to secure the communication measures to match the growing demand for communication, the increase of various types of enterprises as a result of free operation of telecommunication, the development of satellite communication, optical fiber, etc.

The characteristic of this plan is that the international telecommunication operations and the development of the area are carried out simultaneously. In the process, the port or the one in charge of the port will play an important role. Such an undertaking will contribute to the future Laem Chabang EPZ/GIE.

b. The significance of the teleport in the port area

The advancement of port utilization is one important aspect of the teleport. In more detail, it is as follows.

- a) The streamlining of the transportation through the port by the establishment of a port transportation information network and a shipping information network.

The sea port is where all the information facilities are gathered as a center for transportation. Thus the port is often greatly influenced by the development of information facilities. It is possible to establish a network whose information center is a teleport.

- b) International trade activities will be promoted by the promotion of necessary information exchange. The facilities for an international communication network will enhance the utilization of the seaport.

The teleport plan will contribute to the development of Laem Chabang as a useful port and a valuable industrial complex.

c. The requisites of the teleport

The requisites of the teleport are the following.

Earth station: parabolic antenna, antenna site, auxiliary facilities

Office park facilities: information handling buildings

Cable facilities: communication cables connecting the earth station and the office park facilities, and within the office park.

It is imperative to secure enough space for these facilities, if the teleport should be the future figure of Laem Chabang.

(3) SERVICES FOR INVESTORS

The conveniences and services which are being provided by the industrial estates and free export zones to investors, may be classified as follows:

- 1) Those supplied by administrative management
 - a. Maintenance of public facilities (electricity, service water and sewage systems, warehouses, buildings, roads, etc.).
 - b. Reference of factory sites and cooperation for plant construction
 - c. Negotiations and liaison with government (application for permits, acceptance of incentive benefits, etc.).
 - d. Labor (recommendation of personnel).
 - e. Promotion of information exchange, training, exhibitions.
 - f. Provision of parking lots.
 - g. Refuse incineration.
 - h. Provision of leisure facilities (for sports, etc.).

2) Those Supplied by Public Organizations

- a. Taxation service (branch office)
- b. Customs and quarantine service
- c. Country entrance/exit administrative service
- d. Communications facilities (postal, telephone, telegraph)
- e. Computer service
- f. Governmental financing suboffice
- g. Schools
- h. Police and firefighting service

3) Those Supplied by Private Organizations

- a. Banks
- b. Health and sanitation service
- c. Packaging, crating, transportation, cargo handling, warehousing services
- d. Travel agency service (airline tickets, etc.)
- e. Consulting services (technical, management)
- f. Lodging facilities (housing units, apartments, guest house)
- g. Shopping center, restaurants, etc.
- h. Medical clinics

- i. Mechanical repair facility
- j. Customs clearance service
- k. Leisure facilities (golf course, etc.)

The services being supplied by EPZs, industrial estates and science/industrial estates can be rearranged as shown in Table 6-27.

As can be understood from this table, the provision of the following services will be necessary in order to substantiate the services to be offered to investors of the Laem Chabang EPZ/GIE:

- a. Land development and factory construction cooperation
- b. Labor (personnel recommendation)
- c. Establishment of taxation branch office
- d. Immigration administration
- e. Computer service
- f. Establishment of governmental financing branch office
- g. School facilities
- h. Provision of insurance, customs, machinery repair, travel agency offices
- i. Consulting service

Table 6-27 Available Conveniences and Services (1/3)

| Service | Masan EPZ, Korea | Taiwan EPZ | Hsinchu Science/ Industry Zone | Bamboo Ind. Complex, Thailand | Laem Chabang EPZ/GIE, Thailand | Kanazawa Ind. Complex, Japan |
|--|------------------------|---------------|---|--|---|---------------------------------------|
| Supplied by adminis- trative management | | | | | | |
| Maintenance | | | | o | o | o |
| Land development and factory construction cooperation | | | o | o | | |
| Negotiations and liaison with govern- ment | o | o | o | o | o | |
| Labor (recommendation of personnel) | o | o | o | o | | |
| Promotion of information exchange, training, exhibitions | o | | o | | o | o |
| Provision of parking lots | | | | | | o |
| Refuse incineration | o | | | | o | |
| Leisure facilities (for sports, vacationing) | | | o | | o | o |

(Continued)

Table 6-27 Available Conveniences and Services (2/3)

| Service | Masan EPZ, Korea | Taiwan EPZ | Hsinchu Science/ Industry Zone | Bampoo Ind. Complex, Thailand | Laem Chabang EPZ/GIE, Thailand | Kanazawa Ind. Complex, Japan |
|---|------------------------|---------------|---|--|---|---------------------------------------|
| Supplied by public organi- zations | | | | | | |
| Taxation | 0 | 0 | 0 | | | |
| Customs and quarantine | 0 | 0 | 0 | | 0 | |
| Country entry/exit procedures | 0 | | | | | |
| Communications (postal, telegraph, telephone) | 0 | 0 | 0 | | 0 | 0 |
| Computer service | | | 0 | | | |
| Financing by governmental organs | | | 0 | 0 | | |
| Schools | | | 0 | | | |
| Policing and fire- fighting services | 0 | | 0 | | 0 | |

(Continued)

Table 6-27 Available Conveniences and Services (3/3)

| Service | Masan EPZ, Korea | Taiwan EPZ | Hsinchu Science/ Industry Zone | Bampoo Ind. Complex, Thailand | Laem Chabang EPZ/GIE, Thailand | Kanazawa Ind. Complex, Japan |
|--|------------------------|---------------|---|--|---|---------------------------------------|
| Supplied by private corpora- tions | | | | | | |
| Banking service | 0 | 0 | 0 | 0 | 0 | 0 |
| Insurance service | 0 | | | | | 0 |
| Packaging, crating, transportation, cargo handling and ware- housing services | 0 | | 0 | | 0 | |
| Customs clearance service | 0 | | | | | |
| Machinery repair | 0 | | | | | |
| Travel agency service (airline tickets, etc.) | 0 | 0 | | | | |
| Consulting | | | | 0 | | 0 |
| Loading | 0 | | 0 | | 0 | |
| Shopping center, restaurants, etc. | 0 | | 0 | | 0 | 0 |
| Medical treatment | 0 | | 0 | | 0 | |
| Leisure (golfing, etc.) | 0 | | | | | |

(4) SIMPLIFICATION OF PROCEDURES FOR FACTORY LOCATION AND
OTHER APPLICATIONS

Among various procedures connected with industrial estates and export processing zones, the procedure for applying plant location requires a large amount of time (1 to 2 years).

The factory location applications procedure of the industrial estates and export processing zones of South Korea, Taiwan, Thailand, Malaysia and Japan essentially consist of the following elementary operations:

- a. Investment permit application
 Recommendation qualifications
 Investment permit
 Manufacturing permit
- b. Company registration
- c. Capital goods import permit application
 Application for machinery equipment and raw materials import permits
- d. Foreigners' employment applications
- e. Work permit for foreign employees
- f. Acquisition and preparation of factory location plot
- g. Factory establishment application
- h. Construction permit application
- i. Factory operation permit, machinery installation and factory trial running permit application

j. Factory registration

k. Profit enterprise registration

Table 6-28 was prepared by tabulating the various procedures and registrations described on the basis of the various aforementioned element operations described earlier.

The related organs listed in this table are the organs which must be contacted for various element operations included in the siting procedures, and the organs which will be involved when various element operations are accomplished.

By tabulating the number of related organs described in Table 6-28, we get Fig. 6-3.

As indicated in Fig. 6-3, the numbers of governmental organs involved in the procedures of locating factories in Korea, Taiwan and Malaysia are larger than those of Thailand and Japan. However, an enormous period of time is required for making location applications procedures in Thailand today. Accordingly, it will be urgent for Thailand to simplify her location application procedures on one hand and, at the same time, to improve the efficiency of clerical tasks. Regarding application forms, the provision of sample inscribed application forms would be highly convenient for investors, so that preparations should be made in this connection.

Table 6-28 Conditions of location procedure (1/3)

| Contents of Operations | Related Organs | ROK | ROK Automa- | ROK | Thailand | Thailand | Thailand | Malaysia | Japan |
|-------------------------------|--|--------------------|---------------------|-----------|-----------------|------------------------|----------|----------|-------|
| | | Industrial Complex | tic Approval System | Masan EPZ | Promotion Field | Non Promen- tion Field | | | |
| Investment permit application | ROK Finance Department, Other Related Departments, Foreign Capital Enterprises Screening Committee, Director of Economic Planning Agency Bank of Korea Free Export Zone Administrative Agency Investment Deliberation Committee BOI Ministry of Industry | o | | o | | | o | | |
| Manufacturing license | Malaysian Industrial Development Agency, Local Municipality Local Customs Office | | | | | | o | o | o |
| Company Registration | Local Legal Office EPZ Administrative Office Investment Deliberation Committee | o | | o | | | | | |

(Continued)

Table 6-28 Conditions of location procedure (2/3)

| Contents of Operations | Related Organs | ROK | | ROK Automa- tic Approval System | | ROK | | Thailand | | Thailand | | Malaysia | | Japan | |
|---|---|--------------------|-----|------------------------------------|--------------|-----------------|---------------------------|----------|----------|----------|-------|----------|--|-------|--|
| | | Industrial Complex | EPZ | Masan | Taiwan Field | Promotion Field | Non Promen- tion Field | Thailand | Thailand | Malaysia | Japan | | | | |
| Cont'd | Department of Commerce Registration, Ministry of Commerce | | | | | | | | | | | | | | |
| | Registrar of Companies | | | | | | | | | | | | | | |
| | Legal Affairs Bureau Near Main Office | | | | | | | | | | | | | | |
| Capital Goods Import Permit Application | Related Governmental Rrgans and Customs Office | | | | | | | | | | | | | | |
| | Investment Deliberative Committee and Customs Office | | | | | | | | | | | | | | |
| | Customs Office or Related Organ | | | | | | | | | | | | | | |
| Expatriate Posts Application | MIDA | | | | | | | | | | | | | | |
| Working Permit | Embassies of Countries | | | | | | | | | | | | | | |
| | Local agal Office | * | | | | | | | | | | | | | |
| | EPZ Acluradministrative Office | | | | | | | | | | | | | | |
| Factory Location Land Acquisition | BOI, IEAT, Land Department Office in Province | | | | | | | | | | | | | | |
| | Industry Bureau | | | | | | | | | | | | | | |
| | Local Government Office | | | | | | | | | | | | | | |
| State Economic Development Computation | State Economic Development Computation | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

*:

(Continued)

Table 6-28 Conditions of location procedure (3/3)

| Contents of Operations | Related Organs | ROK | ROK Automatic Approval System | ROK Masan EPZ | Taiwan | Thailand Promotion Field | Thailand Non Promotion Field | Malaysia | Japan |
|--------------------------------------|--|--------------------|-------------------------------|---------------|--------|--------------------------|------------------------------|----------|-------|
| | | Industrial Complex | | | | | | | |
| Factory Establishment Office | Commerce and Industry Department | * | * | | | | | | |
| | EPZ Administrative Office | | | o | | | | | |
| | Local Government Office | | | | o | | | o | x |
| | Ministry of Industry | | | | | o | o | | |
| | x = notification | | | | | | | | |
| | * | | | | | | | | |
| Building Permit Application | Local Government Office | * | * | | o | | | o | x |
| | EPZ Administrative Office | | | o | | | | | |
| | * | | | | | | | | |
| | x = confirmation application | | | | | | | | |
| Factory Operation Permit Application | Local Government Office | * | * | | x | | | | o |
| | EPZ Administrative Office | | | o | | | | | |
| | Ministry of Industry | | | | | o | o | | |
| | Machinery Dept., Ministry of Labour | | | | | | | | + |
| | x = issuance of permit for use of building | | | | | | | | |
| | + = application for machinery installation | | | | | | | | |
| Factory Registration Application | Local Government Office (Factory Administration) | | | | | | | o | |
| Profit Enterprise Registration | Local Government Office (Tax Number) | | | | | | | | o |

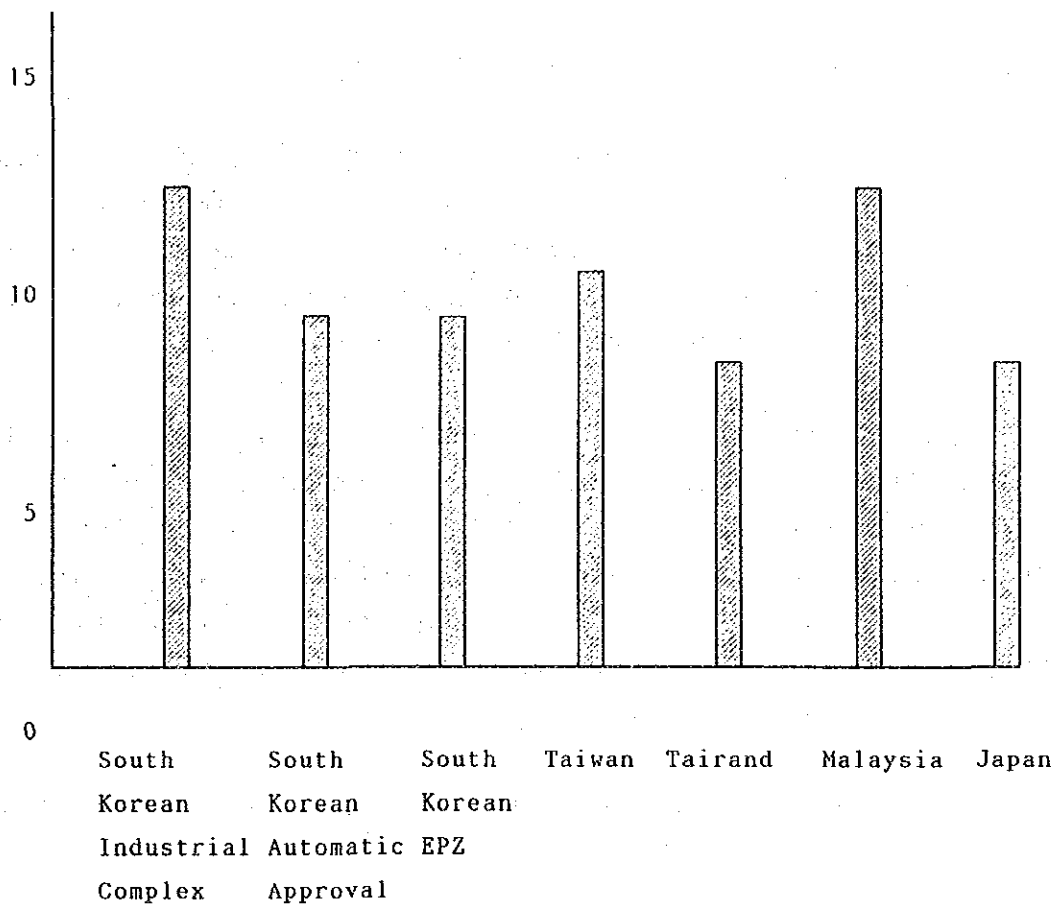


Fig. 6-3 Number of Related Organs

(5) CUSTOMS CLEARANCE SYSTEM

1) Trade Management System in Thailand

In Thailand, high import surcharges and high customs tariffs are generally imposed with for the aim to protect domestic industries and to minimize trade deficits. On the other hand, exports are being promoted actively and, at the same time, export financing is being strengthened.

Export administration is under the supervision of the Foreign Trade Bureau, Ministry of Commerce. Regarding export and import items other than those which are restricted, there is no need to obtain any permit from the government. Therefore, they are traded freely by private enterprises. Both the specific tariff and ad valorem tariff systems are adopted.

The country's import prohibition and restriction items are as follows:

a. Prohibited import items

Included among these items are platinum, used newspapers, Chinese printed matter, timber and wood products, electric machinery type game equipment, sugar, pepper, tin, rice, automobile bodies, fruit juices, used cars, etc.

b. Restricted import items (import license or ministerial ordinance necessary)

Included in this category are gold and gold products, coffee, raw silk, diesel engines, soybean oil, arms, ammunition, explosives, opium, TV sets, radio receivers, tobacco, etc.

c. Prohibited export items

Rice chaff, unhulled rice, platinum, copper, jute seed, fertilizers, coral, wisteria, etc.

