

**The Kingdom of Cambodia  
A Study on Special Economic Zones  
for SMEs**

**Final Report**

**March 2013**

**Japan International Cooperation Agency (JICA)**

**Japan Development Institute (JDI)**



## **SUMMARY**

### **1. BACKGROUND**

Of the eight SEZs currently running in Cambodia, three SEZs are popular among Japanese companies, which are located in Bavet in Svay Rieng, near the Vietnam border. A strong willingness of Japanese companies has been observed to expand further there, leading to the idea that the area could be an area of industrial clusters. However, all necessary infrastructure systems - transportation, electric power supply, water, solid waste disposal, drainage, and sewerage networks, which are just as much the basis of production activity as the housing inventory in the entire area surrounding the production facilities, commercial facilities, transportation, and district facilities, education and health institutions, culture and entertainment activities, have not been fully developed. Also, the government of Cambodia shows a strong interest in the study of urban development plans around the production base, and consider measures to promote future industrial diversification and development clusters, that will lead towards the continuous business expansion of Japanese companies active in Svay Rieng Province.

### **2. 2. ANALYSIS OF THE CURRENT STATE OF CAMBODIA'S INDUSTRIES AND MANUFACTURING BUSINESSES AND THEIR PROJECTIONS**

#### **2.1 THE CURRENT STATE OF CAMBODIA'S INDUSTRIES**

Cambodia's industries are characterized by labor-intensive ones that involve simple assembly, comprising sewing, shoe-making, motorcycle repair, and plastic products (daily necessities), and reveals that these businesses operate mostly in Phnom Penh and Siem Reap. Cambodia's industries mainly comprise sewing, shoe-making, and motorcycle repair, businesses that also identify those of Myanmar and Laos as the last entrants of ASEAN. To promote the improvement of existing industries and the development of new ones, technological transfer by foreign capital is vital.

#### **2-2. The Characteristics and Projections of Cambodia's Manufacturing Businesses, Which Rely Largely on Foreign Capital**

The following summarizes Cambodia's major manufacturing businesses (sewing, electrical and electronics, and machinery) and their projections.

##### **(1) Sewing Industry**

###### **① Characteristics**

- The trade surplus posted by sewing businesses provides the resources to import other consumables and industrial goods. In this regard, sewing is Cambodia's biggest industry that possesses export competitiveness.
- In Cambodia, there are no nationally run sewing companies. Moreover, local sewing companies are weak, and the approval of wholly-owned foreign companies to enter the country's market since 1994 has led to the dominance of foreign capital in the production and export of sewn products.
- The products are first characterized by the fact that they are largely knit. Knitting requires small investment, and transportation costs are cheap as the raw materials are not bulky.
- The second characteristic of Cambodian products is that they first focus on the production of undergarments, which are easy to produce and for which the quality standards are lax among outer garments (e.g., uniforms, training wear, jackets, short jackets, pants, and skirts), intermediate garments (e.g., pajamas, T-shirts, dress shirts, and sweaters), and undergarments (underwear).

## ② Projections

- In the past, nightwear and pajamas made with cotton and synthetic fibers were Cambodia's strongest products in terms of international competitiveness. Gradually, these undergarments are being replaced by intermediate and outer garments, such as cotton skirts, men's shirts made with fabric and men's clothing, which emphasize the silhouette of the body.
- These trends are already apparent with the entry of Nisshin Clothing, known for overalls (entered Cambodia in 2011), Towa, known for men's clothing (2011), ROCKS, known for women's and men's casuals, and Ronchesuta (2012), known for women's clothing.
- However, while the Bavet region offers the advantage of its location with access to Ho Chi Minh's port(s), it has encountered the bottlenecks of [poor] infrastructure and labor. As such, unless these bottlenecks are resolved, it is impossible to manufacture products that maintain quality. It is therefore not easy to operate large sewing factories.

## (2) Electrical and Electronics Industry

### ① Characteristics

- Cambodia's electrical and electronics industry demonstrates potential for future growth, though it has only embarked on the beginning phase of the development backed by the entry of foreign companies. Some Japanese companies that are running businesses in neighboring countries such as Thailand and Malaysia have shown a strong interest in production in Cambodia by leveraging the country's cheap labor.



## ② Projections

In terms of the potential for Japanese companies to enter Cambodia, the following three patterns can be projected based on an analysis of the basic locational requirements for the electrical and electronics industry, policies on the division of production within ASEAN among Japanese companies in Thailand, and the current trends in the entry to Vietnam among electrical and electronics companies, etc.

- (i) Assembly process of wire harnesses
- (ii) Assembly process of coils and transformers
- (iii) Assembly of small electrical products

## (3) Machinery

### ① Characteristics

- In terms of machinery, Cambodia has relied on imports. In turn, galvanized steel plates and motorcycles have been substituted by Japanese companies.
- Japanese companies in Thailand, which focus on transportation equipment, designated Thailand as the center of production. At the same time, they are pushing ahead to build a horizontal division of production wherein they seek to cut production costs by allowing its factories and parts manufacturers in ASEAN to complement each other. Therefore, to cut costs, etc. against the backdrop of the rise in wages in Thailand and the appreciation of its currency, and so as to reinforce competitiveness against China, the companies are considering transferring their more labor-intensive processes to Cambodia.

### ② Projections

- The fields that show promise in machinery include surface treatments in post-processing (plating, painting, and high-frequency), and assembly and wiring (print circuit processing, parts assembly, and mounting), all in the category of precision machinery. Moreover, in automobile parts, the promising fields include chassis and automobile body parts (e.g., fuel tanks, exhaust pipes, mufflers, window frames, seats, and air bags) and electrical parts and others (e.g., switches, meters, wipers, alarms, and heaters) However, [the success] all depends on securing electricity, waterworks and other industrial infrastructure, as well as labor. Therefore, in today's Bavet region, operation of machinery factories is not necessarily easy unless the bottlenecks are resolved.

## **2-3. Characteristics of Companies Entering Cambodia (Investing Country, Business Type, and Location)**

Although comprehensive statistics have not been disclosed, according to CSEZB sources (from 2006 to the end of 2012), the characteristics of the tenant companies in each SEZ can be summarized as follows.

- Increased rapidly from 2008. In 2012, there were 43 companies, reaching \$320 million.
- Companies include those from Japan, Thailand, South Korea, Malaysia, and Singapore.
- The business include not just the traditional industries of shoes and pouches, but also electrical and electronic parts, motorcycle parts, and labor-intensive electrical and electronic parts such as automobiles and plastics. They are diverse, including labor-intensive machine parts. In the Bavet region under review, there is a trend among foreign companies [specializing in] bolt nuts, plastics, coils and transformers, electrical locks, and clock parts.
- As for the SEZs, Phnom Penh, fully equipped with infrastructure, boasts the largest scale in terms of both the number of tenant companies and the investment amount. This is followed by Manhattan SEZ in the Bavet region by the Vietnam border (eastern region), Tai Seng SEZ, and Dragon King SEZ. These feature good access to the port(s) in southern Vietnam. Combined, these three SEZs rival Phnom Penh SEZ in terms of the number of tenant companies. The total of the three SEZs in the Sihanouk region in Southern Cambodia is commensurate with approximately half of the number of tenant companies at Phnom Penh SEZ. The two around the border of Thailand (western region), or Poipet SEZ and Koh Kong SEZ, do not hold enough number of tenant companies from Thailand at this time.

#### **2-4. Characteristics of Japanese Companies**

The following characteristics can be derived regarding the entry of Japanese manufacturers.

- The entry of Japanese companies is remarkable. The investment amounted to \$320 million in 2012, surpassing the \$310 million in cumulative terms up to 2011.
- From 1994 to 2009, export products focused on sewn goods, shoes, and stationery, while motorcycles, galvanized steel plates, and processed foods catered to the domestic demand. On the other hand, from 2010 to January 2013, while sewn goods still accounted for a large portion of exports, business types were diversifying, encompassing electrical and electronic parts (small motors, wire harnesses, aluminum TV frames, coils and transformers, and mold plastics), automobile parts (air conditioner parts, wire harnesses, emblems, and aluminum die casts), and precision machinery (parts for clocks and eyeglasses).
- In terms of the locations of the companies, electrical and electronic parts manufacturers, automobile manufacturers, and those specializing in medium-priced sewn products, shoes, and bags, preferred Phnom Penh SEZ, which commands rents at relatively higher prices. Meanwhile, those specializing in low-priced sewn products, shoes, and bags tended to prefer Tai Seng SEZ and Manhattan SEZ because their rents are low, even though their infrastructure is subpar and

not enough labor is available. Moreover, Koh Kong SEZ and Poipet SEZ were preferred among Thai automobile parts manufacturers, while Dragon King SEZ at the Vietnamese border (also facing such problems as subpar infrastructure and lack of labor) was preferred by Vietnamese precision machinery manufacturers.

### 3. DEVELOPMENT CONDITIONS OF EXISTING SPECIAL ECONOMIC ZONES AND FACTORIES IN BAVET REGION

#### 3-1. LAYOUT OF SPECIAL ECONOMIC ZONES AND FACTORIES IN BAVET REGION

From the country border, the following special economic zones and factories were built or planned; Manhattan SEZ、Tai Seng Bavet SEZ、Tai Seng Bavet SEZ Sub、Dragon King SEZ、Nissin(Factory)、Shandong Industrial Park. Some factories are under operation, under preparation for operation, under construction.

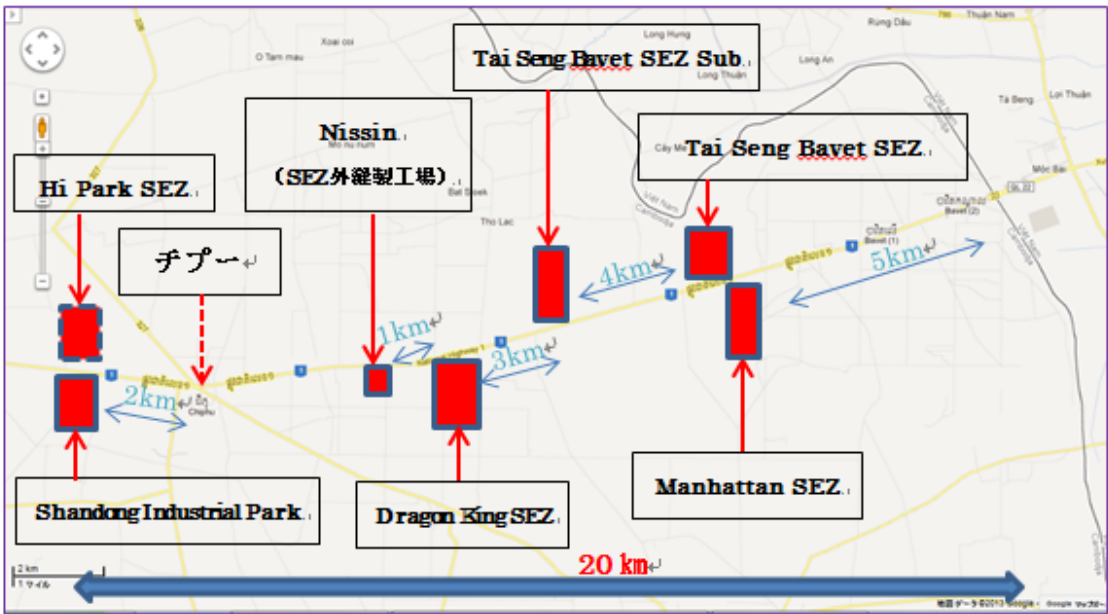


Figure 1: Layout of SEZs and Factories in Bavet

Source: Study team

#### 3-2. Infrastructure Conditions of Special Economic Zones in Bavet Region

The following table shows infrastructure conditions of SEZs in Bavet region.

**Table 1: Basic Infrastructure Conditions of SEZs**

| SEZ   | Planned Development Area               | Electricity                        | Water Supply   | Waste Water  | Drainage   | Road                             | Dormitory  |
|---|--|------------------------------------|--|--|--|----------------------------------|--|
| Manhattan SEZ<br>Developer: Manhattan International Co., Ltd            | 180ha by SEZ map, but 208ha by drawing | Present Capacity 6MW               | Water source: Under ground water<br><br>Supply by pipe in front of factory | Discharging to borrow pit excavated during land earth work | Discharging to rice field through u-channel along road   | Asphalt road without white lines | Under planning   |
| Tai Seng Bavet SEZ<br>Developer: Tai Seng Bavet SEZ Co., Ltd            | 125ha by sez map, but 205ha by drawing | Total capacity: 4MW                | Water source: Under ground water<br><br>Factory must have supply facility  |  | Discharging to borrow pit by the same pipe for rain and waste water<br><br>Flowing out to rice field | Concrete road was made last year | Development drawing indicates dormitory, not yet built |
| Dragon King SEZ<br>Developer: Dragon King Co., Ltd                      | 108ha by drawing                       | Plan to use lines along No. 1 road | Drawing indicated the places for treatment plants                          |  | Under construction, Under planning   |                                  |  |
| Shandong Industrial Park<br>Developer: Manhattan International Co., Ltd | 116ha by drawing                       | Same above                         | The same system as Manhattan SEZ   |  |  |                                  |  |
| Hi Park SEZ<br>Not confirmed  | 300ha by CDC information               | Under planning                     | Under planning   |  |  |                                  |  |

**Source: Study team**

It is clear that the existing SEZs do not satisfy the condition prescribed by SEZ sub decree that says “SEZ must have full infrastructure.” Manhattan SEZ seems to satisfy preliminary conditions of infrastructure. Water is supplied up to the underground pipe in front of factories. Waste water is discharging to the borrow pit which expects natural treatment. However, there are no treatment facilities offering a suitable cleaning process for factories to achieve the internationally satisfactory water quality level. It is also clear that waste water is unable to be cleaned only through borrow pit pond.