Tariffs may be either the ad valorem tariff or the specific (meter-rate) tariff. The latter method applies to virtually all commodities. The ad valorem tariff is imposed in principle on the wholesale price, but in practice the CIF price is set as the basic, or standard price.

Regarding imported commodities, a business tax is imposed in addition to the customs tariff, whose rate is 1.5 - 40%. The rates are low for industrial materials and living necessities, but high for luxury items.

Foreign exchange is under the supervision of the Ministry of Finance and The Bank of Thailand. In November 1984, the floating exchange rate system was adopted at the time the devaluation of baht. As a result, the floating range against the dollar has been suppressed to a relatively low level.

2) Customs Clearance System

Thailand's customs clearance procedures themselves are not so complicated, and do not differ much from those of Japan and other countries. The advanced entry system applied to imports helps to shorten the custom clearance period.

a. Customs procedures for imports

a) Each importer goes to a bank to place an application for an import letter of credit (L/C), taking along a pro-forma invoice, a contract document or an order slip.

b) He next enters the following items on the import application form designated by the customs authorities and applies for customs clearance before the ship's port entry:

- 1 Ship's name, ship's port entry date
- 2 Number of crates, weight and case mark
- 3 Name of commodity
- 4 Export destination country
- 5 Total invoice amount
- 6 Tariff item No.
- 7 Tariff rate
- 8 Import tariff amount
- 9 Estimated sales profit ratio and sales tax rate
- 10 Business tax amount
- 11 Municipal tax amount

c) The following documents are attached to this import entry:

- 1 Invoice
- 2 Packing list
- 3 Bill of lading
- 4 Exchange control form

d) The import entry and the documents are checked by the customs officials, after which the tariff amounts 8, 10 and 11 are determined.

e) Subsequent to these procedures and the payment of tariff at the customs house, the cargo is inspected by customs officials at the port. The cargo landing and handling charges are paid to the Port Authority of Thailand (PAT), then the delivery order (D/O) issued by the shipping company as well as the wharf receipt are received in exchange.

f) The wharf receipt is submitted to PAT, and the cargo is received from the bonded warehouse in PAT's compounds.

g) The cargo is transported from PAT to the designated cargo receiver by trucks or trailers belonging to the Express Transport Organization of Thailand (ETO).

b. Customs procedures for exports

a) Each exporter goes to a bank to obtain an export certification by submitting an export customs clearance permit application form (E/C No. 61) together with the pro-forma invoice, sales contract document and a copy of the letter of credit (L/C).

b) He next places an application for ship reservation.

c) He submits an application for shipment (A/S) to the shipping company while the ship lies in the port, and receives a shipping order (S/O) from the shipping company.

d) The export pass entry designated by the port authorities is submitted to the custom together with the following documents:

- 1 Invoice
- 2 Packing list
- 3 Export customs clearance application form (E/C No. 61)

e) If the cargo to be exported happens to be a restricted item, an export permit obtained from the Ministry of Commerce beforehand will have to be attached to the export pass entry.

f) Export tax and sales tax are imposed on some export cargoes. The amounts are determined in compliance with the Customs Tariff of Thailand.

g) The export pass entry is submitted to the customs officials and, if necessary, tariffs are paid.

h) At the customs house, cargoes are generally inspected by the procedures and methods described in Table 6-29.

Table 6-29 Export Inspection in Thailand

| No. | Place of Inspection | Methods of INSpection |
|-----|-------------------------------|--|
| 1 | Export wharf of customs house | In case of small cargoes, about 20% of the cargo is opened for inspection |
| 2 | Overside | Cargoes in huge bulks or special types of cargoes are inspected at a private warehouse or at the customs house's export wharf. |
| 3 | Exporter's warehouse | Cargoes in large bulks are inspected at the exporter's warehouse, with the exporter bearing the transportation and other costs incurred by the customs officers. |

These export inspections are enforced in conformance with the Export Commodities Standards Act enacted in 1979. Today, export inspection is required for 12 items (bleached jute, salt, silver, castor beans, fish meal, corn, kapok, tapioca procuts, maize, mangu beam, teakwood and Thai silk).

3) Customs Facilities in the Laem Chabang EPZ/GIE

a. Customs facilities

The customs office and bonded warehouse are to be established adjacent to the export processing zone in the Laem Chabang EPZ/GIE.

The functions of the customs office are to process customs documents and inspect export/import cargoes which pass between the Laem Chabang Port and the EPZ, also to provide the necessary spaces for the customs officers and for performing customs work. The customs office is designed for 24-hour operations, and consists of the following facilities:

- Document, Taxes and Finance Office
- Inspection Office
- Administration Division
- Radio Room
- Conference Room
- Residential Area for On-Duty Officers
- Services Room, Waiting Area, Hall, etc.

The layout of the Customs House Area and the layout of the Customs Office are shown in Figs. 6-4 and 6-5, respectively. The Customs Office building has an area of 15 m x 34 m and 2 stories and its effective area is 882 m². This office will have 65 employees, consisting of 42 office workers and 23 warehouse workers.

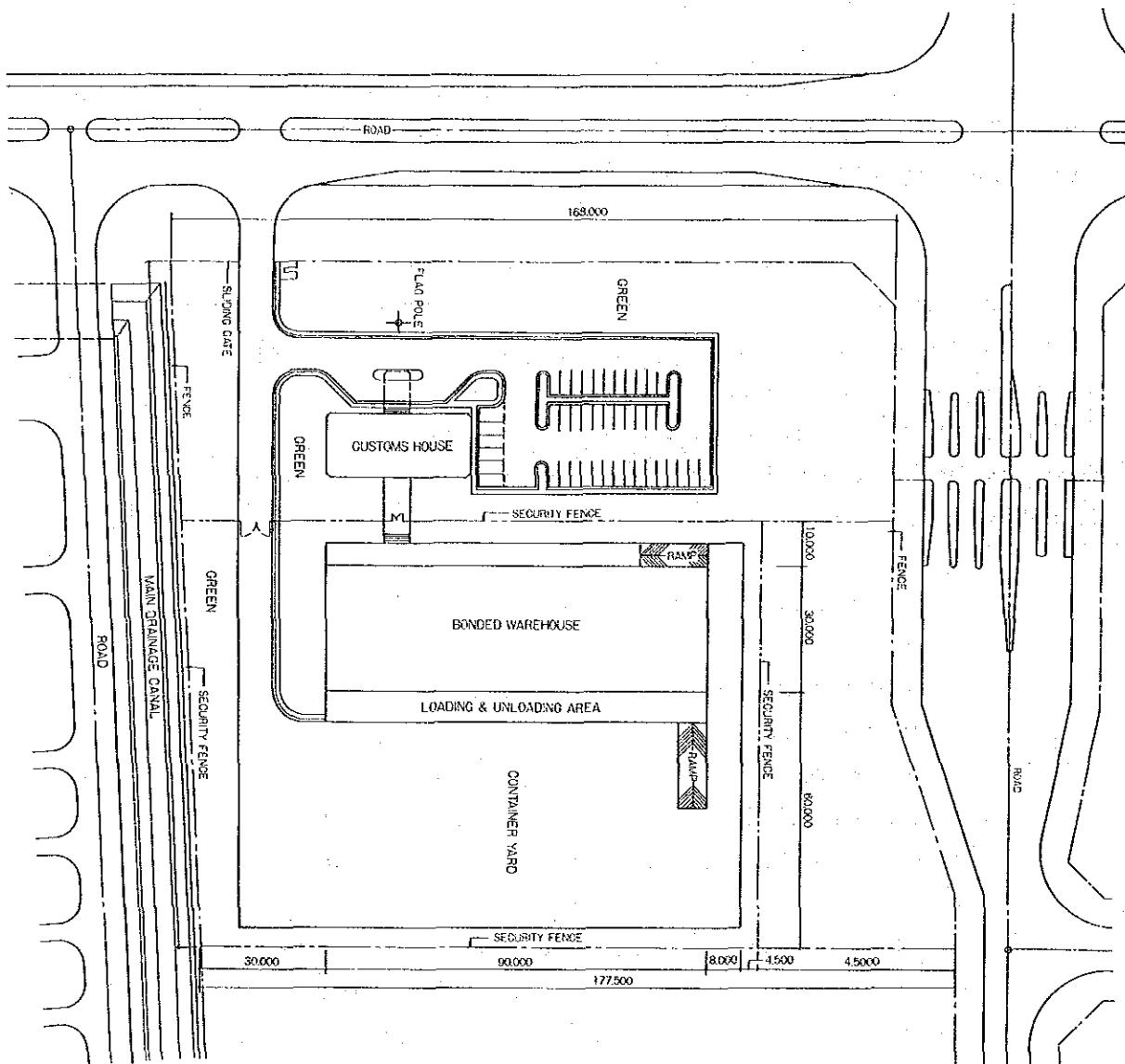
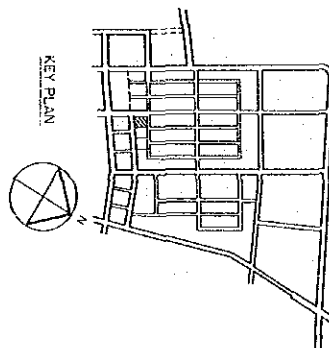


Fig. 6-4 Layout of Customs House Area



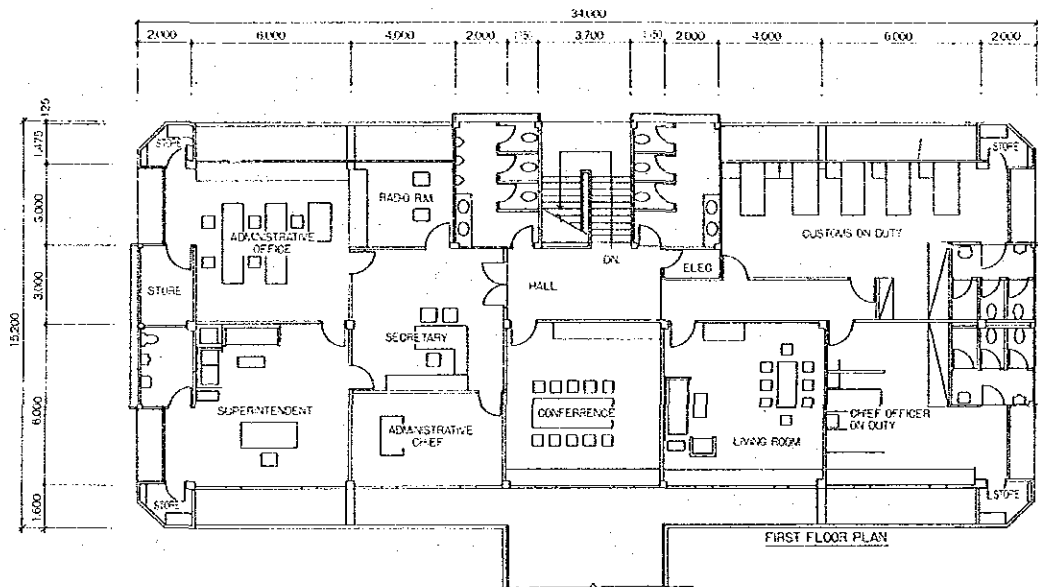
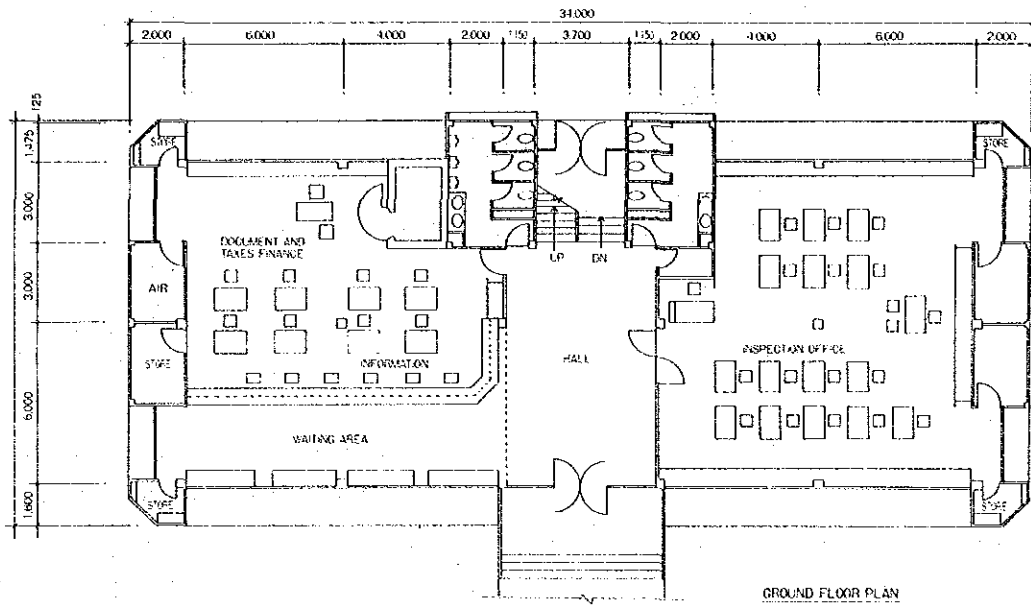


Fig. 6-5 Layout of Customs Office

A breakdown of these 42 Customs Office personnel gives the following list:

| | |
|---|------------|
| Superintendent | 1 |
| Administrative personnel | 10 |
| Inspection personnel | 16 |
| Applications and customs department personnel | 15 |
| <hr/> | |
| Total | 42 persons |

The bonded warehouse is to be constructed adjacent to the Customs Office and can be used for long-term storage of foreign cargoes without import procedures. Permission to use this warehouse is given on the basis of an application to the customs authorities. Namely, the bonded warehouse is provided to expedite trade transactions and to promote transit trade.

The basic dimensions of this bonded warehouse are an area of 42 m x 90 m and an effective storage area of 2,520 m². Fig. 6-6 shows the layout of this bonded warehouse. It is designed to accommodate 23 persons classified into the following job categories:

| | |
|--------------------------------|------------|
| Superintendent | 1 |
| Supervisors | 2 |
| Customs officers | 4 |
| Clerical workers | 8 |
| System and equipment operators | 4 |
| Maintenance personnel | 2 |
| Tallymen | 2 |
| <hr/> | |
| Total | 23 persons |

The provision of customs facilities within the industrial estate for the benefit of export processing zones (EPZs) and general industrial estates (GIEs) as described

above will prove highly convenient and advantageous for corporations venturing into the industrial estate.