Tai Seng Bavet SEZ does not have both a water treatment plant and a waste water treatment plant. Specifically, the waste water pipe is co-used for rain water drainage that will make it impossible to discharge the waste water during the rainy season when the water flow volume becomes high.

### 3-3. DETAILED INVESTIGATION OF FACTORY OPERATING CONDITIONS INSIDE/OUTSIDE SEZs

In order to investigate factory operating conditions, the following categories are used for investigation.

- Factory under operation;
- Factory - already built, but not yet operating, preparing for operation;
- Factory - with signed Land lease agreement, but not yet built;
- Factory - expected to make contract with presently vacant lot

The following table summarizes the previous tables. It shows present agglomerating and operating factories inside and outside SEZs.

**Table 2: Present Operating Conditions of Factories in Bavet Region**

| Operating Conditions                     | Time(End of 2012～<br>January 2013) | Note   |
|--|------------------------------------|--|
| Total Developed Land Area (ha)           | 145.57                             | Assumed: Operating Factory Lot Area×100/70. (Difficult to measure the present developed area due to the ongoing construction.) |
| Land lot area of operating factories(ha) | 101.90                             |  |
| Nos. of operating factories (EA)         | 31                                 | Inside SEZ: 6 (Japan)<br>Outside SEZ: 1 (Japan)  |
| Nos. of Workers(people)                  | 18,382                             |  |
| Water(m <sup>3</sup> /day)               | 1,838.20                           | Assumed: 100l/people/day   |
| Waste Water(m <sup>3</sup> /day)         | 1,470.56                           | 80% of Water Volume  |
| Electrical demand capacity(MW)           | 10.53                              | Manhattan and Tai Seng: 10MW   |

**Source: Study team**

Next table shows operating Japanese factories.

**Table 3: Operating Conditions of Japanese Factories**

| SEZ                | Name of Factory | Industrial Category    | Operating Period |
|--------------------|-----------------|------------------------|------------------|
| Manhattan SEZ      | Morifuji        | Plastic Bags           | Jan. 2011～       |
| Tai Seng Bavet SEZ | DK              | Garment (Men's suits)  | Apr. 2009～       |
|                    | Swany           | Garment (Sport gloves) | Feb. 2012～       |
|                    | Nakayama        | Garment (Baby clothes) | Aug. 2012～       |

|                        |        |                         |            |
|------------------------|--------|-------------------------|------------|
| Tai Seng Bavet SEZ Sub | Yorks  | Garment (Lady's gloves) | Feb. 2012~ |
|                        | Towa   | Garment (Men's suits)   | Sep. 2012~ |
| Outside SEZ            | Nissin | Garment                 |            |

Source: Study team

#### 4. ANALYSIS OF FACTORS IN THE RELOCATION OF THE JAPANESE COMPANIES' PRODUCTION SITES AND THEIR ENTRY TO CAMBODIA AND BAVET

(1) Cambodia's neighboring countries, including Japan, China, Thailand, and Vietnam, are faced with the necessity to transfer their sewing, electrical and electronic, and machinery industries, which are labor-intensive. The backdrop to this trend is higher wages, difficulty in securing labor, and higher exchange rate(s). The first industry facing the need to transfer their production is sewing businesses that manufacture low-fashion everyday wear. The second industry encompasses the assembly of wire harnesses for electrical and electronic devices, assembly of coils and transformers, and assembly of small electronics. The third industry includes surface treatment (galvanizing, painting, and high frequency) in post-processing and assembly and wiring (print circuit processing, assembly of parts, mounting, etc.) in precision machinery, chassis and automobile components (fuel tanks, exhaust pipes, mufflers, window frames, seats, air bags, etc.) in automobile parts, and electrical components and others (switches, meters, wipers, alarms, heaters, etc.).

(2) For empirical analysis, the following were conducted: comparative analysis of recent wage standards among developing countries; historical analysis of wages and labor productivity among the neighboring countries; historical analysis of currency rates among the neighboring countries; analysis of the nominal wage rate and electricity cost rate among Japanese manufacturing businesses; analysis of the nominal wage ratio by business type in China; analysis of Japanese companies that entered Vietnam in the early phase (1990s); and interviews with Japanese and some Taiwanese companies in Ho Chi Minh City in Vietnam and the Bavet region. As a result, it is projected that companies mentioned in (1) would enter the Bavet region in the future.

(3) Conducting each study revealed that the reasons why the Bavet region is selected are as follows: ease of access to the developed port(s) of Ho Chi Minh City; the excellent road infrastructure between Ho Chi Minh City and Bavet; the production linkage with the factories in Ho Chi Minh City; and the cheap rent in Bavet. In particular, Cai Mep-Thi Vai Port in the province adjacent to Ho Chi Minh City (Ba Ria Vung Tau Province) is an open port located in alignment with Shanghai and Singapore. Daily direct services are available to Europe, U.S., and Japan. The time cost is far better than those at Laem Chabang Port in Thailand and Sihanoukville Port in Cambodia, which are located within a bay. For these reasons, Bavet has the potential to draw a large number of industries. On the

other hand, there are issues of labor shortage, inadequate electric power and water systems at industrial complexes named "SEZ," and activities by consultant(s) that were identified to have solicited investment without disclosing these problems. The interviews in Bavet, combined with these issues, also showed that, undeniably, companies may have been misinformed in selecting the locations for investment.

(4) These issues can be categorized into two: those that ought to be resolved by companies who entered Bavet, and those that require public aid. The companies, implementing bodies of SEZs, and third-party developers must take commercial initiatives to build dormitories and commercial facilities to secure labor and install power generators and water systems. In Vietnam, industrial park(s) developed by VSIP (Singapore) are accompanied by dormitories and commercial facilities in the neighboring area(s). While [they] have not received any public aid, at Thang Long Industrial Park, demand is being made to the Japanese government to provide public aid for such facilities. As long as there is VSIP's precedent, it would not be easy to receive public aid that breaks the balance. In this regard, the same applies to Cambodia. In any case, in terms of the infrastructure, the start is to carefully inspect the agreements concluded between the Cambodian government and the implementing bodies of SEZs, as well as those between the implementing bodies of SEZs and the tenant companies.

(5) "The Survey of Japanese-Affiliated Companies in Asia and Oceania" conducted by JETRO in 2012 shows the directions for business development in the next one-two years by country/region. According to the survey result for 3,805 Japanese companies, the high ratio of business expansion needs in the invested countries are put in order as (i) Lao PDR (94%), (ii) India (84%), (iii) Bangladesh (82%), (iv) Indonesia (77%) and Cambodia (77%). Incidentally, Vietnam (66%), China (52%) are dropped from the previous survey in 2011. On the contrary, the ratio of needs for downsizing and relocating to a third country/region or withdrawal is gone up for China (5.8%), Vietnam (2.0%) from the previous survey in 2011. Additionally, Cambodia is shown as nothing (0%) in the year 2012 survey.

When we apply the latter ratio to accumulated numbers of Japanese companies invested in China (total 23,000 firms) and Vietnam (total 1,500 firms) until the end of 2012, we can get the numbers of companies which have intentions of downsizing and relocating to a third country/region or withdrawal as 1,330 firms from China and 30 firms from Vietnam. If the existing shortage of labor force and lack of infrastructure in Bavet will be solved in the future, the investment for relocation will be stimulated from China and Vietnam to there, though the converse is also true in case of no improvement in Bavet.

## 5. PROBLEMS WITH INFRASTRUCTURE CONDITIONS OF EXISTING SEZs AND FACTORIES

### 5-1. Special Conditions of Infrastructures in Bavet Region

In terms of world economic situations, due to changes in Chinese labor cost, China cannot be the only one major industrial base, anymore. Many of them tend to move toward south-east Asia. Specifically Cambodia has a tax advantage as a least developed country. In this respect, country borders such as Bavet have a great advantage to form a joint production process between Cambodia, where small parts can be made, and Vietnam, where whole products are assembled. Foreign investors pay attention to Bavet because of the relatively low labor cost with plenty of workers and the closest distance to Vietnam. Manhattan SEZ and Tai Seng Bavet SEZ started operation in 2006 in Bavet region. Following them, a few more SEZs were authorized by CDC.

**Table 4: SEZs and Factories in Bavet Region**

| SEZ                      | Operation Condition   | Remarks or Problems with Infrastructure                                    |
|--------------------------|---|--|
| Manhattan SEZ            | 19 Factories are operating.                                       | Electric power shortage, Poor transportation for workers, Frequent strikes |
| Tai Seng SE              | 8 Factories are operating.  | Above + improper waste water system  |
| Tai Seng Sub             | 3 Factories are operating.  | Same above   |
| Dragon King SEZ          | Under land developing.<br>1 Factory is under construction.        |  |
| Shandong Industrial Park | Under land developing.<br>A few factories are under construction. |  |
| Hi Park SEZ              | Jan. 2013, SEZ development plan was authorized.                   | Total development area is 300ha.   |
| Nissin Factory           | Factory was built in 2012. Under operation.                       | Land area is 5ha. Self- infrastructure.                                    |
| Rocks Factory            | 5ha land is under construction.                                   | To be self-infrastructure  |

**Source: Study team**

However, in 2012, infrastructure problems started coming out; shortage of electricity, improper waste water system, poor transportation system for workers, insufficient dormitory and strikes. The main cause of those problems is from agglomerating effect of several SEZs and factories. The location of SEZs and the time of development were coincidently near and close. Agglomerating SEZs, which are composed from independent SEZ, creates huge infrastructure demand suddenly and un-



expectedly. With the situation as it is, some factories have been experiencing a hard time to continue the operation. Urgent remedies are strongly required.

## 5.2 Unit for Forecasting Future Development

The unit is necessary for forecasting future infrastructure demand. The unit is calculated using existing actual data of electrical consumption (metering monitoring data), numbers of workers, and numbers of factories. In the following tables, the units for forecasting infrastructure demand are summarized.

### ①Unit for forecasting Electric Power Capacity

**Table 5: Coefficient (MW/ha) Based on Current Contract with EDC)**

| Taisen SEZ   | Factory Lot Area (ha) | Contract with EDC: 4MW            |             |
|--|-----------------------|-----------------------------------|-------------|
| Factory Area under Operation (Taisen 1 + 2)                    | 24.46 ha              | Rate (Electricity / Factory Area) | 0.164 MW/ha |
| Manhattan SEZ  | Factory Lot Area (ha) | Contract with EDC: 6MW            |             |
| Factory Area under Operation (Manhattan)                       | 72.44 ha              | Rate (Electricity / Factory Area) | 0.083 MW/ha |
| Coefficient (MW/ha) for Forecasting Future Factory Development |                       |                                   |             |
| Factory Area under Operation (Taisen 1+2, Manhattan)           | Factory Lot Area (ha) | Contract with EDC: 10MW           |             |
|  | 96.90ha               | Rate (Electricity / Factory Area) | 0.103 MW/ha |

Source: Study team

### ②Unit for forecasting Numbers of Workers

**Table 6: Coefficient (Nos. of Workers /ha) Based on Present Working Numbers**

| Taisen SEZ                                  | Factory Lot Area (ha) | Nos. of Workers | Unit (Workers/ha) |
|---|-----------------------|-----------------|-------------------|
| Factory Area under Operation (Taisen 1 + 2) | 24.46 ha              | 5,777           | 236               |
| Manhattan SEZ                               | Factory Lot Area (ha) | Nos. of Workers | Unit (Workers/ha) |
| Factory Area under                          | 72.44 ha              | 12,525          | 162               |

|   |                       |                 |                   |
|---|-----------------------|-----------------|-------------------|
| Operation (Manhattan)   |                       |                 |                   |
| Coefficient (Workers/ha) for Forecasting Future Factory Development |                       |                 |                   |
| Factory Area under Operation (Taisen 1+2, Manhattan)                | Factory Lot Area (ha) | Nos. of Workers | Unit (Workers/ha) |
|   | 96.90ha               | 18,302          | 189               |

Source: Study team

### ③Unit for Forecasting Numbers of Factories

**Table 7: Coefficient (Nos. of Factories /ha) Based on Present Factory Numbers**

|   |                       |                   |                     |
|---|-----------------------|-------------------|---------------------|
| Taisen SEZ  | Factory Lot Area (ha) | Nos. of Factories | Unit (Factories/ha) |
| Factory Area under Operation (Taisen 1 + 2)                           | 24.46 ha              | 11                | 0.450               |
| Manhattan SEZ   | Factory Lot Area (ha) | Nos. of Factories | Unit (Factories/ha) |
| Factory Area under Operation (Manhattan)                              | 72.44 ha              | 19                | 0.262               |
| Coefficient (Factories/ha) for Forecasting Future Factory Development |                       |                   |                     |
| Factory Area under Operation (Taisen 1+2, Manhattan)                  | Factory Lot Area (ha) | Nos. of Factories | Unit (Factories/ha) |
|   | 96.90ha               | 30                | 0.310               |

Source: Study team

### 5.3 Forecasting Based on the Development Plan (Original Development Drawing)

Presently, the special economic zones are developing land following the original drawing of development plan. For the purpose of forecasting future infrastructure demand of SEZs, in terms of factory lot areas, the land area is categorized by the following 4 conditions of factories on land lots;

- 1) Factory - under operation
- 2) Factory - under preparation for operation, building construction nearly completed
- 3) Factory - with land leasing agreement but building construction not yet completed
- 4) Expected Factory - having no contract yet, and land still vacant

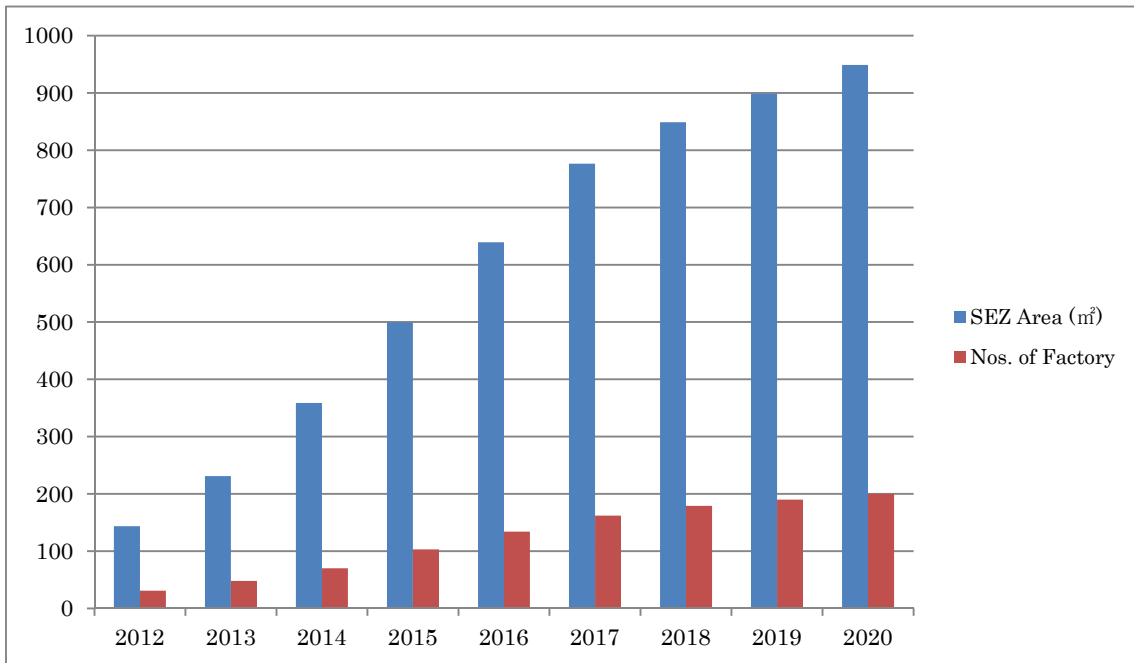
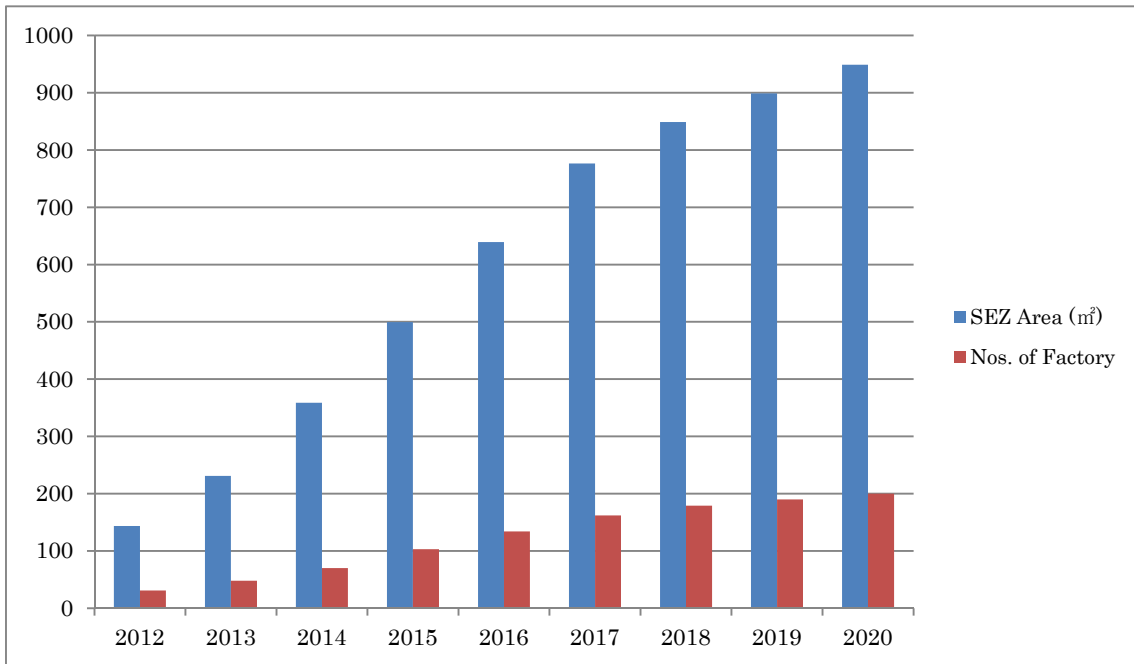
Using the factory lot area data of condition (1), the unit for forecasting the numbers of workers, factories, and electric power capacity are calculated.

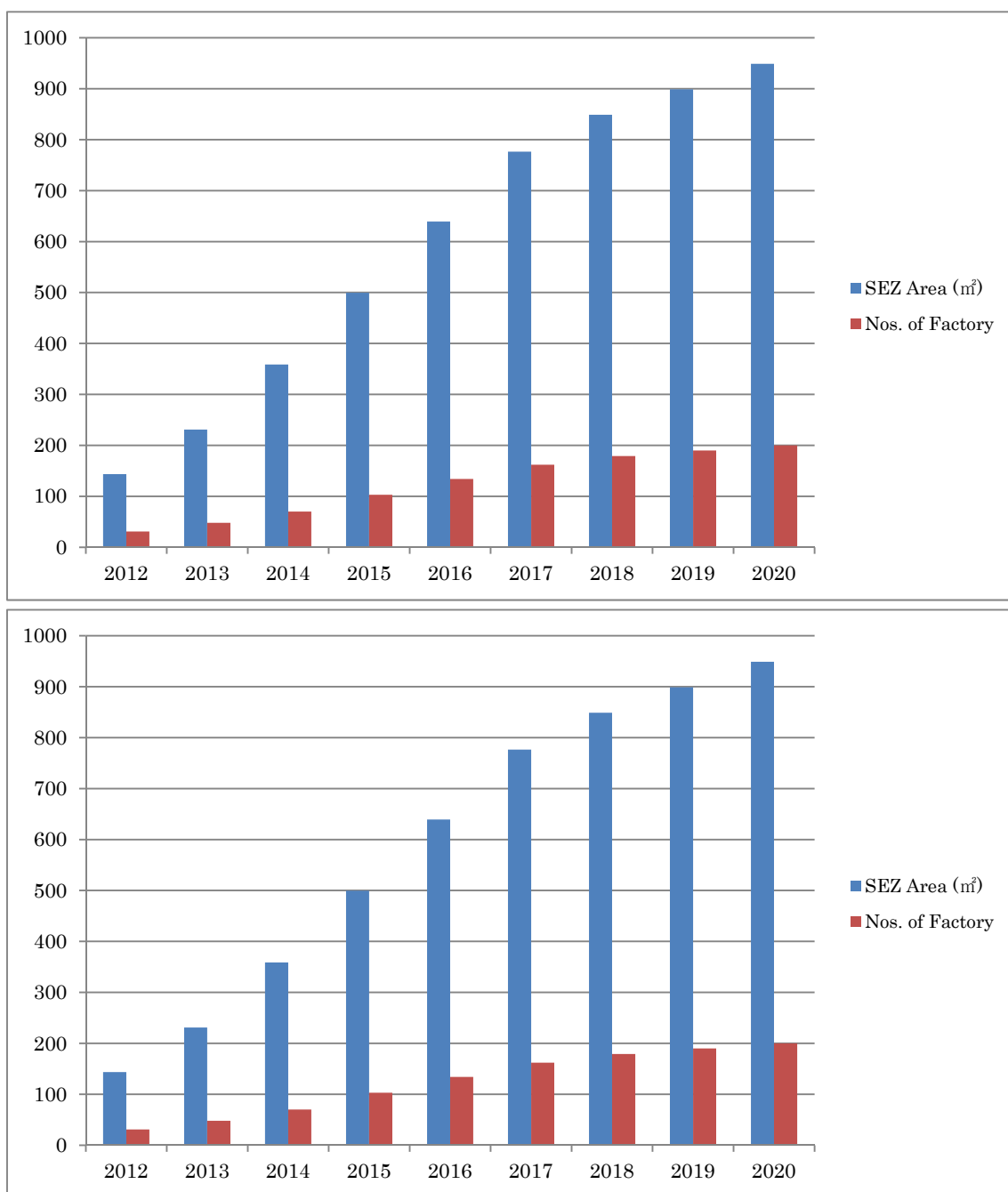
Then, if the factory lot area of conditions (2), (3), or (4) is given, the infrastructure demand in conditions (2), (3), or (4) is to be calculated. Since the original drawing of the development plan is available, the forecasting has been done. The result is shown in the following tables.

**Table 8: Agglomerating Result of SEZs and Factories**

| Year                              | 2012   | 2013   | 2014   | 2015   | 2016   | 2017    | 2018    | 2019    | 2020    |
|-----------------------------------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| SEZ Area (ha)                     | 143.44 | 231.13 | 358.67 | 499.68 | 639.30 | 776.41  | 848.87  | 898.87  | 948.87  |
| Factory Lot Area (ha)             | 101.90 | 163.35 | 253.39 | 353.86 | 453.37 | 550.35  | 602.08  | 637.08  | 672.08  |
| Nos. of Factories                 | 31     | 48     | 70     | 103    | 134    | 162     | 179     | 190     | 200     |
| Nos. of Worker                    | 18,382 | 30,342 | 52,798 | 72,846 | 92,677 | 111,007 | 120,785 | 127,400 | 134,015 |
| Water (m <sup>3</sup> /day)       | 1,838  | 3,034  | 5,279  | 7,284  | 9,267  | 11,100  | 12,078  | 12,740  | 13,401  |
| Waste Water (m <sup>3</sup> /day) | 1,470  | 2,427  | 4,223  | 5,827  | 7,414  | 8,880   | 9,662   | 10,192  | 10,721  |
| Electric Power (MW)               | 10.53  | 16.86  | 26.14  | 36.50  | 46.74  | 56.72   | 62.05   | 65.66   | 69.26   |

**Source: Study team**





**Figure 2: Agglomerating Result of SEZs and Factories**

**Source: Study team**

#### **5.4 Unforeseen Conditions in Bavet Region**

##### **(1) Scenario 1: Production is continued by factories under operation and preparation**

It is assumed that the following tenants will cancel to the land leasing contract due to the previously mentioned effects, specifically by the reason of shortage of electricity, shortage of labor, and strikes.

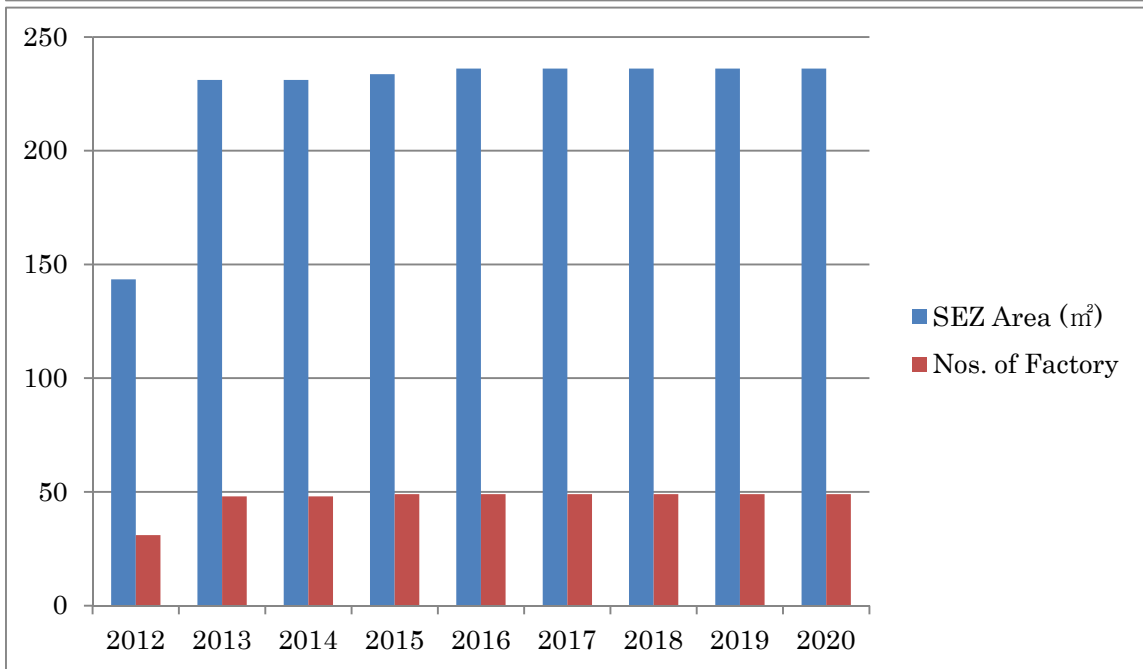
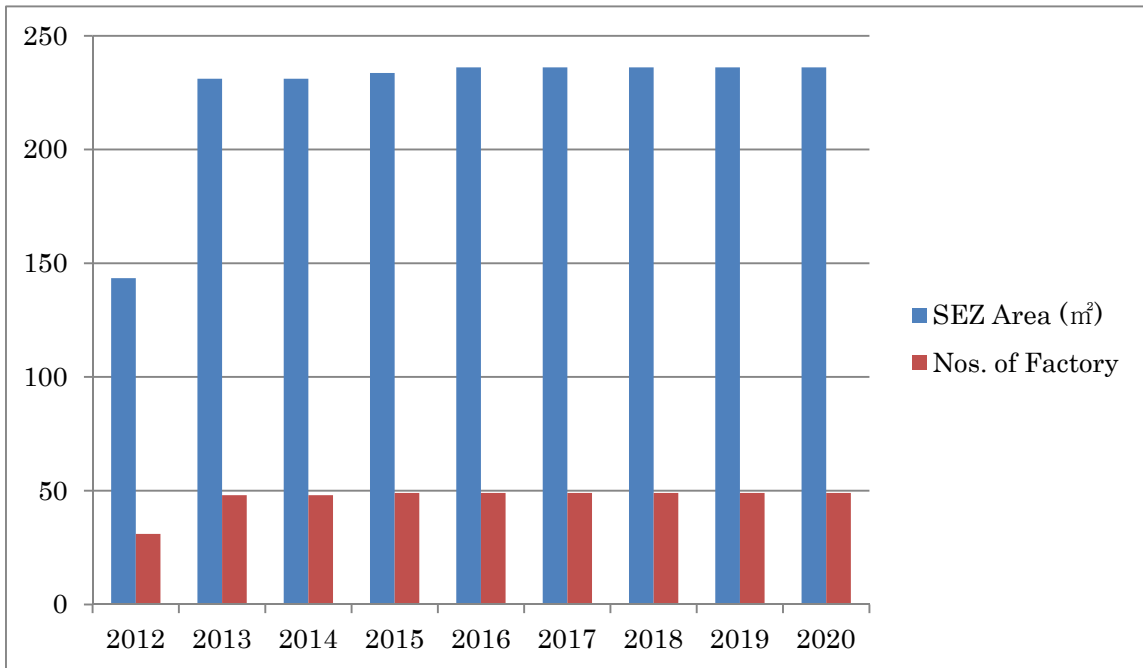
- Factory – with signed land lease already, but building not yet completed
- Expected factory (present vacant land lot)