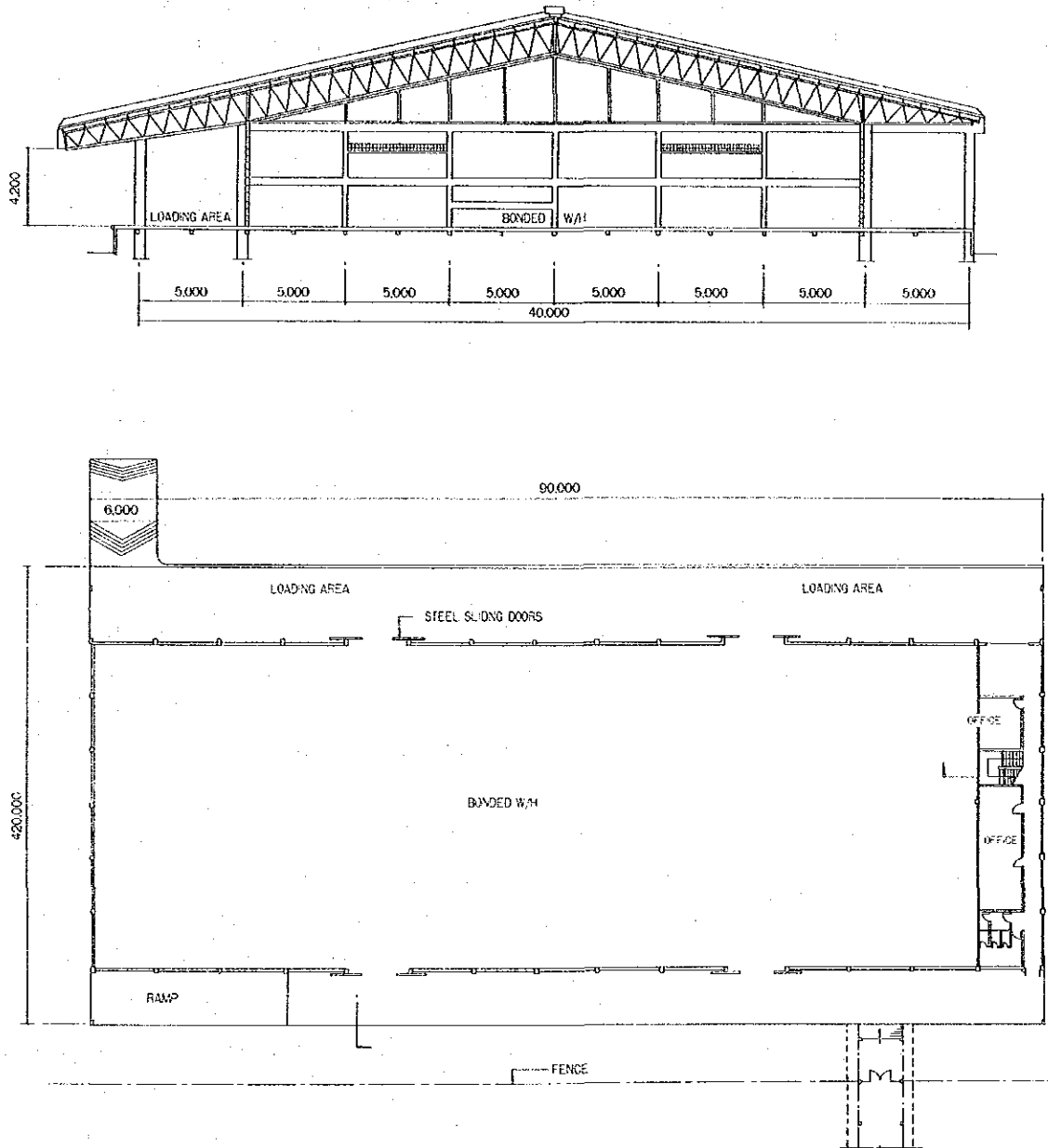


Fig. 6-6 Layout of Bonded Warehouse

b. Relationship with the Laem Chabang Port

The Laem Chabang Port is designed primarily for use as a container port. Bangkok and other leading regions in Thailand are estimated to become shipping and receiving centers for 70 - 80% of the total cargo-handling charges. Meanwhile, the cargo volume shipped out from or delivered to the Laem Chabang region is estimated to account for 20 - 30% of the total volume. Table 6-30 shows the Laem Chabang EPZ/GIE's estimated cargo handling volume for the year 1995.

Table 6-30 Estimated Import/Export Volume of the Laem Chabang EPZ/GIE in 1995 (Tons)

| | GIE | EPZ | Total |
|--------------------|---------|---------|---------|
| Outgoing to Port | 100,000 | 176,000 | 276,000 |
| Incoming from Port | 300,000 | 194,000 | 494,000 |
| Total | 400,000 | 370,000 | 770,000 |

Source: The Laem Chabang Industrial Complex Detailed Engineering Design, IEAT

The larger portion of the container cargoes shipped from or delivered to Bangkok will be sorted and inspected for customs clearance at the Inland Container Deposit (ICD), which is to be established newly in the outskirts of Bangkok. The flow of cargoes among the Laem Chabang Port, the Laem Chabang EPZ/GIE and Inland Container Deposit is shown in Fig. 6-7. The relative positions of the Container Freight Station within the port area and the Laem Chabang EPZ/GIE are shown in Fig. 6-8.

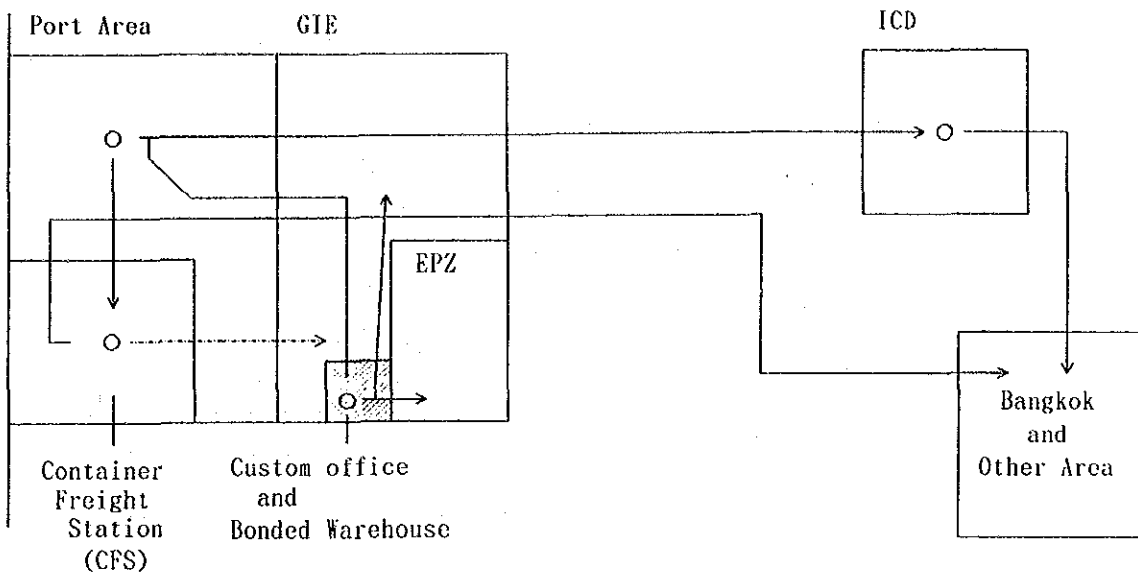


Fig. 6-7 Cargo Flow Between Laem Chabang Port and Laem Chabang EPZ/GIE (Example of Imports)

Foreign cargoes delivered to or shipped from the Laem Chabang EPZ/GIE are examined for customs clearance at the Customs Office adjacent to EPZ. Cargoes stored in bondage, among the cargoes destined to GIE corporations, can be stored in the bonded warehouse attached to the Customs Office, while cargoes destined to EPZ need not be stored in the bonded warehouse and can be accepted by corporations in the EPZ as soon as they clear the customs inspections.

Table 6-31 shows the cargo handling volumes (present and future) of Klong Toei Wharves and the Laem Chabang Port.

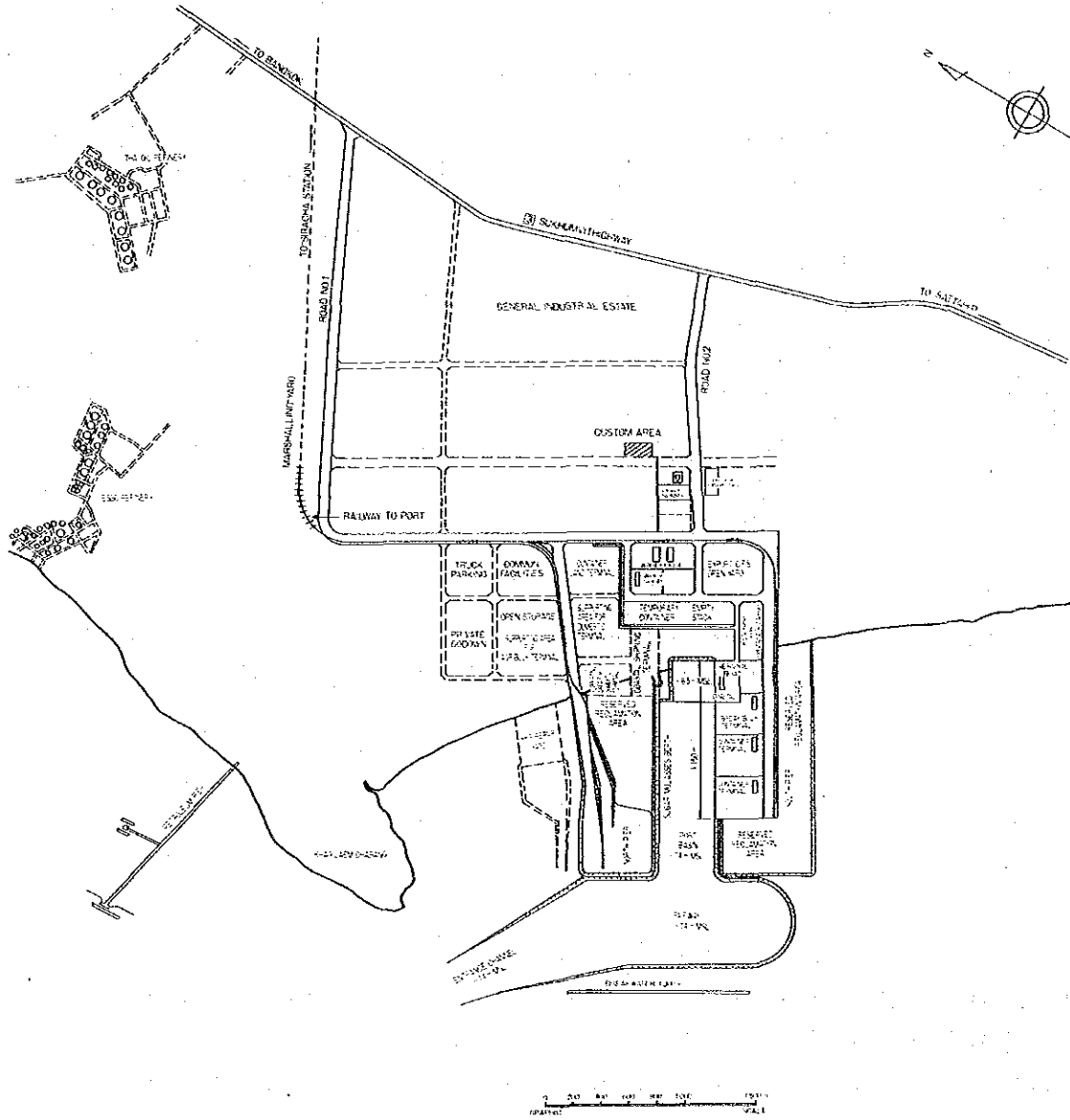


Fig. 6-8 Customs Area in Laem Chabang Industrial Estate

Table 6-31 Cargo Handling Volumes of Klong Toei Wharves and the Laem Chabang Port (Million Tons)

| Year | Klong Toei Wharves | | | Laem Chabang Port (Est.) | |
|-------------|--------------------|-----|-----|--------------------------|-----|
| 1985 | Export | 2.3 | 3.8 | -- | -- |
| | Import | 1.5 | | -- | |
| 1995 (Est.) | Export | 2.5 | 4.5 | 2.2 | 4.0 |
| | Import | 2.0 | | 1.8 | |
| 2000 (Est.) | Export | 2.6 | 4.7 | 3.0 | 5.5 |
| | Import | 2.1 | | 2.5 | |

Source: The Study of the Development Project of the Laem Chabang Coastal Area (1985, JICA)

4) Customs System in the Laem Chabang EPZ/GIE

The customs facilities at the Laem Chabang Port and the Laem Chabang EPZ/GIE will be constructed as detailed in Section 3. Their actual operations must be planned to ensure adequate and quick circulation of materials and goods between the Laem Chabang Port and the Laem Chabang EPZ/GIE.

Today in Thailand, the Klong Toei Wharves are in essence the largest international trade harbor in the country. In order to operate the Laem Chabang EPZ/GIE effectively, it will be imperative to give due study to the problems presently existing in the operation of the Klong Toei Wharves customs system and to utilize the evaluations to improve the management and operation of the Laem Chabang EPZ/GIE.

Regarding Klong Toei Wharves' method of handling foreign cargoes and its customs system, and improvement measures were studied by a joint committee consisting of representatives of the harbor's related organs, cargo handling companies and customs officers. In these deliberations, the following problems were pointed out together with their improvement measures.

Problems Associated with
Klong Toei Wharves'

Customs System

Proposed Improvement Measures

- | | |
|---|---|
| <p>1. When an exporter loads cargo into containers outside the harbor zone, the cargo is inspected outside the harbor. Since customs officers are insufficient, smuggling and tax evasion are easy.</p> | <p>1. The number of customs department officers and the budget should be increased.</p> |
| <p>2. Exporters retain only a small number of container yards (bonded areas) outside the harbor area.</p> | <p>2. private corporations should be permitted to establish container yards, and customs officers should be stationed at these yards.</p> |
| <p>3. The Express Transport Organization (ETO) is monopolizing the container handling business, and their charges are higher compared with private transport companies.</p> | <p>3. Exporters should be permitted to select private transport companies.</p> |

(Continued)

-
- | | |
|--|--|
| <p>4. When customs-cleared cargoes fail to be loaded onto their scheduled carriers, much time is required for revising related documents and for their reapproval (since the system demands the same initial document checker to recheck the revised documents).</p> | <p>4. The re-check system should be improved.</p> |
| <p>5. The State Railway of Thailand is allowed transit into the Port area only during 16:00-19:00 and 24:00-1:00, and has to pay overtime charges to the Customs Office for work done outside these time zones.</p> | <p>5. Custom-cleared cargoes should be loaded onto the railway by railway employees in order to decrease overtime charges.</p> |
-

Due to these problems of the customs system and resultant poor cargo handling efficiency at Klong Toei Wharves, the wharves are incapable of coping with the increasing volumes of foreign cargo and faced with a critical congestion of both ships and cargo. In view of these various problems of the customs system at Klong Toei Wharves, it will be necessary for the Laem Chabang EPZ/GIE to make the following improvements:

- a. Adoption of system for selective inspection of foreign cargoes

At Klong Toei Wharves, all container cargoes are being inspected to prevent smuggling. As a result, the

harbor zone is faced with a serious congestion of cargo distribution. This congestion stems partly from a rapid increase in the actual volume of cargoes being handled, but the basic reason is that the existing cargo handling operations and customs system are incapable of coping adequately with the increase of cargoes.

Surcharges are imposed on container cargoes held up due to ship and cargo congestion. This lowers the competitiveness of imported commodities. Incidentally, the rapid increases in surcharges at Klong Toei Wharves during 1988 are shown in Table 6-32.

Table 6-32 Congestion Surcharges Per Container at Klong Toei Harbor

(US\$/container)

| Container Size | Oct. 1988 | Nov. 1988 | Dec. 1988 |
|----------------|-----------|-----------|-----------|
| 20 ft | 190 | 265 | 340 |
| 35 ft | 220 | 305 | 395 |
| 40 ft | 250 | 350 | 450 |
| 45 ft | 315 | 445 | 570 |

Source: Asia North America Eastbound Rate Agreement

The companies venturing into EPZ in the Laem Chabang EPZ/GIE are certain to export and import raw materials and finished products constantly. Meanwhile, many of the foreign capital-based companies venturing into GIE are similarly expected to import and export raw materials and finished products constantly.

Accordingly, in order to prevent cargo congestion in the port area and to ensure speedy customs clearance at the Laem Chabang EPZ/GIE, it will be necessary to revise the method of examining all container cargoes at least for those

corporations which are engaged in export/import constantly, and to adopt the method of selective inspection of cargoes. Regarding the sampling ratio, about 20% of the total quantity would be advisable. And in the future, it will be desirable for the total cargo examination system to be revised to the selective inspection system even for all the container cargoes passing through the Laem Chabang EPZ/GIE and the Laem Chabang Port.

This improvement measure will enhance speedy customs clearance of raw materials and products for companies venturing into the Laem Chabang EPZ/GIE, and serve as a big incentive for luring companies to venture into the complex. On the other hand, it will enable the Customs Office to employ its personnel effectively and efficiently.

b. Cargo inspection in exporting country

An effective method for expediting the customs clearance of imported cargoes is to have the cargoes inspected beforehand in the exporting country. Among Southeast Asian countries, this system is already being adopted by Indonesia and the Philippines. This has proved highly effective for improving the efficiency of customs clearance work.

Inspection at the exporting country is normally done by an international inspection organization that has been recognized by the importing country's government. The items examined at the exporting country are cargo and the documents such as L/C and pro-forma invoice. Subsequent to these examinations, the international inspection organization issues an inspection certificate bearing the results of its inspection.