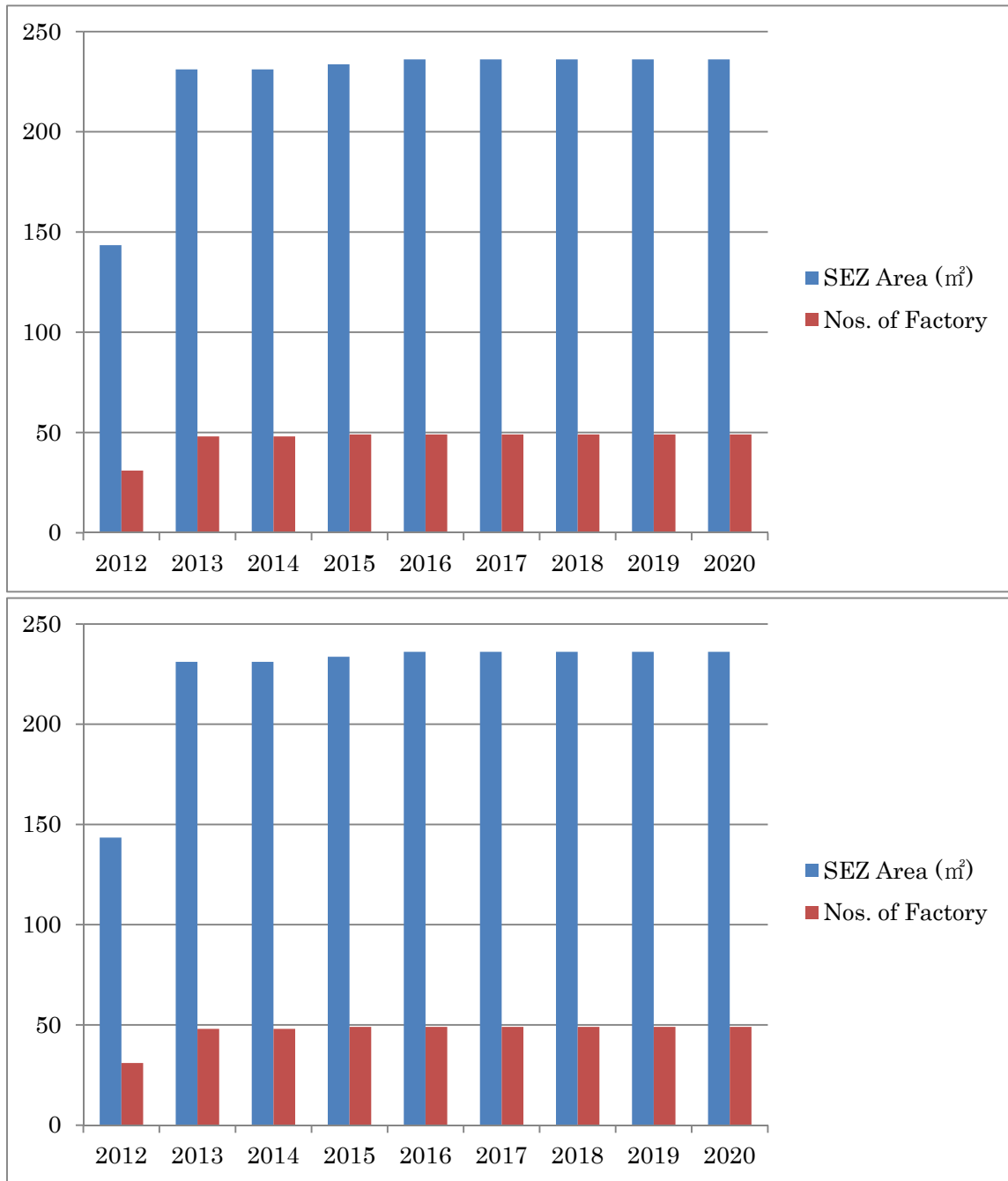
Forecasting is carried out by setting “zero” for these factories.

**Table 9: Forecasted Infrastructure Demand**

| Year                              | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SEZ Area (ha)                     | 143.44 | 231.14 | 231.14 | 233.64 | 236.14 | 236.14 | 236.14 | 236.14 | 236.14 |
| Factory Lot Area (ha)             | 101.90 | 163.36 | 163.36 | 165.86 | 168.36 | 168.36 | 168.36 | 168.36 | 168.36 |
| Nos. of Factories                 | 31     | 48     | 48     | 49     | 49     | 49     | 49     | 49     | 49     |
| Nos. of Workers                   | 18,382 | 30,342 | 30,342 | 31,842 | 33,342 | 33,342 | 33,342 | 33,342 | 33,342 |
| Water (m <sup>3</sup> /day)       | 1,838  | 3,034  | 3,034  | 3,184  | 3,334  | 3,334  | 3,334  | 3,334  | 3,334  |
| Waste Water (m <sup>3</sup> /day) | 1,471  | 2,427  | 2,427  | 2,547  | 2,667  | 2,667  | 2,667  | 2,667  | 2,667  |
| Electric Power (MW)               | 10.53  | 16.86  | 16.86  | 17.12  | 17.38  | 17.38  | 17.38  | 17.38  | 17.38  |

**Source: Study team**





**Figure 3: Forecasted SEZ and Factories Growth (Scenario 1)**

**Source: Study team**

The infrastructure demand will be knocked down and future increase cannot be expected. Consequently, the development size will be confined to the present situation.

(2) Scenario 2: Factory under operation and preparation stop operation and leave



It is assumed that the following tenants will give up and stop operation to leave due to the previously mentioned all effects relating to electric power, labor, water, waste water, etc. Here, simple 10% of the following tenants will leave. (No data of leaving ratio, therefore 10% is simple assumed for one case.)

- Factory - under operation
- Factory - under preparation

Forecasting is carried out assuming that these factories will leave from 2014. For the result, see the main part of this Report.

## **6. LAWS AND INSTITUTIONS RELATED TO INVESTMENT AND BUSINESS ACTIVITIES**

### **6.1 SEZ Legal System and Institution**

#### **①SEZ Sub-degree**

SEZ SUB-DECREE (NO. 148 ON THE ESTABLISHMENT AND MANAGEMENT OF THE SPECIAL ECONOMIC ZONE) was established in 2005 and since then seven years has passed. Originally the subdecree was meant to be reviewed after a couple of years in order to solve problem and upgrade it to a law. However the subdecree has remain as a subdecree and has not yet been improved, resulting in practical problem on the ground in SEZ development in Cambodia.

#### **②Problems of SEZ Sub decree**

According to the interview result conducted in Svay Rieng province, the major problems of the subdecree are as follows:

- ( i ) Lack of Supervision: CSEZA of CDC, the authority who is in charge of supervising SEZs, does not seem to fully manage and supervise SEZ developers so that the SEZ developers comply with the SEZ subdecree.
- ( ii ) Sub-standard SEZs: Because some SEZs have been developed without proper infrastructure, which are required by the SEZ subdecree. If tenant companies invest in factories in such SEZs unknowingly, these companies may face serious problems undermining their businesses.
- ( iii ) Lack of Planning: SEZs have been developed without considering the long term development plan of the region. As a result, such problems as lack of infrastructure and labor have come up.
- ( iv ) There are unclear requirements from OSS.

#### **③Proposal for Solutions**

- 1) Capacity building should be carried put for CSEZA/CDC in order to improve the supervision ability and information provision.
- 2) An information providing system should be created, where comprehensive, objective and accurate information will be disseminated for investors.
- 3) CSEZA/CDC should take counter measures for quickly solving problems and preventive measures in consultation with other ministries.
- 4) Legal and mindset reforms should be addressed.

## **6-2 Labor Law**

Under the current labor law, it is allowed to employ persons over the age of 15 and under the age of 18 according to the excerpts of the law presented. The Article 177 of the Labor law prohibits companies from employing persons under the age of 15. Actually, most of the Japanese companies in Bavet mainly employ persons over the age of 18. According to the department of labor of Svay Rieng province, if companies employ persons under the age of 18, it will be difficult to sell their products to the US and EU markets. Therefore companies exporting to the US and EU normally do not employ persons under the age of 18. Since the constitution of Cambodia stipulates compulsory education of 9 years (up to lower secondary high school) and if students complete lower secondary schools as scheduled, there would not be a problem to employ persons over 15 years. As we will see in Chapter 8 of this report, there are a number students who can not complete lower secondary schools by the age of 15. However, the education level in Svay Rieng has been improving year by year and especially more and more young people now complete lower secondary than before. The labor market may soon be improved for employing persons below the age of 18.

## **7. FUTURE DEVELOPMENT DIRECTION OF BAVET REGION**

### **7.1 Electricity**

Hearing Report is shown here (EDC HQ in Phnom Penh, and Svay Rieng Office)

- Present power to the Bavet region is supplied from Vietnam through National Road No.1, and total capacity is 16MW. The contracted capacity of Manhattan is 6MW and that of Tai Seng Bavet SEZ (Main/Sub) is 4MW. There is one more line (7MW) from Vietnam running in a southerly direction through towards Svay Rieng. However, this transmission line does not reach Bavet. The demand of Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub) has already reached maximum.
- In Cambodia, in 2013, two hydro power plants in Stung Atay and one coal power plant in Si-hanoukville will start supplying power to meet load demand. The total capacity is supposed to be 466MW.

- Problem in Short Term: By the end of 2015, there is no chance of EDC transmission line from Phnom Penh. In Bavet region, about 31-48 factories will start operation within one or two years. Electric power will be in short supply soon. (by investigation team)
- Problem in Mid Term: EDC will connect transmission line between Phnom Penh and Svay Rieng and set up 50MVA step down station near west side of Bavet by the end of 2015.
- Present electrical capacity of Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub) is 10MW. On the other hand, the electric power demand will become 16MW in 2013, 26MW in 2014, and 36MW in 2015. (by investigation team).

**Table 10: Project List (Start supply within 2013)**

| Project   | Country of Supplier | Type  | Power (MW) | Year of Operation |
|---|---------------------|-------|------------|-------------------|
| 200MW Coal Power Plant in Sihanoukville (I) (Phase 1) | Malaysia + Cambodia | Coal  | 100        | 2013              |
| Stung Atay Hydro Power Plant                          | China               | Hydro | 120        | 2013              |
| Stung Atay Hydro Power Plant                          | China               | Hydro | 246        | 2013              |

**Source: MIME**

From these investigations, it is clear that the present electrical capacity cannot be increased so as to catch up with the demand of factory operations in Bavet region.

**Table11: Problems with Power Supply and Counter Measures**

|  |
|--|
| <b>Problems with Electric Power Supply</b>   |
| Electric Power will be insufficient from the present until 2015.   |
| <b>Counter Measure (Present~2015: by Self Effort)</b>  |
| 1) SEZ needs to stop electrical use alternatively at least one time in a week. But the frequency will increase.  |
| 2) Tenants need to set up generator set for additional electricity.  |
| 3) SEZ Developer needs to set up generator set: Manhattan SEZ decided to have 2MW scale. : Tai Seng Bavet SEZ (Main/Sub) under planning to have 2MW scale. |
| 4) Combination between 1 and 2   |
| 5) Japanese tenants can rent or borrow the generator set alternatively, each other.  |
| 6) All concerned parties have a responsibility to inform the electric power issues of all tenants.   |

**Source: Study team**

## **7.2 Waste Water System**

**Table12: Problems with Waste Water System and Counter Measures**

| Problem with Waste Water System  |
|--|
| 1. Manhattan SEZ plans to have WST and WWTP. Tai Seng Bavet SEZ (Main/Sub) & Drogon King have joint pipe of rain water and waste water, and no plan of WST and WWST. |
| 2. Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub) are discharging waste water to rice field. The system does violate the Cambodia environmental standard.           |
| 3. Surrounding land is flat and discharged waste water is difficult to flow out.   |
| 4. This condition might violate the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal.                              |
|  |
| Counter Measure  |
| 1) SEZ developer has a duty of building WWST (One option is Lagoon System)) (Clearly prescribed in sub-decree).  |
| 2) Effluent route shall be maintained.   |
| 3) SEZ developer shall prepare building guidelines.  |
| 4) For mid-term counter measure, Bavet city needs to prepare for WWTP.   |
| 5) Education and capacity building is necessary for SEZ developer.   |
| 6) Capacity building is necessary for CDC and Ministry of Environment to change the SEZ approval process.  |

Source: Study team

### 7.3 Water Supply System

**Table13: Problems with the Water Supply System and Counter Measures**

| Problems with Water Supply System   |
|---|
| 1. Tenants set up underground well inside factory yard in Tai Seng Bavet SEZ.                               |
| 2. Manhattan SEZ has own simple supply system, other SEZs do not have plants.                               |
| 3. Lots of wells concentrated in Tai Seng Bavet SEZ. This might cause water shortage and ground settlement. |
| Counter Measures  |
| 1) Water volume content test and arsenic content test are necessary.  |
| 2) Investigate possibility of river surface water as water resource.  |
| 3) As mid or long-term measure, Bavet City needs to have WSTP.  |

Source: Study team

## 7.4 Transportation System

Several SEZs are located along the National Road No.1 within a short distance each other. At present, more than 18,000 workers are crossing the entrance gate during rush hours. This situation is creating very serious traffic jam during the commuting time. A few persons have been killed in traffic accidents. If this situation continues much longer, workers might hesitate to work in this region.