This inspection certificate is sent to the importer country's bank concerned. When the cargo arrives, the importer pays the necessary customs duties, business tax

and other charges to the bank. Next, the importer submits the receipts issued by the bank and demands the delivery of the cargo. This method will simplify customs inspection at the importing country, resulting in a speedy import procedure.

By adopting this exporter country inspection system, the importers will be able to obtain raw materials and parts very quickly and the enterprises in the Laem Chabang EPZ/GIE will be able to improve the rates of factory operations. This system will be applicable not only to the foreign cargoes destined to the Laem Chabang EPZ/GIE but as well to cargoes being imported through Klong Toei Wharves, thereby contributing immensely to the development of Thailand's economy.

Introducing this system will involve big changes in Thailand's customs system. Therefore, careful deliberations by the Department of Customs, Ministry of Finance and other related organizations will be necessary. Since the advantages provided by the system's introduction will be great, great efforts should be made to materialize the system's introduction.

c. Increase of Bonded Zones

The cargoes destined to GIE in the Laem Chabang EPZ/GIE, are inspected at the customs office adjacent to the export processing zone. Some cargoes can be stored in a bonded warehouse affiliated to the customs office for a fixed period of time. However, when the number of companies entering GIE increases and their total manufacturing volume increases accordingly, then the bonded warehouse would most likely become inadequate.

Meanwhile, the cargoes exported from GIE are to be inspected by the Customs Office and some of them are loaded into large-sized containers. Since the exporting companies

will be limited to GIE, it will be possible to simplify the inspections at the Customs Office.

In view of this situation, it is desirable for the Thai Government to provide the enterprises going into GIE with permission to establish bonded zones in their compounds.

Today in Thailand, there are bonded manufacturing warehouses, bonded warehouses, EPZs and other bonded facilities in the numbers shown in Table 6-33. However a permit is rarely issued for establishing a bonded manufacturing warehouse or bonded warehouse in the compounds of individual companies. It will be desirable for this system to be introduced gradually for the companies venturing into the Laem Chabang GIE.

Customs officers visit to or stay at bonded areas and warehouses of individual companies to inspect foreign cargoes. However, in order to prevent the number of these customs offices from increasing greatly, the selective inspection system should be adopted for container cargoes. At the same time, the companies should be permitted to perform autonomous inspections for the cargoes which are carried into or away from bonded zones and warehouses.

Table 6-33 The Numbers of Bonded Areas in Various Countries

| | Bonded Manufacturing Warehouse | Bonded Warehouse | Bonded Shed | Bonded Area | E P Z |
|------------------------|--------------------------------------|------------------------------------|--|------------------------------------|---|
| Thailand | 70 | 1 (Klong Toei) | | | 3 • Lat Krabang (33ha) • Bampoo (51ha) • Lamphun (25ha) |
| Japan (Jan. 1988) | 1.127 (62.4mil. m ²) | 1.251 (4.8mil. m ²) | 3.495 (57.6mil. m ²) | 72 (15.6mil m ²) | 1 • Okinawa Free Trade Zone |
| U. S. A (May. 1987) | Sub Zone (large factory) 104 | | | | 141 (F. T. Z) |
| Malaysia | | | | | 12 (F. T. Z) |
| U. K. | | | | | 6 (F. T. Z) |

By adopting these new systems and measures, it will be possible to prevent cargo congestion in various customs facilities and to promote smooth cargo distribution. For companies which decide to avoid Klong Toei Wharves' congestion and venture into the Laem Chabang Industrial Estate, which is about 130 km distant from Bangkok, the incentive measure of permitting them to establish their own bonded zones and/or bonded warehouses in their own compounds will become a powerful tool for strengthening the market competitiveness of their products.

d. Umbrella service, computerization and autonomous administration

The estimated cargo volume and the number of customers officers in the Laem Chabang EPZ/GIE are compared

with those of the Hamamatsu Inland Container Terminal in Japan in Table 6-34. The volumes of cargoes handled by both these zones are about the same, but the number of required customs officers at the Hamamatsu Terminal is only about one-fourth that of Laem Chabang. This is because the umbrella service, computerization and autonomous administration are applied to bonding, customs clearance and import/export procedures.

Table 6-34 Comparison of Efficiencies of the Laem Chabang EPZ/GIE, Inland Container Terminal Hamamatsu and Okinawa Free Trade Zone

| | Number of Required Customs Officers | Volume of Cargo Handled | Area of Customs Area and Bonded Area |
|--|---|-------------------------------|--|
| Inland Container Terminal Hamamatsu | 11 | 645,000 tons (1987) | 32,821 m ² |
| Laem Chabang Industrial Estate | 42 (+23 bonded & ware- housing personnel) | 770,000 tons (1995) | 23,240 m ² (+ EPZ 176 ha) |
| Okinawa Free Trade Zone | 3 | 23.9 Billion Yen | 27,000 m ² |

Meanwhile, Table 6-35 shows a comparison of the time required for customs clearance in Thailand and Japan. We see that about five days are required for customs clearance in Thailand (Klong Toei Wharves). This is a decisive bottleneck for company and factory operations.

Table 6-35 Comparison of Days Required for Customs Clearance (In Case of Import)

(days)

| Harbor Entry-Acceptance-Inspection-Permit | | | |
|---|---------------------------------|-----|-----|
| Japan (Average)* | 6.1 | 0.3 | 0.4 |
| Hamamatsu Inland Container Terminal | For passage through terminal: 2 | | |
| Malaysia (FTZ, LMW)** | | | 1.0 |
| Thailand, Klong Toei Wharves | Waiting at sea: 5-7 | | 2-5 |

* Survey in Sept. '86

** FTZ: Free Trade Zone

LMW: Licenced Manufacturing Warehouse

The concentration of import/export procedures (umbrella service or one-stop service), computerization and autonomous administration are vital measures for improving the efficiencies of customs clearance operations. These measures are more effective if combined instead of being applied independently. Even in connection with the Laem Chabang EPZ/GIE, it will be desirable to design customs clearance clerical work most efficiently beforehand, in order to cope with the expected increase in the cargo handling volume.

Umbrella service means a service system under which all operations, such as the procedures for customs clearance, bonding and import/export, are accomplished at one place (in this case, at a single customs clearance area). The exporters and importers will not have to go here

and there for cumbersome applications and other procedures. This prevents cargo congestion. Fortunately, the Laem Chabang EPZ/GIE is designed with a setup for offering all these services in the customs area adjacent to EPZ. Therefore, this system must be managed efficiently to ensure smooth services.

A vital system for supporting the umbrella service is to computerize import/export clerical tasks. In case of import business, for example, an on-line computer system processes a series of offices works which are performed by a shipping company, a storage company, a customs agent, a bank, etc., between the port and the cargo owner.

Regarding air cargo, this computerized processing system is highly advanced and various systems are already in commercial use. They include the Nippon Air Cargo Clearance System (Japan), London Air Cargo EDP System (United Kingdom) and System d'Ordinateur Pour le Fret International (France). In the sector of marine shipping, various on-line systems have already been introduced which link the cargo owner, storage company, customs agent and shipping company. On-line computerized systems including customs office are being used only in the United States. Japan is also conducting a study on introducing this system. Since the system displays a tremendous effect in improving the efficiencies of customs clearance tasks, it will be desirable for the Laem Chabang EPZ/GIE to gradually introduce a computerized on-line system for handling customs clearance and import/export clerical tasks. Fig. 6-9 shows the computerized flow of customs clearance tasks.

Another system that has a great effect for improving the efficiency of customs clearance tasks is the autonomous (self-imposed) administration system. Under this bond administration system, a private corporation having received a permit from the customs office for the use of a bonded area, a bonded warehouse or a bonded factory performs

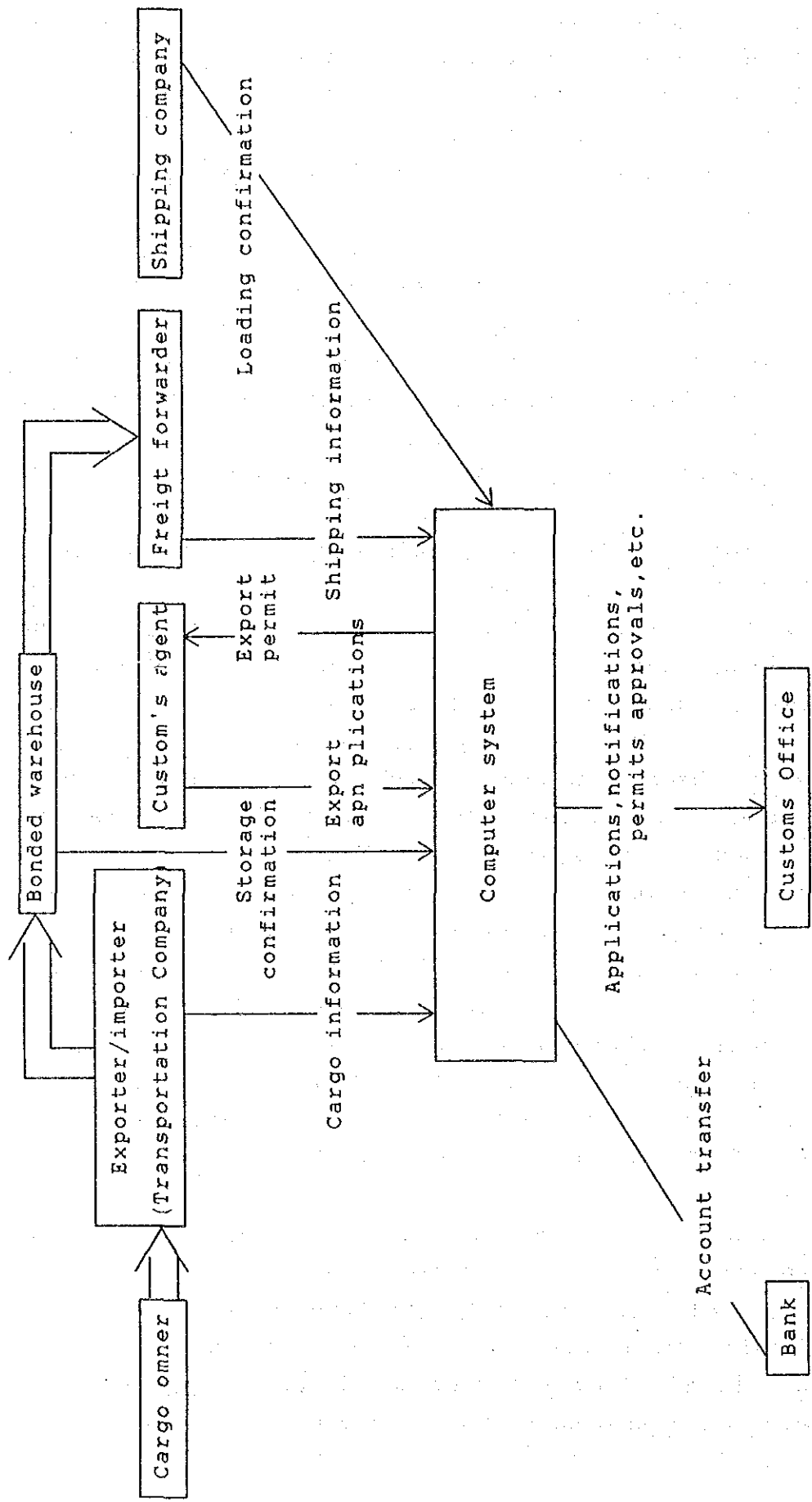


Fig. 6-9 Computerization of Customs Clearance Tasks (Example of Export)

an autonomous administration of the foreign cargoes. At the same time, it is obligated to keep a record of these operations in a ledger. This system is highly advanced in Japan and in the United States, and is displaying its full worth in the face of the increasing volumes of import/export goods. Incidentally, among the roughly 6,000 bonded areas in Japan, about 96% of these areas are adopting this autonomous administration system.

By introducing the three systems described above, the Laem Chabang EPZ/GIE will become an industrial base that provides remarkable export competitiveness in Thailand. This condition will stand out as a big incentive for corporations giving thought to venturing into this complex.

e. Export inspection

In addition to the customs inspection, the following 12 items are inspected by the Office of Commodity Standards (OCS) or by a licensed private inspection company in compliance with Export Commodities Standards Act (1979).

Compulsory Inspection Items (Export Goods)

| | |
|---------------|------------------|
| Kapok | Fish Meal |
| Salt | Castor beans |
| Silver | Maize |
| Bleached jute | Tapioca products |
| Teak wood | Thai silk |
| Corn | Mung beans |

Presently, export inspection has not presented any difficulties. Nevertheless, it is desirable to establish the following inspection organizations in consideration of the industry types of the enterprises which enter the Laem Chabang EPZ/GIE.

Export Inspection Organizations and Related Details

| Export Inspection Organization | Inspection Details |
|---|--|
| Food products inspection office | Agricultural products inspection Food bacteria inspection Can inspection Food additive inspection Packing inspection |
| Industrial products inspection office (for electric apparatus and plastics products) | Non-destructive inspection Damage inspection Durability inspection Welding inspection Insulation inspection Inspection for harmful and/or poisonous materials Inspection based on the industrial and safety standards of the importing country |

(6) STANDARD FACTORY

1) Object of Installation of Standard Factory

The objective to install a standard factory in an industrial area is to promote industrial expansion by reducing the investment burden at the initial stage of occupation.

2) Classification of Standard Factories by Operation Types

Standard factories can be classified into the following two types by their operations.

- a. A factory which is used temporarily until the own factory is built.
- b. A factory which is used to promote the expansion of a domestic enterprise.

The examples of the type a are Masan EPZ in Korea, Nampeng Fabrication Area in Taiwan and Jurong Industrial Area in Singapore. Those of the type b are Pulogadung Industrial Estate in Indonesia and Prai Processing Zone in Malaysia.

Table 6-36 shows the outline of existing standard factories in Singapore, Taiwan, Indonesia and Malaysia and the outline of the standard factory in plan for the Laem Chabang EPZ/GIE. When the types a and b are compared in terms of their floor area per unit, it is found that a is relatively large (about 900 m² to 3,500 m²) and b is about 200 m² to 420 m². The latter is 1/5 to 1/3 of the former. (The average floor area at Masan EPZ is 1,800 m², though not included in this table.) No concrete data on the standard factories in Table 6-36 are available. (In case of Masan EPZ, excluded from the table, it is 1,800 m² in average.)

Considering the floor area, the standard factory in Laem Chabang belongs to type a but it is comparatively small among the group.

3) Role of the Standard Factory in Development of Industrial Area

Standard factories are normally installed at the early stage of EPZ development, and their utilization rate at the early stage is higher than owned factories. So we show the example of Bataan EPZ Philippines. (The outline of Bataan EPZ is shown in Table 6-37.) Of the industrial area of 258 ha available 1975, 41% was already occupied. At this time, the utilization rate of standard factories was 88%. The role of standard factories is very important in the early stage of EPZ development (Table 6-37).

This is because most occupants of EPZ are labor-intensive light industries and assembly industries. They do not need so many heavy machines and aim at the early return of investment by utilizing the cheap labor. Many enterprises move their factories to other countries where the labor cost is lower when the economic development raises labor wages and lowers the relative competitiveness.

4) Occupation Conditions and Industry Types of Standard Factories

Table 6-38 compares the occupation conditions and industry types of standard factories in different countries. In Taiwan and Korea, the minimum condition of investment is provided. In case of Korea, the occupation conditions of standard factories are more relaxed than those of owned factories in EPZ. The investment for one owned factory is 1.21 million dollars, while that for one standard factory is about 0.51 million dollars.

As for the industry types, standard factories are used mainly by life-related industries and processing/assembling industries, but rarely by raw materials industries. When they are used for manufacturing electronic machinery, clothes, general goods, etc., some additional restrictions of industry types are sometimes imposed. Because many enterprises occupy the same building, the industries using dangerous articles, such as fire and explosion, are prohibited (Indonesia), and the industries causing pollution are prohibited (Taiwan).

5) Merits and Demerits of Standard Factory

The merits of standard factories can also be demerits for enterprises. Table 6-39 shows the merits and demerits. An enterprise decides to occupy a standard factory when it judges that the advantages are larger than the disadvantages.

6) Occupation Contract Types of Standard Factory

There are two types of contracts. They are rent and sale. Table 6-36 shows the contract types and the prices of standard factories in each country.

In most cases, the land is rented because of the character of EPZ. In some cases, an enterprise can choose to rent or purchase the building. In other cases, it must rent the building (for example, a flatted factory in Singapore). Different rentals are set in various countries and locations. In Singapore and Taiwan, different prices are set for different floors of a 3-storied or higher building. The prices of higher floors are lower than lower floors.

7) Proposal on Standard Factory in the Laem Chabang
EPZ/GIE

We analyzed the occupation conditions, industry types, advantages, disadvantages and contract types of standard factories by comparing the standard factories in various countries. The Laem Chabang EPZ/GIE has three types of standard factories, as shown in Table 6-36. They are the type A, the type B and a standard bay factory. A factory building of the type A is occupied entirely by one enterprise. A building of the type B has three floors and can be occupied by three enterprises independently. A bay factory has only one floor. There are 8 buildings of the type A, 4 buildings of the type B (4 x 3 = 12 units) and 5 bay factories. There is an EPZ storehouse and a container yard in front of the bay factories. In case of the type B, it is possible to use one building (3 floors) by a single industry.

In determining occupation conditions and industry types of standard factories in the Laem Chabang EPZ/GIE, the examples in Korea and Taiwan will be extremely useful (Table 6-38). In Masan in Korea especially, the main occupants are Japanese processing and assembly enterprises of electronic and electric industries. It will show an effective way for promoting Japanese enterprises. In Laem Chabang also, the main occupants will be electronic and precision machine processing and assembly industries. They will be followed by life-related industries, such as plastic products, crafts, rubber products, cosmetics, office supplies, textile products and medical machinery.

The interest of Japanese enterprises in standard factories is shown in Table 6-40. Among 107 enterprises, 52 companies (about one half) indicated a wish or a possibility to use standard factories. Therefore, a high occupation rate can be expected at the early stage of the development. It may become necessary to consider the expansion and increase of facilities.

As for the contract types, the land should be rented, but the buildings may be purchased or rented according to each enterprise's intentions. The prices of rent and sales cannot be decided generally, because they depend on the development cost of land and buildings. When both the land and buildings are to be rented, the rental should be \$2 to \$4/m² in order to attract enterprises.

8) Storage and Packing Facility

The result of the questionnaire to Japanese enterprises shows that the necessity for storage facilities and packing facilities is comparatively low. An enterprise intends to possess its own storage within his own factory space. It also intends to possess its own packing facility or machine depending on its own necessity.

Therefore storage and packing facility in the estate should be operated by private firms.

Table 6-36 Comparison of Standard Factory in Industrial Area and Export Fabrication Area

| Name of Factory | Industrial Area/ EPZ name | Type of Factory | Floor | Unit Floor Area | m^3 | Contract Type | | Price | | Bldg. | Equipment |
|------------------------|---------------------------|-----------------|-------|-----------------|-------|---------------|---------------|-----------------------|---------------------------------|----------------------|---|
| | | | | | | Sale | Rent | Purchase (Bldg.+Land) | Rent US\$/m ² /month | | |
| Thailand | Laem Chabang (plan) | A | 2 | 927 | - | - | - | - | - | Second floor | 1F OF30, ST30, W/C |
| | | B | 3 | 832 | - | - | - | - | - | blowby concrete | ZF MR39, CR39, W/C |
| | | Bay Factory | 1 | 750 | - | - | - | - | - | - | |
| Singapore | Jurong (1988) | T6 | 1 | 913 - 920 | 0 | 0 | 489.43+4.56/Y | 4.35 | 4.35 | Concrete rigid frame | ELC: 22 KVA 400Vx3ph 230Vx1ph |
| | | C6 | 1 | 1,432 | 0 | 0 | 496.66+4.56/Y | 5.25 | 5.25 | | Potable Water |
| | | D6 | 1 | 2,362 | 0 | 0 | 829.45+4.56/Y | 4.34 | 4.34 | | Industrial Water Sewage |
| | | E6 | 1 | 3,561 | 0 | 0 | 731.36+4.56/Y | 4.11 | 4.11 | | Industrial Water Sewage Tel & Telex, Fax |
| Flatted Factory (1988) | | 5th-7th storey | 7 | 1985-3227 | 0 | 0 | 4.46 | 4.46 | 4.46 | Reinforced Concrete | ELC: 400Vx3ph 230Vx1ph |
| | | 4th storey | 7 | | | | | | | + | |
| | | 3rd " | 7 | 860-1345 | 0 | 0 | 5.30 | 5.30 | 5.30 | Brick | Potable Water Sanitary |
| | | 2nd " | 7 | | 0 | 0 | 5.79 | 5.79 | 5.79 | | |
| | | 1st " | 7 | 806-1116 | 0 | 0 | 7.11 | 7.11 | 7.11 | | |

(Continued)

| Name of Factory | Industrial Area/ EPZ name | Type of Factory | Floor | Unit Floor Area | (m ³) | Contract Type | | Price | | Bldg. | Equipment |
|-----------------|-------------------------------|-----------------|-------|-----------------|-------------------|---------------|---------------|-----------------------|---------------------------------|-------|--|
| | | | | | | Sale | Rent | Purchase (Bldg.+Land) | Rent US\$/m ² /month | | |
| Taiwan | (1987.5) | 4th storey | 4 | 979 | 0 | 0 | 196.83+4.95/Y | | | | |
| | | 3rd storey | 4 | 979 | 0 | 0 | 214.74+4.59/Y | | | | |
| | | 2nd storey | 4 | 979 | 0 | 0 | 232.61+4.23/Y | | | | |
| | | 1st storey | 4 | 979 | 0 | 0 | 250.51+3.89/Y | | | | |
| Indonesia | Pulogadung I.E (Jakarta) | | 2 | 324 | 0 | 0 | | Reinforced Concrete | ELC: 23KVA | | 220,380Vx3ph Water: 150 l/s Tel. GAS |
| Malaysia | Jejauri Phase I (Perlis) | | 2 | 223 | 0 | 0 | 210.73 | | | | |
| | Prai Phase V (Penang) | | 1 | 197 | 0 | 0 | 236.84 | | | | |
| | Pasir Gudang Phase I (Johore) | | 2 | 1,092 | 0 | 0 | 208.01 | | | | |
| | | | | | 0 | 0 | 2.16 | | | | |

Exchange Rate
 US\$: US\$49.05
 INT: US\$3.463
 IM\$: US\$37.237

W/C: Toilet
 A/C: Aircondition

OP: Office
 ST: Storage
 M.R: Manager Room
 C.R: Conference Room

Table 6-37 Outline of Bataan EPZ, Philippines

Outline of Bataan EPZ Philippine

| | |
|--|--------------------------|
| (Location) 55 km by sea, 170 km by land from Manila Capital Zone | |
| (Development Area) | |
| Total Area | 735 ha |
| Industrial Area | 365 ha |
| Other (house, hotel, golf course, green field) | 370 ha |
| (Development Area Details) | |
| Refer to the map on right hand. | |
| 1st Phase ... | Light industry |
| 2nd Phase ... | Middle and Auto industry |
| 3rd Phase ... | Heavy industry |
| 1st Term | 100 ha |
| 2nd Term | 107 ha |

(Utilization of Each Area 1975)

| Name of Area | Total Area (ha) | Utilization Area (ha) | Utilization Rate (%) |
|---|-----------------------------|-----------------------|----------------------|
| 1st Phase | 67 | 14.2 | 21 |
| 2nd Phase | 91 | 34.7 | 38 |
| 3rd phase (1st term) | 100 | 56.7 | 57 |
| " (2nd term) | *(107) | - | - |
| Total | 258 | 105.6 | 41 |
| No utilization rate because the land is not arranged. | | | |
| (Utilization Rate of Standard Factory) | | | |
| Total Floor Area (ha) | Utilization Floor Area (ha) | Utilization Area (%) | |
| 5.4 | 4.8 | 88 | |

Table 6-38 Occupation Conditions and Industry Types of Standard Factory

| Name of Country | Occupation Condition | Line of Business |
|-------------------|--|--|
| Singapore | <p>Flatted Factory</p> <ul style="list-style-type: none"> o Rent only o Contract term 3 years o Production business only o Production space is more than 60%. o Office space is under 25%. | <p>Production business only. There is no condition unless prohibited goods specified by the government are included.</p> |
| Taiwan | <ul style="list-style-type: none"> o All products should be exported. o The minimum investment product, technical should be more than NT\$ 20 million (692,600 US\$) o Added value in product product, chemical should be more than 25% of EBO price. o No pollution occurs during production. | <p>Precision machine, electronics, optical instrument, metal product, plastics, furniture, machine product, technical art, electric apparatus, rubber product, chemical product, printing and business supplies, cake, cosmetics, leather product, paper product, toy, yacht, knit-wear, garment, medical instrument, sports wear, education instrument and musical instrument</p> |
| Indonesia | <ul style="list-style-type: none"> o The object is the industry of middle and small scale. o Prohibited industry: Oil refining and processing of minerals and chemicals | <p>Drinks, medical supplies, cosmetics, plastics and wooden product</p> |
| Malaysia | | <p>Printing, fiber, knit-wear, food chemical product, electric apparatus, precious metals</p> |
| Korea (Bazan EPZ) | <ul style="list-style-type: none"> o Export amount should be more than US\$ 600/Tsubo (1 Tsubo=3.278m²) o Employee number should be more than 25 men/Tsubo o The minimum investment should be US\$100,000 | <p>Electronics and electric industry</p> |

Table 6-39 Merits and Demerits of Standard Factory

| Item | Merit | Demerit |
|--|---|---|
| 1. Equipment investment | Early investment is small. | Factory planning is not free. o Limitation on equipment o Limitation on input/output of raw materials and product |
| 2. Collection of investment | Early collection is possible. | Cost loading continues (in case when the land and building are rented.) |
| 3. Utility (power, water, communication equipment) | Reduction of maintenance cost by common use | Limitation on utilization in both quality and quantity. |
| 4. Common space | Reduction of cost by common use | Sufficient space can not be obtained for well-being and welfare of employee. |

Table 6-40 Result of Questionnaire on Standard Factory

| No. | Contents of Answer | No. of Answer | Percentage |
|-----|--------------------------------|---------------|------------|
| 1 | Wish to use one | 10 | 9.3 |
| 2 | Possibility of using one | 42 | 39.3 |
| 3 | No intention to use one | 10 | 9.3 |
| 4 | Want a larger standard factory | 12 | 11.2 |
| 5 | Others | 33 | 30.8 |
| | Total | 107 | 100.0 |

(7) FACILITIES FOR WORKERS

1) Workers' Facilities in the Laem Chabang EPZ/GIE

The Laem Chabang EPZ/GIE is situated at about 130 km from Bangkok. Since there is no large city in the surrounding areas, it will be necessary to provide the complex with welfare facilities for the workers to enjoy their working and daily lives, recreation facilities for enjoying themselves during free hours, and educational facilities for the employees to acquire techniques and knowledge on their own.

Based on the results of the surveys directed to Japanese companies, it was found strongly advisable to make sufficient restaurants, hotel accommodations, and facilities for the education of children.

Incidentally, the welfare facilities listed in Table 6-41 are to be provided in the Laem Chabang EPZ/GIE.

2) Administration and Operation of Workers' Facilities

As described in 1), highly substantiated welfare facilities are to be constructed in the Laem Chabang EPZ/GIE. In considering their administration, it will be necessary to give due thought to the unique characteristics of the estate. Fig. 6-10 gives the conditions which must be considered in planning the management of facilities for employees in the Laem Chabang EPZ/GIE.

a. Unique conditions of the Laem Chabang EPZ/GIE

- a) Congregation of companies and employees of various nationalities

The occupants of the Laem Chabang EPZ/GIE will be not only domestic enterprises, but also various foreign

Table 6-41 Facilities of IEAT Administration Center (1/3)

| Facility | Sub Facility | Area | Storeys | Qn, | Capacity, Utility, Personnel | |
|---------------------|----------------------|---------------------|---------|-----|---|--|
| Sport Facility | Soccer Field | 100m X 48m | | 1 | | |
| | Tennis Court | | | 4 | | |
| | Basketball Court | 31m X 33m | | 1 | | |
| | Swimming Pool | 25m X 12.5m | | 1 | With stadium | |
| | Locker Room Building | 303m ² | 1 | 1 | | |
| IEAT Administration | | 1,685m ² | 2 | 1 | Function : office accomodation for personnel involved in the administration and control of Ieam Chabang Industrial Complex. | |
| | | 54.5m X 32.0m | | | | |
| | | | | | Personnel : Manager 1 | |
| | | | | | Admi.Div. 17 | |
| | | | | | Engineering Div. 24 | |
| | | | | | Procedure and | |
| | | | | | Export Zone 11 | |
| | | | | | Total 53 | |
| | | Exhibition Hall | | | 1 | |
| | | Meeting Room | | | 1 | |
| | EPZ Agency Office | | | 3 | | |
| | POST Office | | | 1 | | |
| | Bank | | | 1 | | |

(Continued)

Table 6-41 Facilities of IEAT Administration Center (2/3)

| Facility | Sub Facility | Area | Storeys | Qn, | Capacity, Utility, Personnel |
|--------------------------------------|------------------------------|------------------------------------|---------|-----|--|
| IEAT Administration | First Aid Clinic | | | 1 | |
| | Library | | | | |
| | IEAT Admi. Office and Others | | | | |
| Canteen (Club House and Facility) | | 1,529m ² 34m X 76m | | | Function : To provide for amenities, relaxation and entertainment of all personnel, officers, staff, executive management, families and visitors. Personnel : 5 |
| | Canteen Area | | | 1 | 152 seats |
| | VIP Dinning Room | | | 1 | |
| Guest House | | 1,220m ² 37m X 24.5m | 4 | 1 | |
| | Bed Room | 14m X 16m | | 16 | not equipped with bathroom |
| | Living and Dining Room | | | 8 | with kitchen |
| | Multi-purpose Hall | | | 2 | |

(Continued)

Table 6-41 Facilities of IEAT Administration Center (3/3)

| Facility | Sub Facility | Area | Storeys | Qn. | Capacity, Utility, Personnel |
|------------|---------------------------------------|--------------------------------|---------|-----|--|
| Sub Center | | 324m ² 20m X 22m | 1 | 4 | Function : Surviving all foods, meals and beverage. Shops, drugstore, small hall, large garden landscaping with "OASIS" areas. |
| | Meeting and Canteen Room with Kitchen | | | 1 | |
| | Shop | | | 1 | |
| | Storage Room | | | 3 | |
| | Terrace | | | 1 | |
| | | | | | |

Source: IEAT

enterprises from Japan, Taiwan, Korea, Singapore, Europe and America. Accordingly, employees of diverse nationalities with different living customs, educations, religions and business practices will be congregating inside the estate. As a result, various kinds of frictions may occur among corporations and among employees. Therefore, it will be necessary to administer the diverse facilities in a manner that would not cause any friction among the employees of various nationalities and enable them to coexist pleasantly.

b) Lack of amusement facilities

The Laem Chabang EPZ/GIE is situated about 130 km away from Bangkok, and there is no large city in the surrounding area. Sriracha is about a dozen kilometers away, Pattaya also about 20 km away. Therefore, there are no daily amusement facilities for the employees working inside the estate.

c) Lack of cultural and educational facilities

Due to the conditions described in item b) above, there is no adequate cultural and educational facilities near Laem Chabang. There are almost no such facilities for foreign employees. It will be urgently necessary to expand and construct facilities for foreign employees and their dependents.

d) Lack of hotel facilities

There is no modern hotel facilities in the environs of the estate, so short-term visitors will necessarily have to commute from Pattaya or Bangkok. Inside the estate is a Guest House, but this belongs to IEAT and its use by companies venturing into the estate will be difficult. Therefore, the lack of hotel facilities will become a serious problem as an increasingly larger number of corporations start to enter the estate.