**Table14: Problems with the Transportation System and Counter Measures**

| Problems with Transportation System   |
|---|
| 1. Commuting requires 1.5-2.0 hrs and present truck for worker transportation is not suitable.  |
| 2. Near the entrance of Manhattan SEZ and Tai Seng Bavet SEZ along National Road No.1, traffic jam at rush hours is more than saturated by 18,000 workers. Serious accidents have occurred already. According to information from the Tai Seng Bavet SEZ operation team, a few people were already killed by accidents. |
| 3. Transportation cost for worker is going up year by year: \$ 7 → \$ 10 → \$ 13  |
| 4. Transportation needs will increase.  |
| 5. Worker tends to choose closer SEZ from home. Job change rate is more than 15% already.   |
| 6. Within 1 – 2 years, when worker demand becomes high, commutable workers will not be found.   |
| Counter Measures  |
| 1) SEZ needs to set up transportation stop station inside SEZ, and temporary commuting road may be necessary behind the zone.   |
| 2) Width of National Road No.1 needs to be extended urgently.   |
| 3) Dormitory is necessary for long distance commuters.  |

**Source: Study team**

### 7-2-5. Dormitory

Presently about 1,200 workers are working and about 6,000 workers at Manhattan SEZ are working at Tai Seng Bavet SEZ (Main/Sub). The total numbers of workers are approaching to the commutable numbers of workers. Within a short period, dormitory might be necessary. SEZs are already facing with worker shortage and about 15% of workers are trying to find another factory that will give little bit more high salary. If this situation continues long, strike might happen very frequently and SEZs will experience a hard time to find new workers. In this respect, some functions of dormitory are indispensable.

**Table15: Problems with Dormitory and Counter Measures**

|   |
|---|
| <b>Problems with Dormitory</b>  |
| 1. SEZs have already whole commutable workers in Bavet region. SEZs will face with shortage of workers in 2014. In 2015, the shortage might be 5,000 workers (See Chapter 8 for the estimate).  |
| <b>Counter Measures</b>   |
| 1) Dormitory, restraint, commercial building might be necessary at the Casino side.<br>(1) Private investor builds the dormitory.<br>(2) SEZ developer builds the dormitory.<br>(3) Third sector such as housing authority builds the dormitory.<br>(4) Private sector expands an existing building for dormitory.<br>(5) Central government, state, province, or city builds the dormitory and provide long term – low rate bank loan. |
| 2) Extend width of National Road No.1 and reduce the truck rate.  |
| 3) Prepare for bus system.  |

**Source: Study team**

## **7.6 Rental Factory**

At the beginning of this investigation, there was not high demand heard during hearings on the subjects. However, due to current strike conditions and bad rumor about poor infrastructure in Bavet region, tenants might need rental factory in order to reduce their investment risks.

**Table16: Problems with Rental Factories and Counter Measures**

|   |
|---|
| <b>Problems with Rental Factories</b>   |
| 1. 4 SEZs in Bavet have rental factories. If the demand is high, developer will build.                    |
| 2. Small rental factories (300—1000—2000 m <sup>2</sup> ) are needed in Vietnam and Indonesia now.        |
| 3. There is not enough core industry in Bavet. That may be one of the reasons for the present low demand. |
| 4. Strike will create high demand.  |
| <b>Counter Measures</b>   |
| 1) Build rental factory with ratio of 10% of factories in SEZ.  |
| 2) Core industry is needed for small enterprise. May be 5-7 years later.                                  |

3) If the urgent needs happen, the combined rental factory such as PPSEZ type can be applied.

Source: Study team

### 7.7 A Desirable Urban Development Plan for Bavet District (Master Plan Prepared by ADB)

The ADB prepared the Master Plan for the future development of Bavet District in 2009. During this study, the Study Team confirmed that the Bavet city also follows this Master Plan. However, the current status of the SEZs and factories in the region have developed in a different direction from the Master Plan. It is an urgent need to consider the necessary infrastructure required for the future development of the region. The appropriate infrastructure development in Bavet district enables the sustainable operation of the SEZs and factories in the area that will promote the development of Bavet to be the important industrial city.

**Table17: The Comparison of ADB's Master Plan and Current Status**

(in terms of the location of the road and size of land area in the Original Development Plan)

| Land Use  |
|---|
| <p><u><i>In the Master Plan</i></u></p> <p>The main SEZs are considered to be Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub). Based on these two SEZs, the large scale industrial zone is expected to be developed in the two locations in the north (1,000ha and 1,139ha) the total of 2,139ha.</p>   |
| <p><u><i>Current Condition</i></u></p> <p>1. Industrial zone is currently not connected to the National Road No. 1 and development is not in progress.</p> <p>2. Currently, the industrial zone is concentrated and expanding in the direction of Chipu along National Road No. 1.</p> <p>3. The actual development area of the SEZ and factories in the Bavet area (according to the original development plan approved by the CDC) is limited to around 950ha.</p> <p>4. As SEZ Developers continue to develop SEZ, they seem to be purchasing additional land around the area (although the accurate size of acquired land is not obtainable). Therefore, if the problems of infrastructure are to be solved and market condition permit, the industrial zone can be expanded further.</p> |
| Road  |
| <p><u><i>In the Master Plan</i></u></p> <p>National Road No. 1 assumes the function as the core transportation line in the industrial zone and Sub Road in the residential zone.</p>  |
| <p><u><i>Current Condition</i></u></p> <p>Since there are no transportation access in the north, SEZ is not developed in the area.</p>  |

Source : ADB Master Plan

### 7.8 SEZ Based Urban Development in the Bavet Area

If the Bavet area is able to solve the electric power shortage, establish dormitories, and perform road maintenance by 2015, there will be no basic infrastructure problem in Bavet area. As described in Chapter 5, based on the original development plan approved by CDC, it is estimated that all the factory lots will be fully occupied and the companies starting their operations from 2020. In addition, if the industrial accumulation is favorable, Bavet area will have a potential to further develop as an SEZ-based industrial city. Usually, SEZ will be financial viable with certain development scale and in many cases, size of the SEZ are 200ha to 500ha. This additional expansion requires around 10 years. Based on this assumption, below section discusses the necessary infrastructure development under the condition that each SEZs in the Bavet area expand their sizes to 200 to 500ha during 2020 to 2030.

### 7.9 Demand Forecast of Infrastructure

In case of the SEZ Developers continue to operate and the market is stabilized due to the industrial accumulation, each SEZs will gradually expand their development area. As a result, further accumulation of SEZs and factories will be expected in the whole Bavet area. Based on this assumption, the infrastructure demand in the whole region is estimated below. For the projection, basic unit indicated in the previous chapter is used.

**Table18: Infrastructure Demand in Bavet**

| Year                              | 2020      | 2030      |
|-----------------------------------|-----------|-----------|
| Development Area (ha)             | 948.88    | 1,738.57  |
| Factory Lot Area (ha)             | 672.08    | 1,200.00  |
| Nos. of Factories                 | 200       | 359       |
| Nos. of Workers                   | 134,015   | 228,436   |
| Water (m <sup>3</sup> /day)       | 13,401.55 | 22,843.62 |
| Waste Water (m <sup>3</sup> /day) | 10,721.24 | 18,274.89 |
| Electric Power (MW)               | 69.26     | 122.15    |

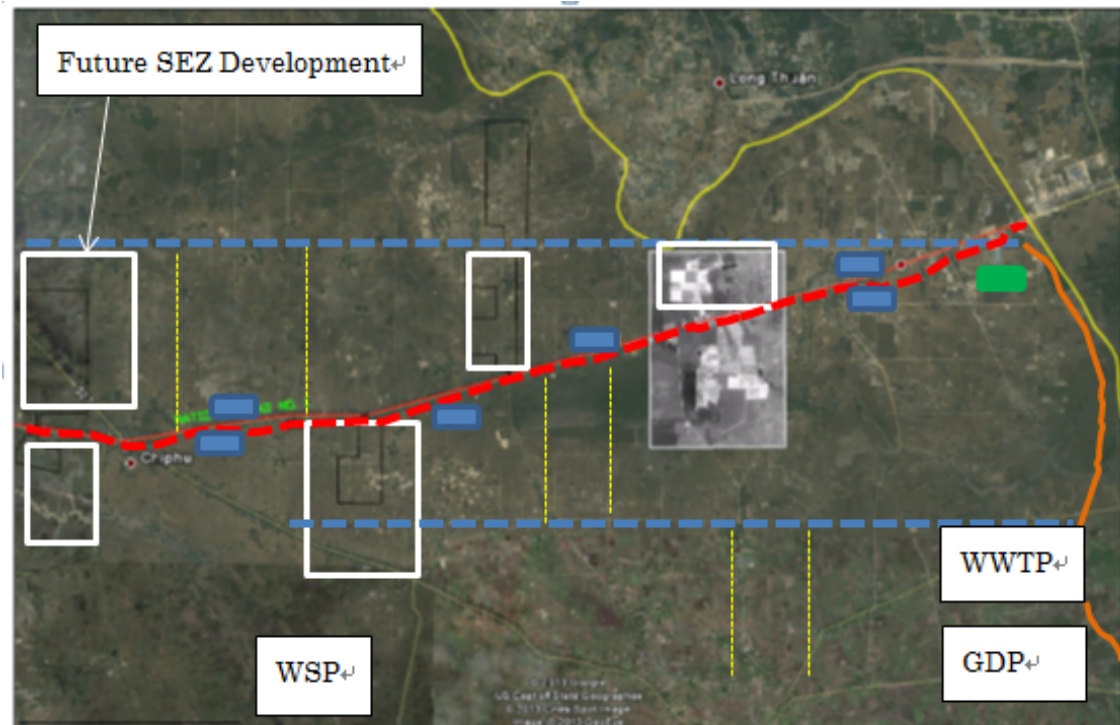
Source: Study team



### 7.10 Necessary Infrastructure in Bavet Region in the Future

The this section describes the necessary infrastructure development based on the combination of the ADB's Master Plan, and the current status and future development prospects analyzed by the Study



Team.



| Legend  | Item   | Schedule (Term) |     |      |
|---|--|-----------------|-----|------|
|   |  | Short           | Mid | Long |
|  | Dormitory Zone                               | ○               |     |      |
|  | High class residential zone                  |                 | ○   |      |
| WSP   | Water Supply Treatment Plant (Surface Water) |                 | ○   | ○    |
| WWTP  | Waste Water Treatment Plant                  |                 | ○   | ○    |
| GDP   | Garbage Disposal Plant                       |                 | ○   | ○    |
|  | Expanded National Road No.1                  | ○               | ○   | ○    |
|  | New Road (Sub Road)                          | ○               | ○   | ○    |
|  | Village Road                                 | ○               |     |      |
| Electricity   | Self (Generator set)                         | ○               |     |      |
| Electricity   | New EDC Power                                |                 | ○   | ○    |

**Figure 4: Schedule of Necessary Infrastructure Development**

(1) Necessary Infrastructure Development in the Short Term

Village Road indicated in Yellow

Village roads development is in urgent need to expand the commuter belt. During the rainy season, because the drainage is poor, the route connecting village and National Road No. 1 is difficult to commute in many cases. In order to solve this problem, a self road development scheme by the villagers is recommended. Firstly, asphalt cement shall be provided to the villagers and the road development shall be done by the villagers themselves. As an incentive, once the village roads are developed, motor bike and tuk tuk shall be granted. In this case, the grassroots support of JICA may be applicable.

Dormitory Development

There is a limitation of commuting workers that is rapidly being reached at this moment. Therefore, a dormitory shall be developed in a timely manner. A more upscale residential facility for the manager class worker is also required, especially for the foreign tenants. In this case, the application of the currently closed casino as a residential use may be an option.

Electricity (Generator Set)

No additional EDC power will be available until 2015. Until that time, self power supply is necessary.

(2) Desirable Infrastructure Development in the Mid Term

Widening of National Road No. 1 and New Road Development by ADB (Red dashed line and Blue dashed line)

Local traffic condition is imminent. There is a need for the road maintenance as soon as possible. In ADB's development plan, new road development is expected to proceed in the south. However the road in the north is also important to disperse the communal traffic. It may serve as the bypass road to Vietnam.

(3) Desirable Infrastructure Development in the Long Term

Water Supply Plant

Excessive water intake by the increasing factories in SEZs may result in land settlement. Utilization of the river water as the water source is recommended with building pipes along the new road network.

Waste Water Treatment Plant

Wastewater treatment plant has to be developed in the SEZ by the SEZ Developer. As the urbanization progresses, naturally the population increases. Therefore, sewage plant for the urban population in the city is also required. As the same as water supply, sewage pipe shall be equipped along the new road network as the Figure shows. Only after the purification, the treated wastewater shall be discharged into the river.

#### Waste Disposal and Treatment Facilities

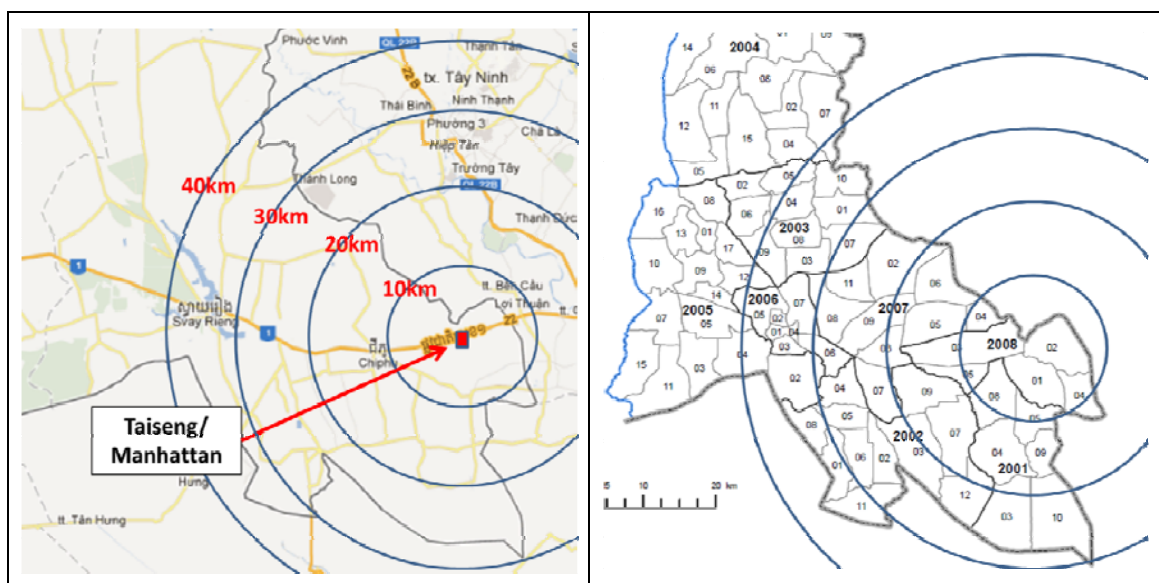
As the urbanization progresses by attracting investment and labors in SEZ, large amount of waste will be generated. Thus, the establishment of the waste treatment facility at the site indicated in the Figure is expected. In addition, it is desired to utilize the heat generated by the incineration of wastes.

## **8. LABOR MARKET SITUATION**

### **8.1 Potential Labor Supply to Taiseng and Manhattan SEZs**

In this section, we consider the potential labor supply to particular SEZs, namely Taiseng SEZ (main and sub) and Manhattan SEZ. Taiseng and Manhattan SEZs are located at a place which is near the Vietnam border and in the easternmost among the existing SEZs in Bavet area. Therefore, the labor supply from the east of the SEZs are rather limited and the majority of the labor supply have to come from the west of the SEZs. Since the majority of the population is concentrated in the western part of the province, the southwest in particular, SEZs are in more advantageous positions in terms of labor if located more close to the population concentration. This may well explain the reason why new SEZs are located to further and further to the east.

According to interviews with tenants in the SEZs, the maximum commuting distance is 40-45km for ordinary workers. If circles are drawn with the radius 10-40km around the SEZs, the provincial capital of Svay Rieng city is mostly included in the 40km circle but the area between the capital and the western border is not included, where plenty of people reside.



**Figure5: 0-40km area from Taiseng and Manhattan SEZs**

**Source: Study team**

This 40km circle includes 6 districts with 270,000 people, accounting for 57% of the land area of Svay Rieng province.

However, it is not that all the young working population can actually commute to the SEZs. The national road No.1 is a paved asphalt road in good condition, while most of village roads running toward north and south from the national road No.1 are not paved, where commuting trucks can only run at 10-20 km/hr in the dry season. The situation of village roads is even worse in the rainy season. In order to understand the actual commuting area for workers of the SEZs, we plot almost all the home villages of workers, based on the detailed information provided by a Japanese company operating in Bavet. It is shown that workers normally come from villages 5-10km away from the national road No.1 and some people come from an area even 15km away from the national road No. 1 if the condition of the village road is good. This current commutable area accounts for roughly 2/3 of the area covered by the 40km circle drawn above. Assuming the geographical uniformity of population density in the province, we may consider that 2/3 of the working population covered by the 40km circle could commute to Taiseng and Manhattan SEZs.



|                                  |        |        |        |        |
|----------------------------------|--------|--------|--------|--------|
| Sub-total(Male:18-39 year old)   | 16,513 | 17,207 | 17,901 | 21,368 |
| Supply total (18-29 year old)    | 28,328 | 29,071 | 29,814 | 33,529 |
| Supply total(18-39 year old)     | 44,189 | 45,658 | 47,126 | 54,468 |
| Demand                           |        |        |        |        |
| Female (18-29 year old)          | 13,710 | 20,582 | 23,682 | 29,654 |
| Female (18-39 year old)          | 5,876  | 8,821  | 10,150 | 12,709 |
| Sub-total (Female:18-39year old) | 19,586 | 29,403 | 33,832 | 42,363 |
| Male (18-29 year old)            | 4,570  | 6,861  | 7,894  | 9,885  |
| Male (18-39 year old))           | 1,959  | 2,940  | 3,383  | 4,236  |
| Sub-total(Male:18-39 year old)   | 6,529  | 9,801  | 11,277 | 14,121 |
| Demand total (18-29 year old)    | 18,280 | 27,443 | 31,576 | 39,539 |
| Demand total(18-39 year old)     | 26,114 | 39,204 | 45,109 | 56,484 |
| Balance                          |        |        |        |        |
| Female (18-29 year old)          | 3,723  | -2,766 | -5,483 | -9,537 |
| Female (18-39 year old)          | 4,367  | 1,814  | 876    | 274    |
| Sub-total (Female:18-39year old) | 8,090  | -952   | -4,606 | -9,263 |
| Male (18-29 year old)            | 6,325  | 4,394  | 3,720  | 3,527  |
| Male (18-39 year old))           | 3,659  | 3,012  | 2,903  | 3,720  |
| Sub-total(Male:18-39 year old)   | 9,985  | 7,406  | 6,623  | 7,247  |
| Balance total (18-29 year old)   | 10,048 | 1,628  | -1,762 | -6,009 |
| Balance total(18-39 year old)    | 18,075 | 6,454  | 2,017  | -2,016 |

\*The growth rates for 2013-2020 of 18-39 and 18-29 year old women were calculated to be 3.3% and 2.2% respectively based on 2008 Population Census. The same rates for men were 4.2% and 2.8%.

Source: Prepared by Study team based on data from 2008 Population Census & Seila Program Annual Work Plan and Budget 2005

## 9. SITUATION OF FACILITIES FOR HUMAN RESOURCE DEVELOPMENT AND BUSINESS INCUBATION

The enrollment rates we have seen above are relatively high but their graduation rates are rather low. According to 2008 Population Census, 1.7%, 19 % and 47 % of the male population of over 5-years old completed primary, lower secondary and secondary schools in Svay Rieng province. And 0.6 %, 8.5% and 28.5% of the female population of over 5-years old completed primary, lower secondary and secondary schools, which are lower than those of the male population.

**Table20: Education Attainment in Svay Rieng Province (2008 Population census)**

|                       | Male | Female | Total |
|-----------------------|------|--------|-------|
| No education          | 14%  | 29%    | 22%   |
| Primary Not Completed | 39%  | 43%    | 41%   |
| Primary school        | 28%  | 20%    | 24%   |
| Lower secondary       | 17%  | 8%     | 12%   |
| Secondary             | 0.6% | 0.2%   | 0.4%  |
| Beyond secondary      | 1.1% | 0.3%   | 0.7%  |
| Other education       | 0.0% | 0.0%   | 0.0%  |
| Total                 | 100% | 100%   | 100%  |

Source : 2008 Population census

The illiteracy of 15-45 year old population in Svay Rieng was 5.9% in 2011. The younger generation generally has better literacy.

**Table21: Literacy in Svay Rieng Province**

|                                      | 2009    | 2010    | 2011    |
|--------------------------------------|---------|---------|---------|
| 15-45 year old population            | 287,910 | 295,284 | 299,633 |
| Of which female                      | 147,930 | 152,144 | 154,268 |
| 15-45 year old illiterate population | 7.55    | 6.69    | 5.93    |
| Of which illiterate female           | 4.18    | 3.7     | 3.31    |
| 15-17 year old illiterate population | 3.49    | 3.22    | 2.53    |
| Of which illiterate female           | 3.64    | 2.96    | 2.87    |
| 18-24 year old illiterate population | 4.62    | 3.96    | 3.39    |
| Of which illiterate female           | 4.96    | 4.28    | 3.53    |
| 25-35 year old illiterate population | 8.19    | 6.98    | 5.67    |
| Of which illiterate female           | 8.88    | 7.48    | 6.16    |
| 36-45 year old illiterate population | 12.78   | 11.62   | 11.01   |
| Of which illiterate female           | 13.46   | 12.46   | 11.74   |

Source : 2008 Population census

## 10. CASE STUDY OF NEIGHBORING COUNTRIES

### 10-1 Outline of SEZ and Urban Development in Neighboring Countries

Thailand, Vietnam and Indonesia have successfully developed industrial parks (IPs) and SEZs since late 1980's.

**Table 22: Successful Cases of IPs/SEZ and Surrounding City Development in Asia**

| Country/IP&SEZ        | Year of Start/<br>Initial city population | SEZ Area<br>(ha) | Current<br>No.<br>workers | Currenrt<br>City population |
|-----------------------|---|------------------|---------------------------|-----------------------------|
| Thailand/Bang Pakong  | 1986/<br>50,000                           | 700              | 70,000                    | 500,000                     |
| Thailand/Amata City   | 1993/<br>10,000                           | 4,000            | 250,000                   | 700,000                     |
| Indonesia/Bekasi      | 1990/<br>50,000                           | 3,000            | 400,000                   | 2,000,000                   |
| Indonesia/Batamisland | 1989/<br>200,000                          | 1,500            | 300,000                   | 800,000                     |
| Vietnam/VSIP1         | 1995/<br>50,000                           | 600              | 30,000                    | 300,000                     |
| Veitnam/Amata         | 1994/<br>20,000                           | 500              | 30,000                    | 500,000                     |

**Source: Study team**

Lessons derived from the experiences of these neighboring countries are as follows.

- (1) SEZs/IPs is an effective means of promoting FDI, creating employment for young populations and industrial clustering and population dispersion.
- (2) Governments need to support the legal system and organizations, infrastructure surrounding SEZs, housing and public facilities, labor recruitment and training.
- (3) Especially when SEZs are developed in remote areas, the first thing to do is to prepare housing, commercial, and public facilities prior to establishing factories.
- (4) If the partnership between private and public organizations goes smoothly, there is a possibility for a city hosting the SEZs to develop rapidly into a modern industrial city with a 500,000 to 1,000,000 population.

## **10-2. Securing of Labor Force in Neighboring Countries**

To secure a sufficient labor force, neighboring countries have resorted to the following measures:

- (1) Thailand: Government's housing corporation, together with IP developers, supplied housings for workers. Private housing developers also supplied depending on locations of IPs.



- (2) Vietnam: IP developers, who are often JVs of provincial governments and private developers, prepared dormitories and housing for workers from the beginning of the development of IPs. Private housing developers also voluntarily started supplying housing for workers.
- (3) Indonesia: Government's housing corporation, together with IP developers, supplied housing for workers. Private housing developers arranged low interest loans for workers from government and supplied housing to workers.

## 11. SWOT ANALYSIS

In order to analyze the potential and risks facing Bavet, we use a SWOT matrix to analyze the ① Strengths, ② Weaknesses, ③ Opportunities, and ④ Threats/Challenges/Risks. Below is part of the full list. For detailed information, see the full list of the main report

**Table23: Bavet's SWOT analysis**

| <b>1. Strength</b>    |  |
|-----------------------|--|
| ①                     | With a strategic location of facing East-West corridor connecting HMC and BKK, Bavet has good access of about 80km to HMC and Saigon Port, and about 130km to Cai Mep – Thi Vai port of Vietnam.   |
| ②                     | There is land reserved for 5 SEZ (including existing No. 2 and No. 3) being developed, and one more SEZ (300ha) approved by CDC in January, making a total of 6 SEZ (1500ha). Besides Taiwanese companies, the number of Japanese companies started from 2008 is 22 (total is 51 companies).   |
| <b>2. Weakness</b>    |  |
| ①                     | 6 SEZ are already approved in Bavet, 5 SEZ have started construction, 3 SEZ have started operation. In 2010, the number of companies drastically increased, resulting in a shortage of labor, electric power, water and sewage. There is no accommodation, commercial facilities, public facilities, service facilities for workers in the region, making it difficult to ensure labor, and this has become the biggest problem. |
| ②                     | SEZ, a part of the CDC Office, is supposed to give license, management, guidance of operation for SEZ, reviewing plan of infrastructure and town development but it is not working. Due to the chaotic and unplanned development of the SEZ, more than 50 companies have come over the past two years, causing the problems of housing shortages, power shortages, the lack of water and sanitation and labor shortages.         |
| <b>3. Opportunity</b> |  |
| ①                     | Located at the crOSSroad of East-West Corridors that connect four countries of the Mekong  |

Region, Bavet has good access to HMC and Cai Mep/ Thi Vai Ports. The 50MVA electric power is planned to be supplied in 2015, and the land for future development is allocated for SEZs of 1,500ha and for a township which will be designed by a new Master Plan.?? If the labor shortage is resolved, Bavet will be an industrial center like other industrial cities in ASEAN countries that grew up from 300,000 to one million of population during the past 25 years.

- ② There are already three SEZs, and about 50 companies with 20,000 workers are operating, mainly Taiwanese and Japanese. Now the roles of public and private sectors should be defined clearly to tackle and solve the existing problems as soon as possible. By the year 2015 new operations should be put off because of the lack of electricity and manpower. After 2015, however, industrialization will be accelerated again, and it will be an industrial city of 300,000 to 400,000 residents in 2030.