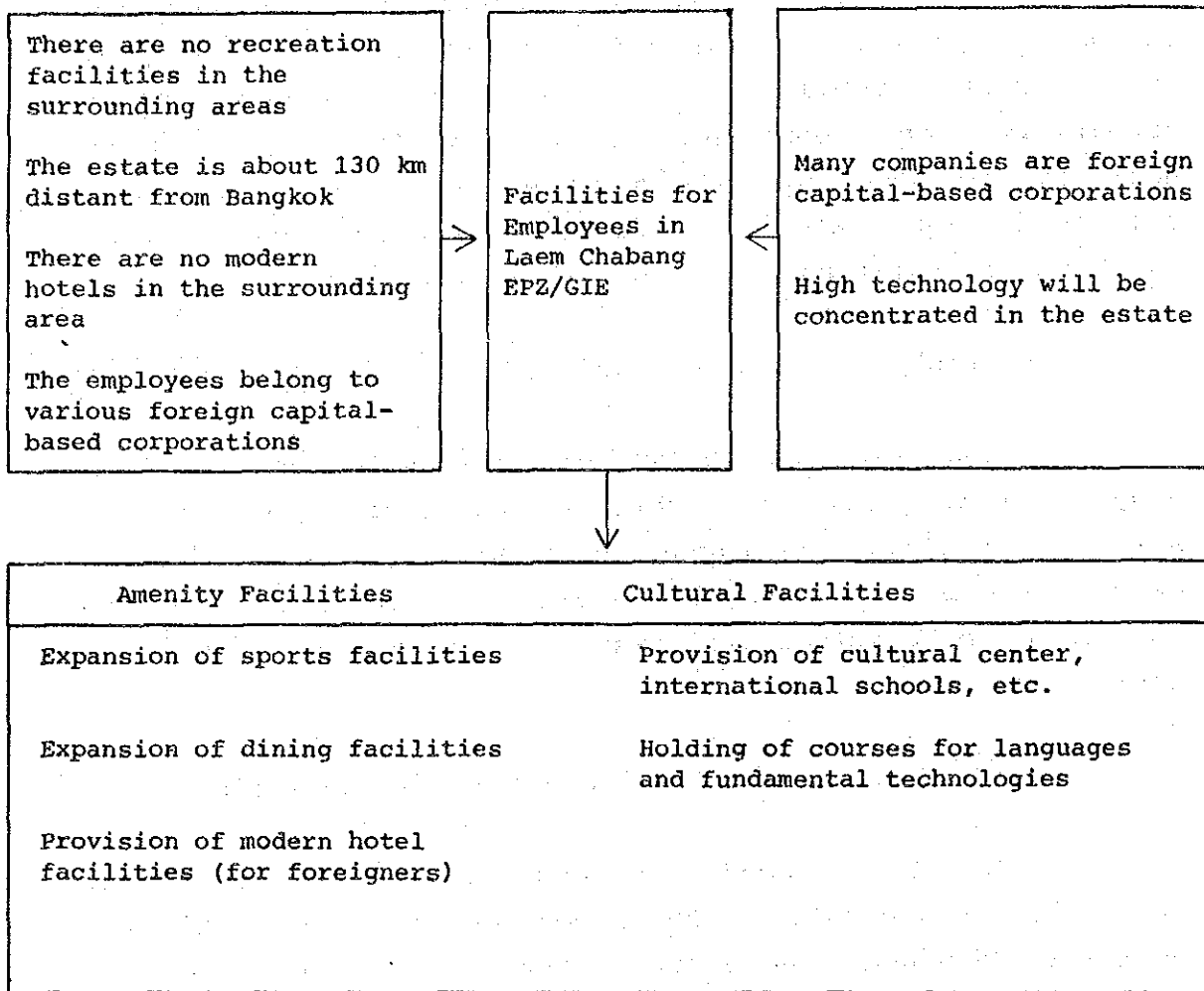


Fig. 6-10 Expansion of Workers Facilities in Laem Chabang EPZ/GIE

e) Concentration of advanced foreign technologies

According to the questionnaire survey on corporations, the outlook is that corporations with a high level of advanced technologies will be venturing into the Laem Chabang EPZ/GIE. The managers and employees of these corporations are also expected to possess high levels of technical education. Accordingly, a distinct characteristic of the Laem Chabang EPZ/GIE is that there will be frequent technology transfers here since many prominent corporations will be venturing into the estate from Japan, Europe and NIEs countries. As a result, the estate will be linked directly with the advanced homeland technologies of these venturing corporations.

b. Policies for management of employee facilities

In view of the environmental conditions described in the preceding item a, the following policies appear desirable for managing the employee facilities in the estate:

a) Substantiation of sports facilities and their efficient management

The Laem Chabang EPZ/GIE will have remarkable sports facilities that cannot be found elsewhere in Thailand. However, in order to ensure the maximum pleasure and friendship among employees, it will be necessary to adopt efficient measures for cleverly managing and expanding the service functions of these facilities.

The applications for the use of these facilities by tenant corporations and their employees should be handled with priority, and telephone services should be made available for the reservation, alteration or cancellation of the use of these facilities. With finance permitting, nighttime illumination should be provided, and an indoor

gymnasium (1,300 m² class) will be desirable. It is recommended to operate these facilities even on weekends and holidays and to provide sports instructors. And sports events should be held from time to time with the participation of as many tenant corporations and their employees as possible to promote mutual understanding and goodwill.

It may be advisable to adopt a system enabling the facilities to be used separately by higher personnel and ordinary employees. Whenever these facilities are idle, they should be made available for local residents.

b) Substantiation of dining facilities

The canteen facility should be made available also to IEAT personnel, customs officers, governmental personnel as well as the managerial class personnel of the tenant corporations. In this case, persons belonging to various countries such as Japan, European countries, Taiwan and Korea will be utilizing the facility in addition to Thailand nationals. So it will be desirable for international foods to be served, if possible, and services should be extended by taking into consideration the food habits of various countries as well as the kinds of foods which are prohibited for religious reasons.

In addition, since the Laem Chabang EPZ/GIE is isolated from city areas, it may be necessary to adopt a system of delivering ordered foods and lunches to the employees of tenant corporations. They should preferably be rich in variety and include Siamese style, Western style, high-class and local type foods. It will be desirable for management of the dining facilities to be provided by private enterprises by renting the dining space to them.

c) Substantiation of lodging facilities

There is an IEAT Guest House with 16 rooms in the estate, but it is to be used primarily by personnel related to IEAT. Therefore, lodging facilities will definitely be insufficient for companies planning to venture into the Laem Chabang EPZ/GIE.

Since the estate is far away from Metropolitan area, it will be necessary for the convenience of tenant companies to make IEAT's Guest House available for the short-term visitors to the tenant companies. And when it becomes financially possible, it will be desirable for small-scale, modern Western type lodging facilities to be constructed in the environs of the estate.

d) Provision of cultural facilities and international school

Upon the completion of the Laem Chabang Port and the Laem Chabang EPZ/GIE, the area's population including the employees and their family members is estimated to run up to roughly 120,000 persons. But according to the existing plan, the cultural and educational facilities for these employees and local residents will be quite inadequate. When considering that a comparatively large number of managerial level personnel and foreign employees will live in the environs of Laem Chabang, it will be important to provide at least the necessary cultural and educational facilities in this region.

More specifically, the following cultural and educational facilities are regarded as necessary for the Laem Chabang EPZ/GIE:

- International school
- Cinema hall
- Lecture room for technical and other courses

- Language laboratory
- Exhibit hall
- Ball room

Among these facilities, the international school is certain to attract the greatest interest of foreign employees. As for its management, it is conceivable for the site to be acquired from the Thai Government at no charge and for the school to be operated jointly by the tenant corporations and IEAT. Inside this facility, language courses (Japanese, Siamese and English languages) may conceivably be provided for the benefit of upper and middle managerial class personnel and foreign employees.

Since corporations with advanced technologies will be venturing into the Laem Chabang EPZ/GIE from Japan, European countries and NIES countries, upleveling of the technical knowledge and technical skills of their employees will be very important for these companies. Therefore, a big demand will be raised from the companies for courses in electricity, electronics, machinery, physics and mathematics which are indispensable for acquiring high levels of production technologies. So it will be desirable for IEAT to respond to this need and to offer lectures on basic technologies to middle class technical personnel. In this case, it may be desirable to maintain close liaison with some universities situated in the environs of Laem Chabang.

In addition to these facilities, the provision of other cultural facilities such as cinema hall, a ball room and an exhibition hall are considered necessary. So it will be desirable to construct a cultural center accommodating all these facilities on a site adjoining the Laem Chabang EPZ/GIE. If possible, these facilities should be constructed and managed in combination with the lodging facilities described earlier in item c).

(8) CONSTRUCTION COST FOR THE SUPPORTING FACILITIES

The preceding sections have examined the supporting facilities such as a vocational education center, communication facilities, a customs office, standard factories, and facilities for employees. The facilities for workers consist of sport facilities, dining facilities, cultural facilities, and international school etc.

These facilities, except the vocational education center and some of the communication facilities are described in the Master Plan.

This study focused on the functions of these facilities, but the cost estimation were excluded. The detailed study for the vocational education center and the teleport as a communication facility should be conducted in the future.

The construction cost of the supporting facilities that are currently planned are as follows.

| | (1,000 Baht) |
|-------------------------|--------------|
| Administration Building | 12,571 |
| Canteen | 14,924 |
| Guest House | 7,909 |
| Staff Residence | 17,480 |
| Custom House | 6,030 |
| Bonded Warehouse | 15,111 |
| Standard Factories | 85,419 |
| EPZ Warehouse | 4,569 |
| Sub Center | 5,764 |
| Sport Facilities | 13,601 |

Source: IEAT

6-3 MANAGEMENT AND OPERATION OF LAEM CHABANG EPZ/GIE

(1) ROLES TO BE PLAYED BY THE MANAGEMENT AND OPERATION BODY

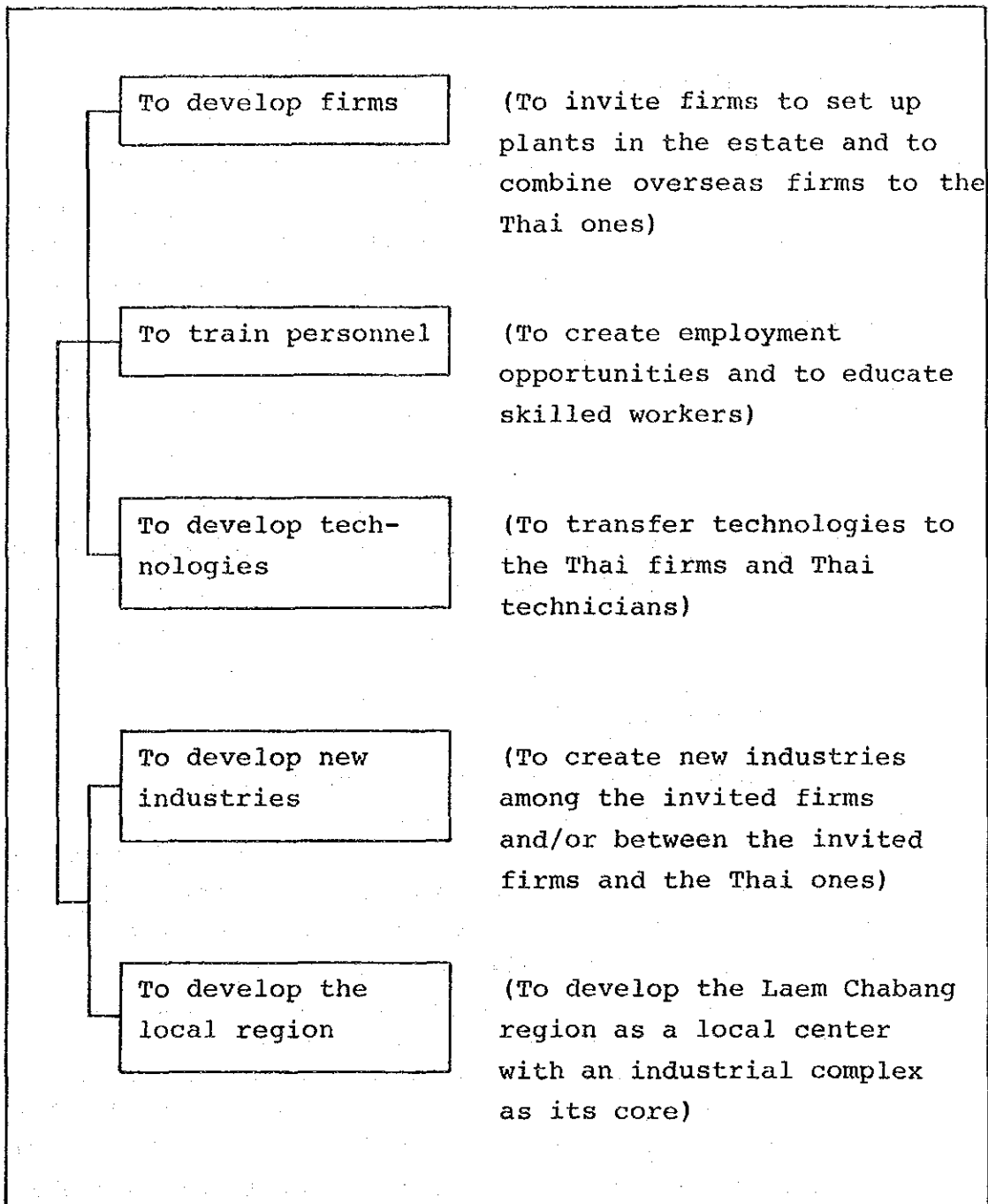
1) Short-term or Narrow-sense Roles

The management and operation body's immediate role is to invite firms to set up their plants in the estate, to maintain facilities of the park constantly in good conditions and to help firms in the park carry out their businesses successfully.

2) Long-term or Wide-sense Roles

The previous purpose of Japanese firms going into foreign countries was to establish their sales bases in these countries. At present, their purpose is to establish production bases or plants. Recently, Japanese firms are going to establish their research and development bases not only in Europe and the United States, but also in NIES countries in order to obtain overseas information on the research and/or to develop goods suitable for foreign markets. Under these circumstances, the management and operation body's roles in a long-term or wide sense are to grasp both the new needs of such firms and the move of the Thai economy, to create new industries and to connect this new movement to the economic development of the Laem Chabang region (Table 6-42).

Table 6-42 Roles of the Management and Operation Body



(2) SELECTION OF THE MANAGEMENT AND OPERATION BODY AND SCOPE OF ITS BUSINESSES

1) Desirable Management and Operation Body:

Three following forms can be considered as the possible management and operation body of the Laem Chabang EPZ/GIE. IEAT, which has been successful in the existing industrial estates in Thailand, should play a central or leading role (Table 6-43).

Table 6-43 Three Forms of Management and Operation Body

| |
|--|
| a IEAT |
| IEAT is considered as the best organization as a coordinator with the governmental organizations concerned. However, it is necessary to make the best use of the advantages of private enterprises. |
| b Joint venture between IEAT and private firms |
| It is necessary to clarify the division of the management and operation duties to be shared by IEAT and private firms. Private firms are reluctant about businesses of low profitability. |
| c Co-operation between IEAT and invited firms |
| Firms' intention is apt to be reflected in the management and operation businesses. This form should be adopted only when the industrial estate is occupied almost completely. |

The Banpoo Industrial Park is a good example of item b. In this industrial estate, the Thailand Industrial Real Estate Development Co., which developed the estate, asked IEAT to manage and operate it. However, some Japanese enterprises in this firm complained in an interview, "The division of roles between the management and operation bodies is not clear." The clear division of roles and constant coordinations are essential.

The form of item c can be materialized only after almost all the firms are set up, and the businesses of the core firms have been put on the right track. This form means that a third sector would be established between IEAT and invited firms and that this sector would be in charge of the practical management and operation duties. This form has not yet been realized in Thailand, so it is regarded as premature.

Judging from the merits and demerits of each form and considering the following reasons, IEAT seems to be the best as a management and operation body of the Laem Chabang EPZ/GIE.

- The existence of IEAT is indispensable for making contacts with government organizations concerned.
- IEAT' experiences and knowhow as the management and operation body in other industrial estates are useful.
- When the management and operation body is a public organization, an industrial estate's reputation will be higher to the firms.