#### **4. Challenge & Risk**

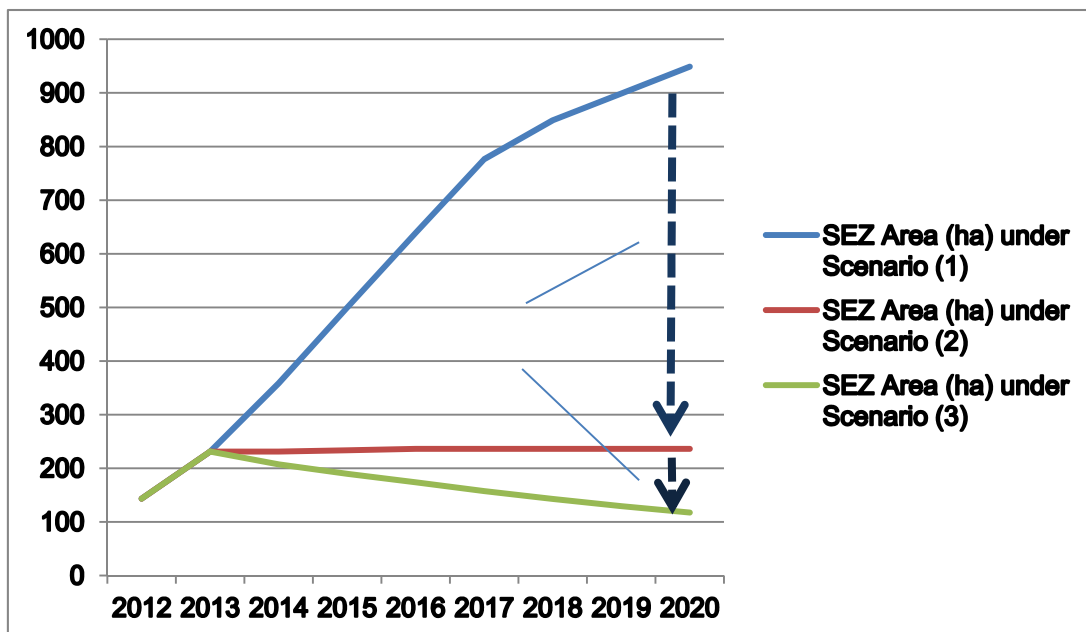
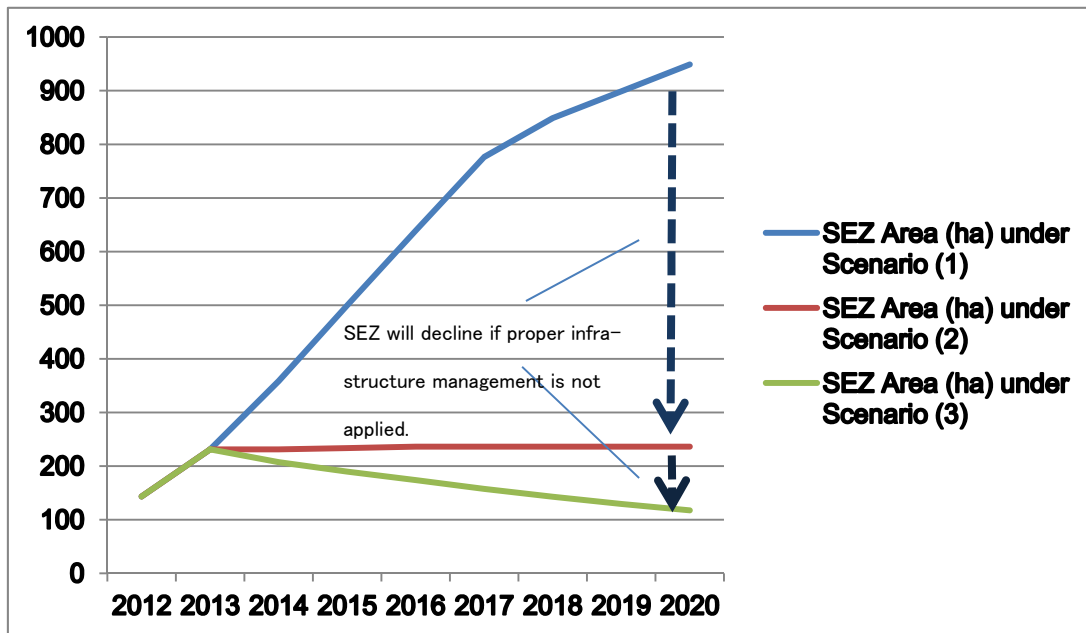
- ① If the existing problems are not solved in the near future, especially those of labor shortage and electric power, the manufacturers that have already invested in Bavet SEZs will be forced to withdraw and it will become difficult to attract new investment. In this case, the development of Bavet area will stagnate.
- ② The development will grind to a halt if the infrastructure, especially the electric power and the sewerage system, housing inventory, and the health services systems are not improved. In this case, new investments will not come in, some of the now operating industries will retreat, and the direct foreign investment will disappear.

**Source: Study team**

## **12. SCENARIOS AND DEMAND FORECASTS**

### **12.1. Future Forecast**

Chapter 3 of this report summarized the present situation of SEZs and factories in Bavet. Chapter 4 examined the type and number of companies which may invest in Bavet in future. Chapter 5 pointed out problems related to the existing SEZs in Bavet and provided estimations of the number of operation factories based on three scenarios: Scenario1 is the case without any infrastructure and labor problem, Scenario 2 is the case with no more new investment, and Scenario 3 is the case where existing factories are gradually withdrawing.



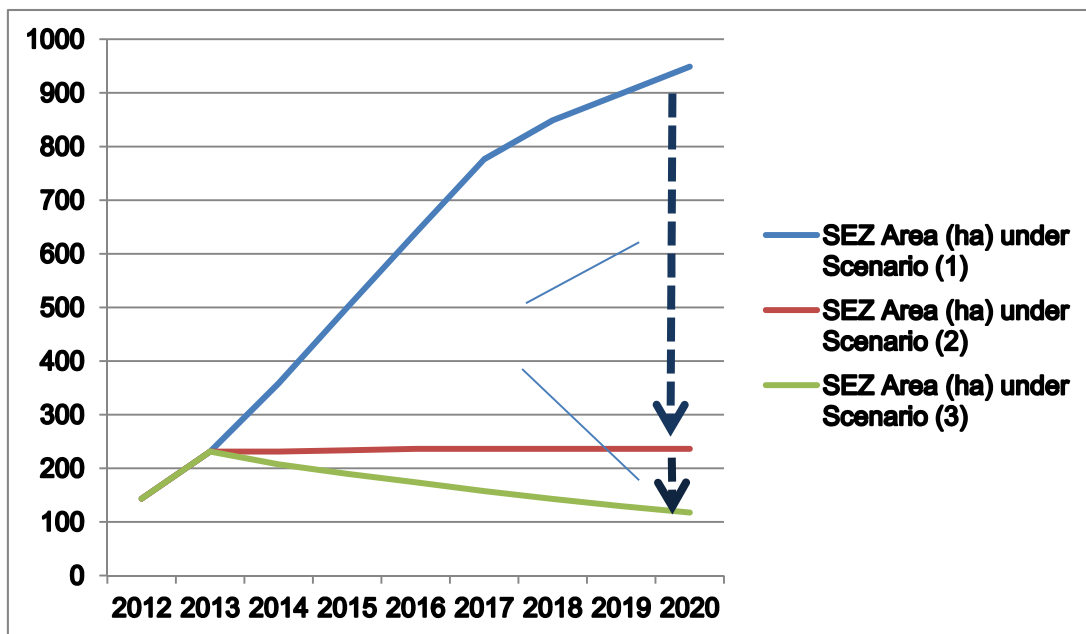
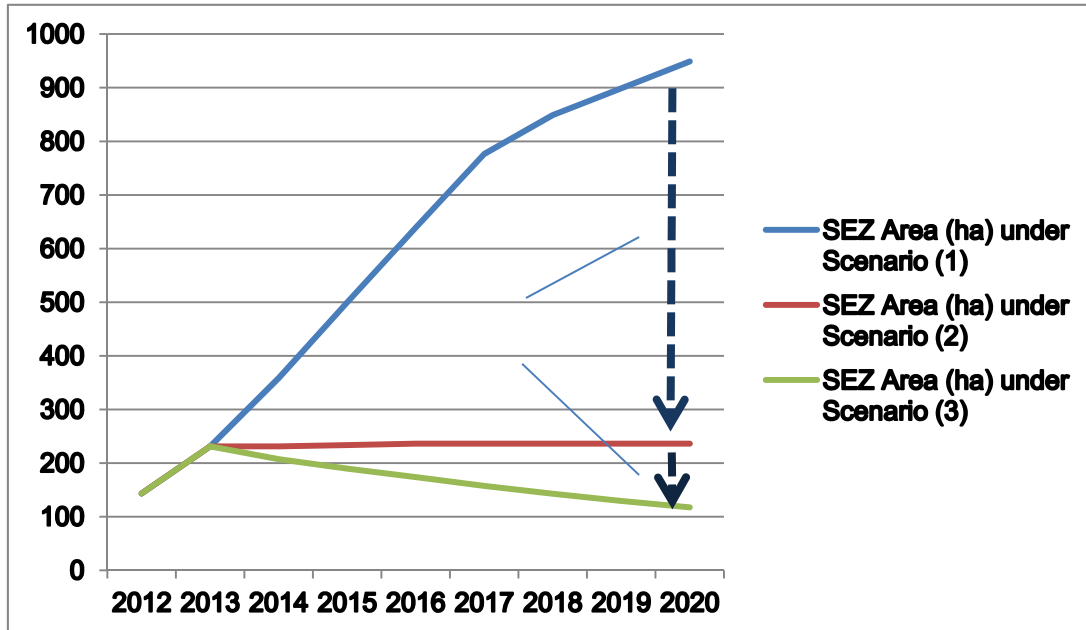
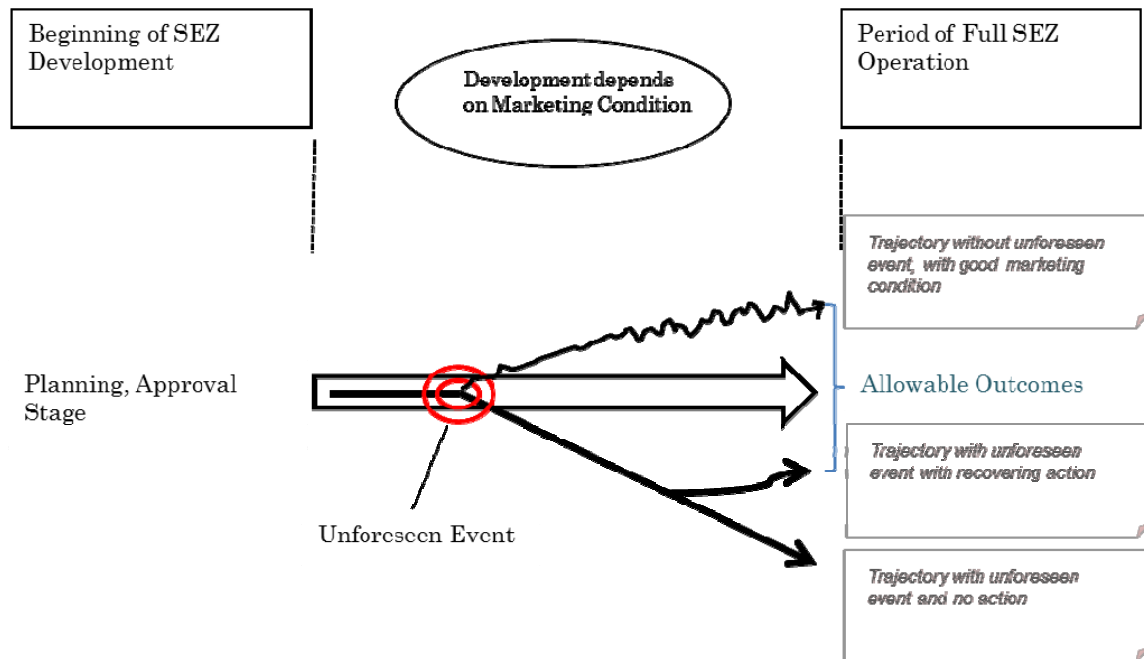


Figure 7: SEZs Development Scenarios

(Cited from Chapter7, figure 7.1)

Chapter 7 explained necessary infrastructure developments which can mitigate a possible stagnation of investments and SEZs development in Bavet.

This Chapter assumes the implementation of the necessary infrastructure development and then examines how the gap between the SEZ developers' expectation and the worst case can be narrowed in different scenarios.



❏ 8: Development Scenarios due to Occurrence of Agglomerating Effect

(Quoted from Chapter 5, Figure 5.1)

The figure above shows that the number of existing factories (31 factories at present) may increase 5 times upto 103 factories in 2015 if there are no problem in infrastructure and labor supply. However infrastructure and labor problems has started coming out such as shortage of electricity, improper waste water system, poor transportation system for workers, insufficient dormitory and strikes, and there is a good possibility that the best scenario (Scenario 1) will be delayed. It is difficult to solve all the problems in short time. In this case, if counter measures are delayed, the scenarios will worsen. Therefore, the future development of Bavet city may well depend largely on short term counter measures. These counter measures should all depends on efforts of CSEZA and international donors such as JICA and ADB, etc. as well as those of SEZ developers and tenant companies. This Chapter examine more realistic future forecast of industrial accumulation in Bavet region.