2) Scope of Duties of Management and Operation Body:

a. Scope of duties and collection of fees, etc.

The duties of the management and operation body are to offer supporting services and manage (regular inspection, repair, construction, etc.) physical facilities in the industrial estate (Table 6-44).

Table 6-44 Scope of Duties of Management and Operation Body

| | |
|----|--|
| 1 | Offer of supporting services: |
| 1) | Service to administrative works: Telex and facsimile fees would be charged. |
| 2) | Service to attend firms' requests: Free of charge |
| 3) | Information service: Fees would be collected depending upon the types and contents of information. |
| 4) | Sports facilities service: Fees would be collected. (Those who use the facilities shall pay.) |
| 5) | Facilities offer service: Conference room, etc. free of charge. |
| 6) | Holding liaison meeting between firms and management and operation body: Management and operation body shall offer places for the meeting. |
| 7) | Management consulting service: Free of charge, depending upon the demands from firms. |
| 8) | Employees transportation service by bus: Fees would be collected, depending upon demands from firms. |

(Continued)

-
- 9) Workshop service:
Fees would be collected. Some duties, including the repair of equipment would be entrusted to specialized companies.
-
- 2 Maintenance of physical facilities in the industrial estate:
-
- 10) Facilities related to control office:
Facilities would be lent to post office, fire station, clinic, bank, etc., free of charge or with fee.
-
- 11) Sports facilities:
Special attention is paid to the control of water quality of swimming pool.
-
- 12) Facilities related to customs house:
Facilities would be lent to customs house free of charge.
-
- 13) Facilities related to standard factories:
-
- 14) Facilities related to the incinerator: garbage collection and cleaning work would be entrusted to private companies.
-
- 15) Facilities related to drainage:
-
- 16) Facilities related to sub-center:
Kiosk and restaurant facilities would be lent to drinking/eating shops with fee.
-
- 17) Facilities related to business center:
Rentable floor area would be lent to shop and other firm-supporting companies with fee.
-
- 18) Facilities related to power receiving and transformer substation:
-
- 19) Facilities related to telephone and telegram:
-

(Continued)

20) Water supply and sewage service:

21) Road network in the complex, including street trees:

22) Facilities related to security and guard:
Facilities would be lent to private companies, free of charge.

Maintenance expenses for physical facilities in the premises of firms, including standard factories, water supply and sewage service and garden trees shall be paid by the firms themselves. However, when requested by the firms, the management and operation body would repair or expand facilities and maintain trees with fee.

b. Clarification of scope of duties of management and operation body:

It is necessary to clarify in advance the scope of responsibilities both of the management and operation body and invited firms. It is useful not only for preventing troubles, but also for raising the management and operation body's reputation to include the stipulations about the uses of facilities in the complex and about the scope of responsibilities.

For instance, it is necessary that the contract should say that the periodical maintenance of street trees in the complex should be carried out by the management and operation body, while the trees in the premises of firms should be maintained by the firms themselves.

(3) STRUCTURE OF MANAGEMENT AND OPERATION BODY

1) Relations between firms, IEAT and other governmental organizations:

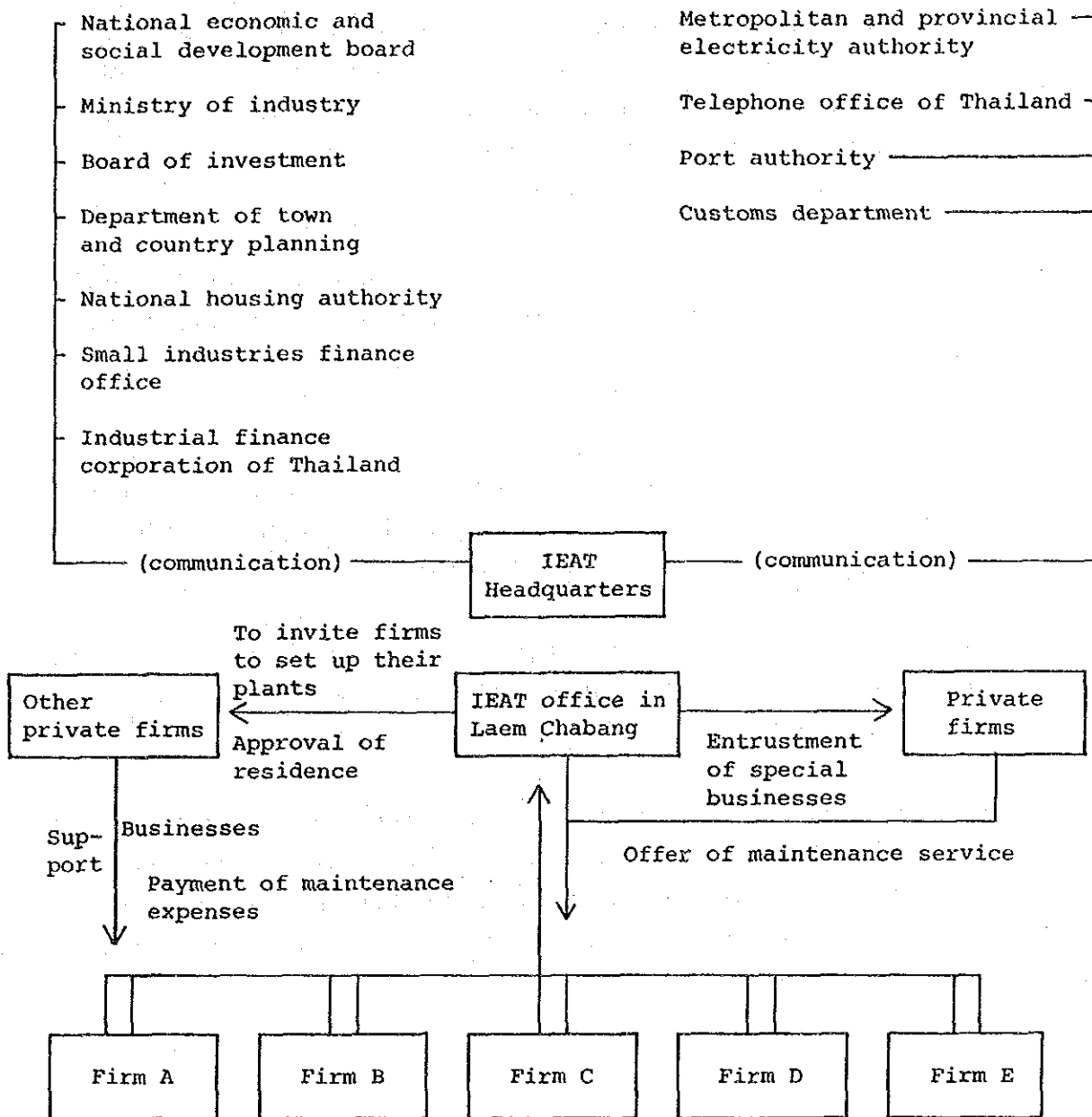


Fig. 6-11 Layout of Relations between Firms, IEAT and Upper Government Organizations

- . Close contact between IEAT and other governmental organizations is necessary. Especially, sufficient exchange of information and mutual assistance between BOI and the taxation office are important for the management and operation of the estate.
- . Daily exchange of information between IEAT and invited firms is important. It will be helpful to periodically hold a liaison meeting between them and to issue publicity publications.
- . It is necessary to facilitate the management and operation duties by inviting private companies which are entrusted with some of the duties.

2) Structure of Management and Operation Body and Relations between the Management and Operation Body and Firms:

In order to smoothly carry out the maintenance of physical facilities and supporting services, it is necessary to establish the following structure of the management and operation body and relations between the body and firms (Fig. 6-12 - 14, Table 6-45).

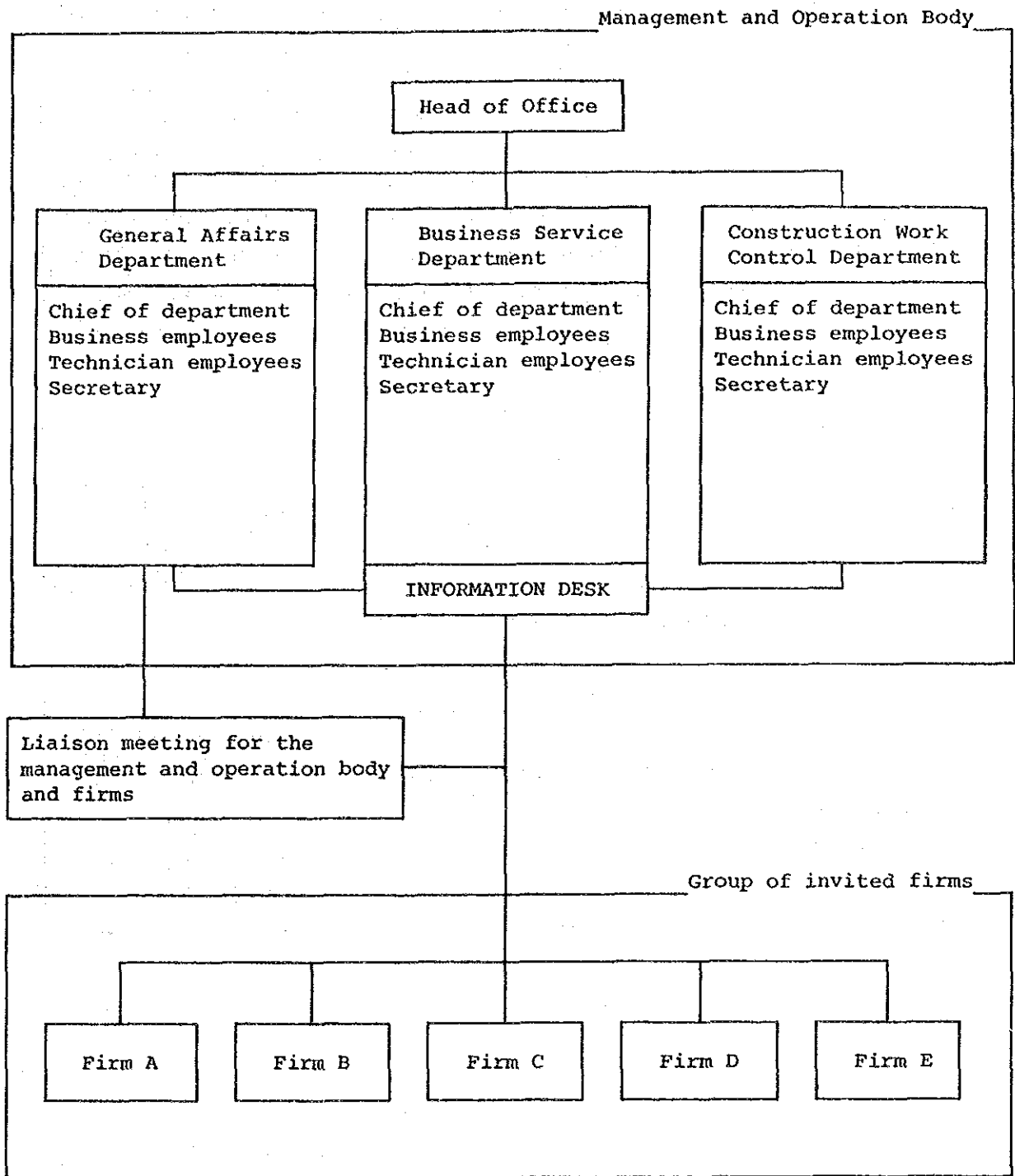


Fig. 6-12 Layout of Structure of Management and Operation Body and Relations between the Management and Operation Body and Firms

Table 6-45 Contents of Main Services of Each Department of the Management and Operation Body

| Department | Contents of main businesses | Remarks |
|---|--|--|
| General Affairs Department | Planning, personnel affairs, budget, collection of maintenance fee, performance of firm supporting services (6 and 7), holding liaison meetings, and collection of water, sewage and energy use fees | It is important to bring up and secure staff of the management and operation office. |
| Business Service Department | Collection of firm assistance service fees and performance of firm assistance services (1, 2, 3, 5 and 8) | Completion of function of INFORMATION DESK |
| Construction and Supervision Department | Performance of firm supporting services (4, 9, 10 to 22) | Control of services entrusted to private companies |

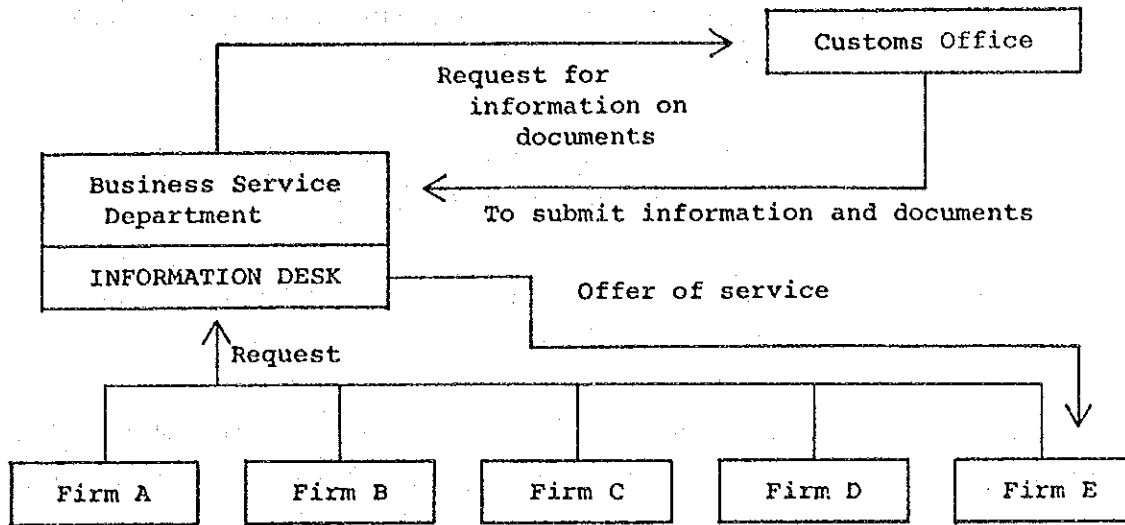


Fig. 6-13 Function of Organization: When a firm requests information on the obtaining and preparation of documents for the customs clearance procedures

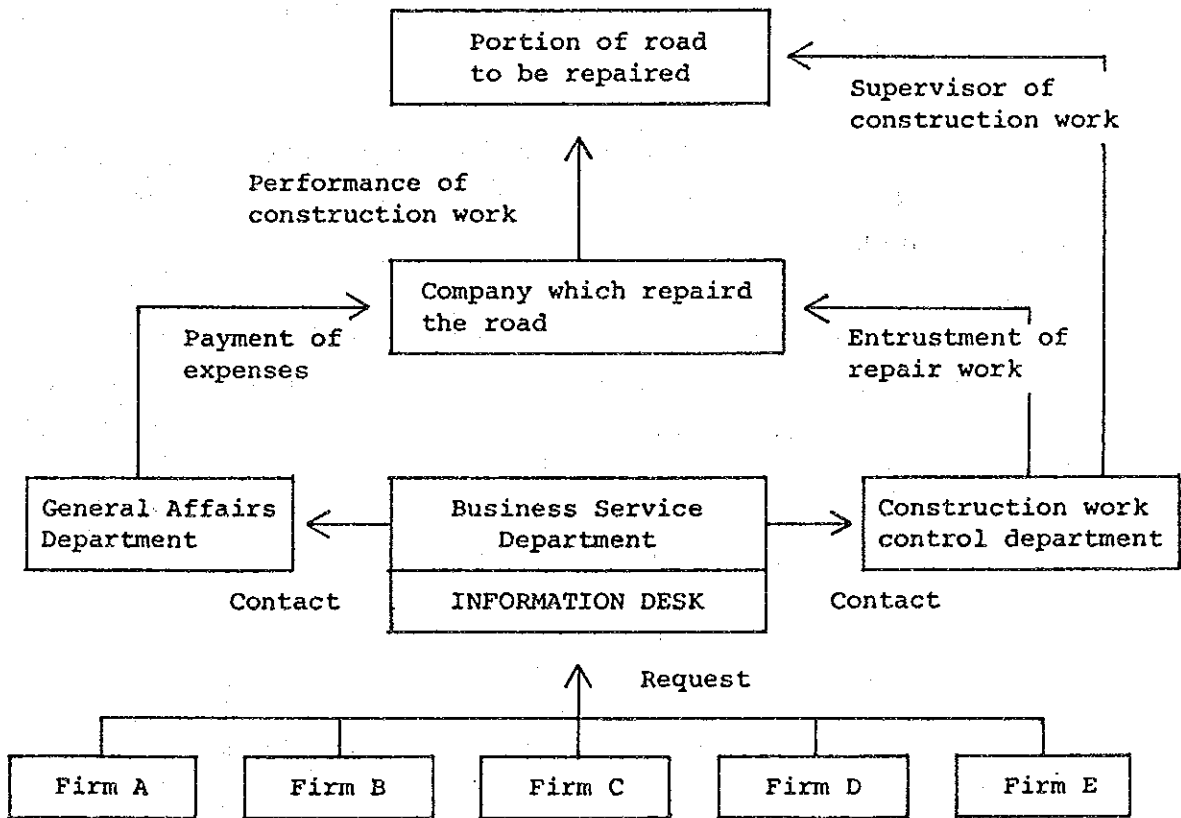


Fig. 6-14 Function of Organization: When a firm requests the repairing of a road in the work

(4) ON THE FINANCIAL ADMINISTRATION OF THE MANAGEMENT AND OPERATION BODY

1) On the Administration of Financial Aspect of the Management and Operation Body (Fig. 6-15)

a. Basically, the self-support system should be used by the management and operation body.

b. Main annual income sources of the management and operation body should consist of general maintenance fees and water and sewage fees and service charges.

c. Main annual expenditure sources of the management and operation body should comprise the physical facilities maintenance expenses of the park and the general control expenses, including personnel expenses of the management and operation body.

d. The management and operation body should plan and operate profitable supporting services to strengthen its financial foundation.

e. The structure of the management and operation body should start with minimum staff and should gradually be expanded as the number of firms located in the industrial park increases.

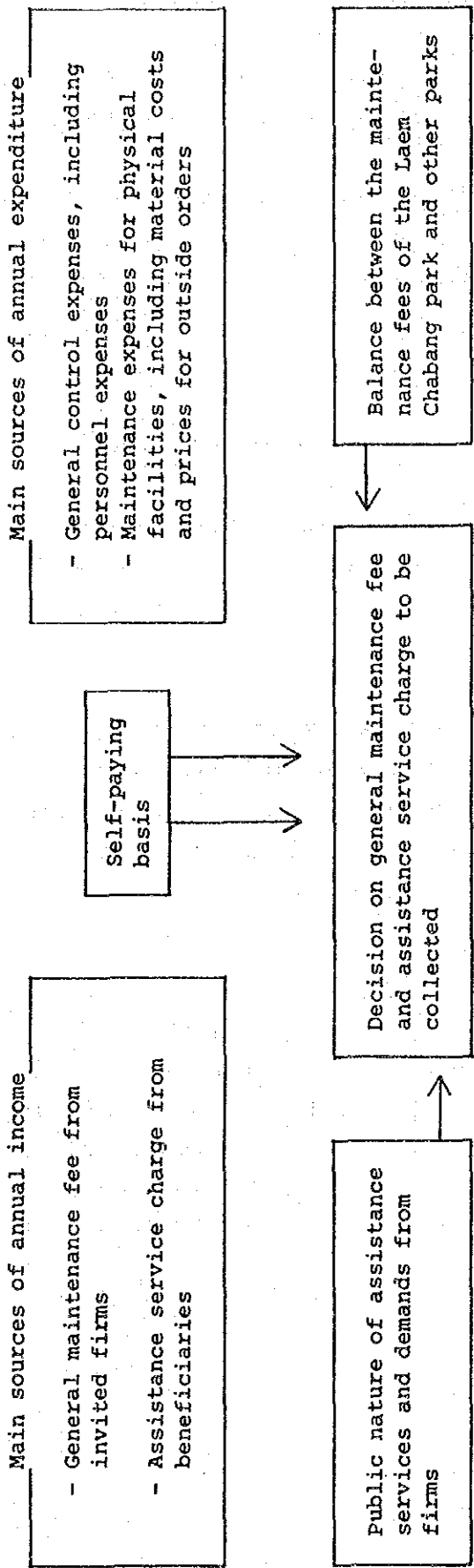


Fig. 6-15 Annual Income and Expenditure Source of the Management and Operation Body

2) On General Maintenance Fee from Invited Firms:

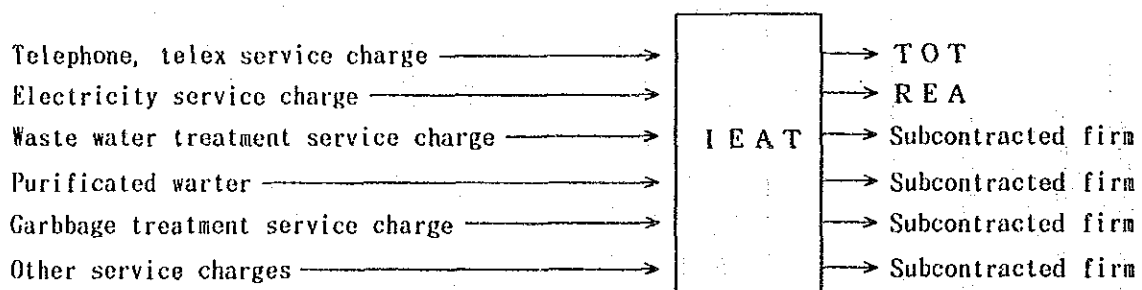
a. It should be clarified in advance what services the firms can receive by paying the general maintenance fee

b. The amount of general maintenance fee should be determined by taking the examples of other parks into consideration. The amount should also be based on the idea of "Better service with cheaper fees", as an incentive for firms.

3) On Supporting Service Charge from Beneficiaries:

a. It is necessary to determine, in advance, not only per-hour fees for service charges for the use of sports facilities, but also special fees for the use at night if any.

b. Fees for the use of electricity and telephone are determined in accordance with the amount or time charged by firms. However, it would be a good service for IEAT, instead of the energy suppliers, to collect the fees from the firms and pay the fees to the suppliers.



7. CONCLUSIONS AND RECOMMENDATIONS

7-1 CONCLUSIONS

This study on the Laem Chabang I.E. differs in nature from those for planning and designing the infrastructures.

The construction of the Laem Chabang Sea Port has already been started and the IEAT is undertaking the Laem Chabang I.E. project of 570 hectares in the region behind the port. This study will examine the promotions, the incentives, and the supporting functions deemed necessary for the sound implementation of the project.

The study refers to several promotional activities for public organizations to induce industries appropriate for the local economy. Before implementing a promotion program in full scale, there are several issues to be resolved. What is the most efficient way to approach both local and foreign potential investors? What factors will serve best to urge investment by companies? What is the most effective way to hold seminars? What sort of data should the investors submit to the authorities to determine the acceptability of the investment plan? How should the promotion activities and services by the authorities concerned be altered to stay competitive with other neighboring countries? This study addresses these issues first, and presents the appropriate strategies.

Thailand has achieved a remarkable progress in economic development. In 1988, the economic growth rate is expected to reach 8 to 9%, compared to the original forecast of only 5%. The country's manufacturing sector is now undergoing a major structural change from import substitution to export promotion. It is considered that it will not be too long before Thailand joins the group of the NIES.

One of the key factors for this thriving economy is the direct investment from abroad. Apart from the traditional sources of investment, such as those from Japan, the NIES have emerged as major investors. These investments will sustain the economic growth in Thailand and contribute to the improvement of the trade balance. In contrast to the rapid changes in the economy, the lagging development of the infrastructures has surfaced as the bottleneck for future development. Above all, the development of the deep sea port is one of the most urgent tasks for the country. The current international gateway, Khlong Toey Port, is located 28 km upstream from the river mouth of the Chao Praya River, and, as it limits entrance of ships of less than 10,000 DWT, it causes extreme congestion. The Laem Chabang Port will become the first deep sea port in the country that faces the ocean directly.

There is a shortage of developed industrial plots. Many private investment plans are underway to supply more industrial plots. According to our survey, 64 locally established companies and 149 Japanese companies showed their interest in investing in the Laem Chabang I.E. It is deemed urgent to complete the Laem Chabang I.E. at the earliest possible date.

The economic boom which has lasted over two years is expected to continue into the foreseeable future, but the investment promotion must not be neglected. There are negative indications as well. On top of the underdevelopment of the infrastructures, there is also a lack of engineers and skilled workers. Other competitor neighboring countries, such as Malaysia, the Philippines, and Indonesia, are conducting aggressive investment promotions and are now showing investment growth rates exceeding that of Thailand. Thus, the investment promotion must not be overlooked.

The Laem Chabang Project is to create a complete self-sufficient industrial base adjacent to the metropolitan area. It is expected to reinforce the international

competitiveness of Thailand. The Laem Chabang I.E. is located on firm soil, off the Chao Praya Delta. On the other hand, it is necessary to build a new community to support the functions of this new industrial base. Therefore, the supporting facilities and services play a vital role in making the whole project successful. The Study is also focused upon examining these supportive functions to lead the project to success. The Laem Chabang project should provide the impact on Thailand's new industrial age.

7-2 RECOMMENDATIONS

This study is based upon the surveys of the potential investors and their preferences of services and incentives. In the preceding chapters, suggestions were offered according to the stage of industrial promotion such as selection, promotion, management, and maintenance of the industrial estate. In this section, overall recommendations will be presented.

(1) SCREENING AND TARGETING CRITERIA OF INVESTMENT

The screening and targeting criteria presented in Chap. 4 are intended to provide an objective instrument to assess investment applications quantitatively. When these criteria apply to the intended project, they will enable the comparison of projects even from different fields.

(2) USING THE CRITERIA

The current application form of the IEAT does not cover such items as environmental impact, visual appearance, employment generation, and housing. These items should be included to assess the eligibility properly.

The weighing of each item of the evaluation must be carried out to follow the industrial development policies of

the country and the changes in the economic situations, and also to control the total impact of the industrial estate on the surrounding environment.

The provisions of the incentives should be accorded the evaluation of the applied investment in order to maintain uniformity.

(3) EFFICIENT AND EFFECTIVE PROMOTION

In spite of the favorable investment climate prevailing in Thailand, the promotion activities should be reinforced to capture the full benefits of the available opportunities to upgrade the industrial structure of Thailand.

Seminars should be conducted continually to keep the attention of the potential investors.

Enlarging the marketing channels is one of the most urgent tasks for the Laem Chabang I.E. project. In order to achieve the enlargement of marketing channels within a short period of time, it may be effective to contract private agents specializing in marketing.

The potential investor survey, which was conducted as part of the Study, provided vital information for the marketing of the industrial estate. It will be quite helpful if a similar survey is conducted in other countries, such as Taiwan and the United States.

The results of the potential investor surveys should be accumulated properly in a database for quick reference, and the database should serve as the target list for marketing. The list of attendants to the seminars should be treated in the same way.

The Study also produced pamphlets of the Laem Chabang I.E., which gives a brief introduction of the project, in

Thai, English and Japanese. For further marketing, more detailed information is required for attracting potential investors. It is recommended that an investors' guide on the Laem Chabang I.E. be produced, and also a video clip for audio-visual presentation.

All the promotional efforts should be focused on the year 1990 when the Laem Chabang I.E. is to be completed. A comprehensive schedule of all the promotional activities should be created as suggested in Chap. 5.

(4) LONG-TERM IMPROVEMENT IN INCENTIVES

When incentives are given to certain activities, a promoted company is monitored by BOI in order to prevent it from changing the activities or disposing of equipment or materials. As the number of promoted companies increases exponentially every year, it is feared that the monitoring of a large number of companies, which are interrelated, might interrupt the manufacturing activities. Therefore, in the long term, it is recommended that the incentives be simplified, especially by lowering the import duties. The overall reduction of import duties will further strengthen the export industries, which are now emerging as the leading industry in Thailand.

On a shorter term, it may be worth probing the possibilities of attracting key manufacturing industries by giving special incentives. However, the decision should be made cautiously since it may harm the development of other industries.

(5) RESTRUCTURING THE IEAT

The general policy in changing the structure of the IEAT is to shift the focus from engineering to services.

A policy and coordination section should be set up to plan and monitor the industrial structure and the locations and further to make an industrial estate master plan that will contribute to the national industrial policy in Thailand.

In order to make the start-up of the factories quicker and smoother, a Customer Service Section should be established to provide assistance for registration, licensing, factory construction, and manpower development.

As for the enlargement of the marketing channels for effective promotion and quick sales, the Sales and Promotion Section should be enlarged from the current section to a division equal in size to others, such as the Engineering Division.

(6) FACILITIES REQUIRED FOR THE LAEM CHABANG I.E.

A vocational training center should be established either inside the Laem Chabang I.E. or in its vicinity. The training should be oriented toward the upgrading of the skills of the workers, and the management and control capabilities of the foremen and supervisors in the Laem Chabang I.E. It is recommended to introduce the labor intermediation service to vocational center.

In order to facilitate communication between the companies and the administrating body in the Laem Chabang I.E., the establishment of the committee on the operation of the Laem Chabang I.E., consisting of both the administrating body and the company representatives, is suggested.

More than 5000 lines need to be installed in the planned telecommunication system between Laem Chabang and Bangkok. A large number of factories located in the Laem Chabang I.E. will come from abroad. Therefore, a proper international telecommunication network should be constructed. Some

factories in the Laem Chabang I.E. may need an advanced data communication system. If the need for such system is large enough, the establishment of optical fiber lines and a computer center should be probed.

The standard factories may be leased or sold to meet the needs of investors.

Currently, the Laem Chabang area lacks urban facilities and services since there is no big city in the vicinity. An effort for the allocation of resources should be made to provide the facilities and services for the welfare of the workers in the Laem Chabang I.E. The facilities needed are athletic facilities, canteens, restaurants, hotel accommodations, and cultural facilities.

(7) SERVICES REQUIRED FOR THE LAEM CHABANG I.E.

In order to facilitate implementation of the investments in the Laem Chabang I.E., the investors desire services such as financing by public institutions, computer services, schools, and consulting and mediating services for customs clearance.

The most important of all is to streamline the licensing procedures.

In order to speed up customs clearance, measures such as the adoption of sampling inspection, inspection at original countries, one-stop service, computerization and autonomous administration are suggested.

To meet an increasing number of export-oriented investments, the bonded area should be expanded.

(8) CLARIFICATION OF THE RESPONSIBILITIES OF THE
ADMINISTRATION BODY

In order to avoid unnecessary conflicts, it is advised to clarify in advance the responsibilities between the administrating body and the factories concerning the maintenance and use of the facilities in the Laem Chabang I.E.

There are some tasks still to be tackled in order to further increase the development effects of the Laem Chabang I.E. project.

1) Establishment of an Industrial Estate for Small-Scale
Industries

Although one of the prime objectives of the Laem Chabang I.E. is to facilitate the relocation of industries from the Bangkok Metropolitan Area, a large number of small-scale industries may not be able to relocate their factories. In such a case, the government should explore the possibility of establishing industrial estates specialized for small industries to keep their negative effects to a minimum.

2) Monitoring Environmental Impacts

Special attention should be paid to an area where industrial development is concentrated, such as in the Laem Chabang I.E. The environmental impact should be measured at certain levels of development to ensure the safety of the residents of the area. There are numerous lessons that Japan can offer in this regard.

3) Basic Data Collection for Industrial Planning

The screening criteria are principally based upon the data of the Japanese manufacturing sector. In order to

establish an accurate planning system in Thailand, basic data and statistics with regard to manufacturing should be collected regularly.

4) Inducing Industrial Development to Other Areas

The Laem Chabang I.E. is planned to become a new industrial base in Thailand. The next task is how to lead industrial development from the Laem Chabang I.E. to other underdeveloped areas, especially in the northeastern areas. In order to facilitate a chain-reaction of industrial development to other regions, the government should start to plan the industrial bases now, taking into account the development levels of the metropolitan area and Laem Chabang.

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