## 12.2. Short Term Scenario

Three future scenarios until 2015 are shown as follows;

**Table 24 : Projection of 2013-2015 Operational Factory Lot Areas**

|   | 2012 | Factory lot<br>area of<br>newly<br>established<br>factores<br>(ha) | 2013 | Factory lot<br>area of<br>newly es-<br>tablished<br>factores<br>(ha) | 2014 | Factory lot<br>area of<br>newly es-<br>tablished<br>factores (ha) | 2015 |
|---|------|--|------|--|------|---|------|
| Basic Scenario  | 102  | +61  | 163  | +90  | 253  | +101  | 354  |
| All factory lots<br>are operational<br>(ha)                       |      |  |      |  |      |   |      |
| Upper Scenario  | 102  | +61x80%  | 151  | +90x60%  | 205  | +101x50%  | 256  |
| 72% of Basic<br>Scenario (com-<br>pared to 2015 on<br>area basis) |      | +49  |      | +54  |      | +51   |      |
| Medium Sce-<br>nario  | 102  | +61x70%  | 145  | +90x50%  | 190  | +101x30%  | 220  |
| 62% of Basic<br>Scenario (com-<br>pared to 2015 on<br>area basis) |      | +43  |      | +45  |      | +30   |      |
| Lower Scenario  | 102  | +61x50%  | 133  | +90x30%  | 160  | +101x10%  | 170  |
| 48% of Basic<br>Scenario (com-<br>pared to 2015 on<br>area basis) |      | +31  |      | +27  |      | +10   |      |

**Source: Study team**

The conditions of the Scenarios are discussed in the main part of this report.

The figure and talbe below showed the maximum development estimate from the viewpoints of SEZ developers and the minimum estimats based on unforeseeable problems. These scenarios are extreme scenarios and more realistic scenarios can be drawn in between these extreme scenarios. In this context, three more realistic scenarios were presented in the previous section. Based on the

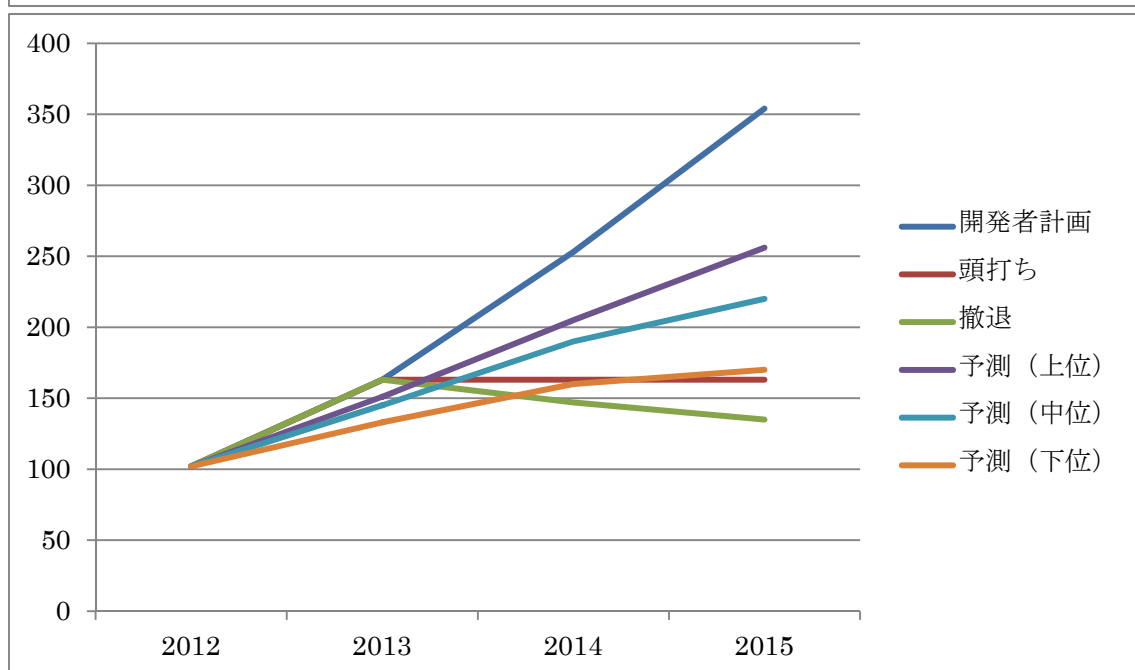
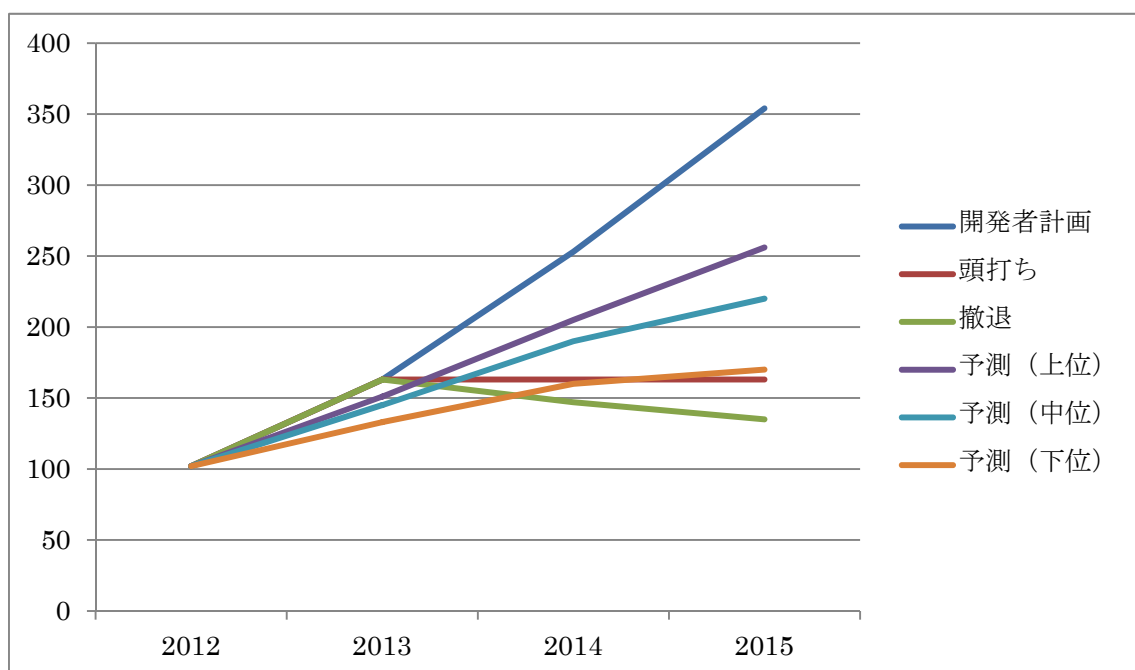
present situation of SEZs and tenants, the medium scenario should be the most realistic. Six scenarios given so far are summarized in the table below.

**Table 25 : 2013-2015 Operational Factory Lot Area (Unit : ha)**

|                        | Graphs            | 2012 | 2013 | 2014 | 2015 |
|------------------------|-------------------|------|------|------|------|
| Chapter 5              |                   |      |      |      |      |
| Case 1 (Original plan) | Developers' plans | 102  | 163  | 253  | 354  |
| Case 2 (Stagnating)    | Stagnating        | 102  | 163  | 163  | 163  |
| Case 3 (Withdrawing)   | Withdrawing       | 102  | 163  | 147  | 135  |
|                        |                   |      |      |      |      |
| Chapter 12             |                   |      |      |      |      |
| Upper Scenario         | Upper forecast    | 102  | 151  | 205  | 256  |
| Medium Scenario        | Medium forecast   | 102  | 145  | 190  | 220  |
| Lower Scenario         | Lower forecast    | 102  | 133  | 160  | 170  |

**Source: Study team**

Graphical representation of the table above is shown below.





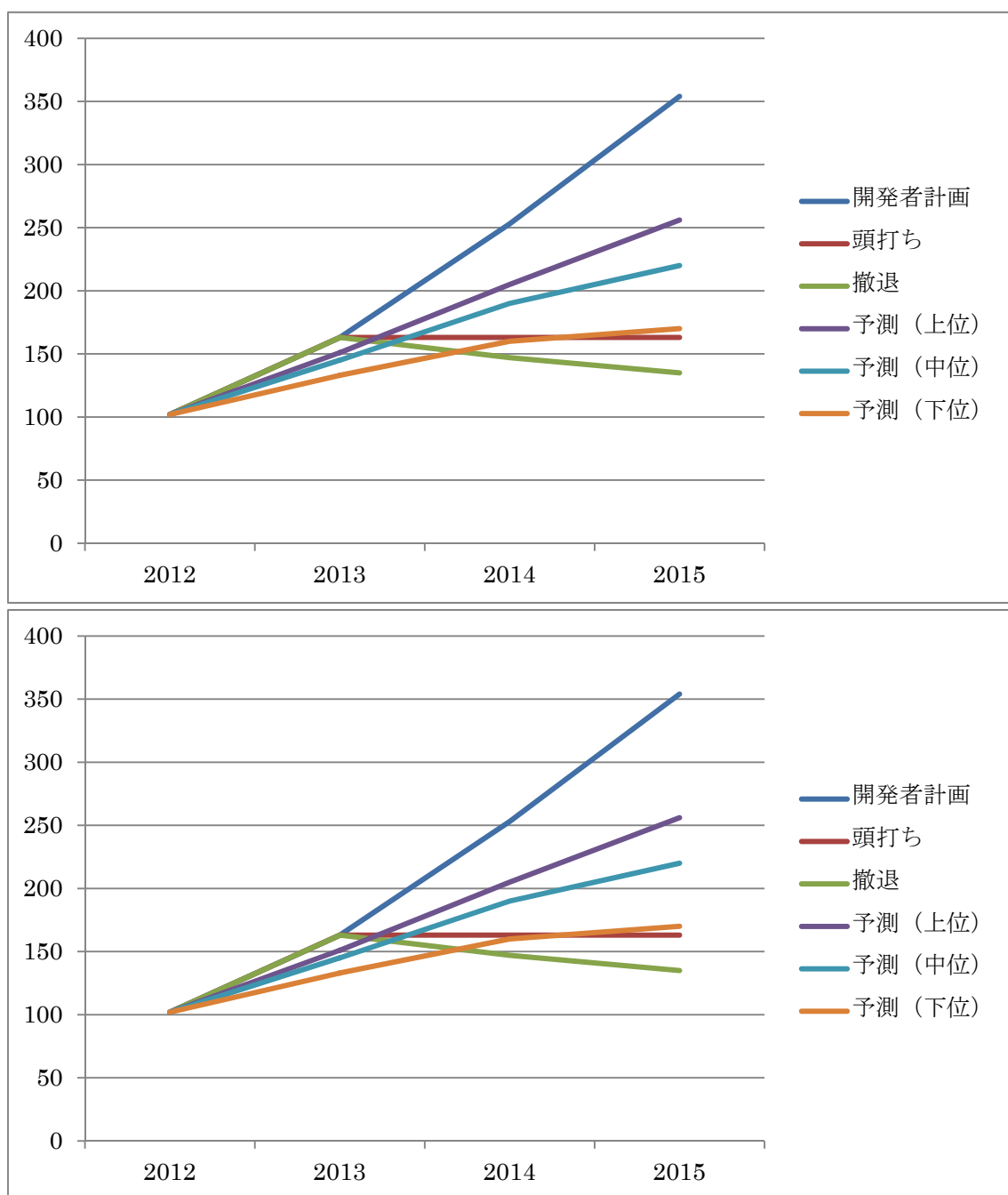


Figure 8: 2013-2015 Operational Factory Lot Area (Unit : ha)

Source: Study team

### 12.3. Long Term Future Forecast

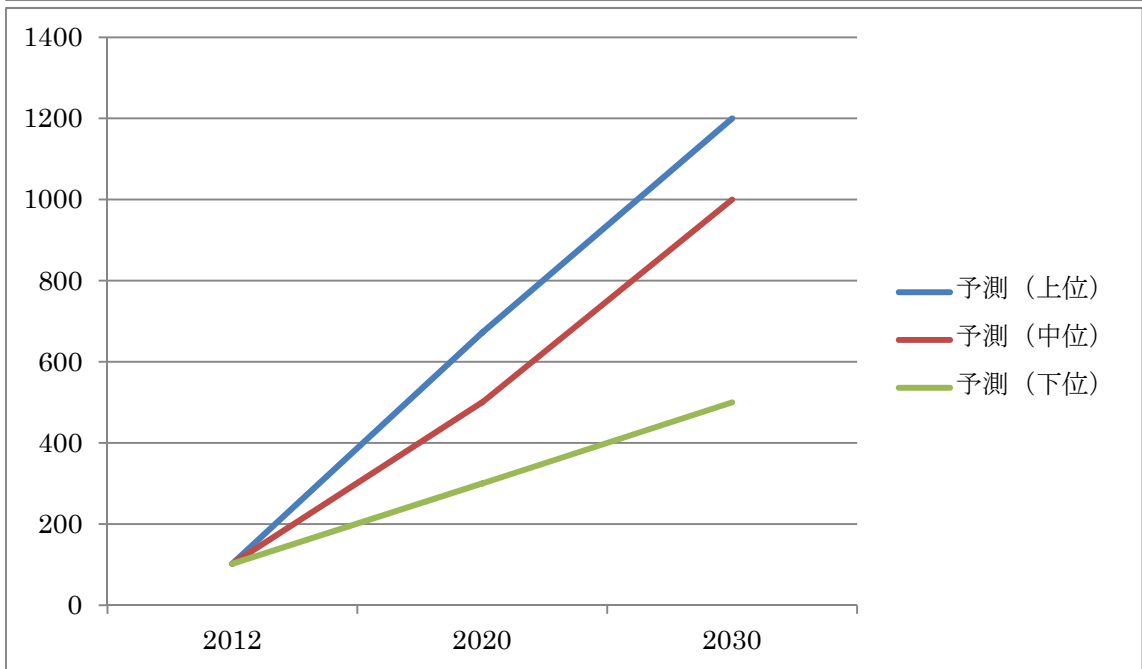
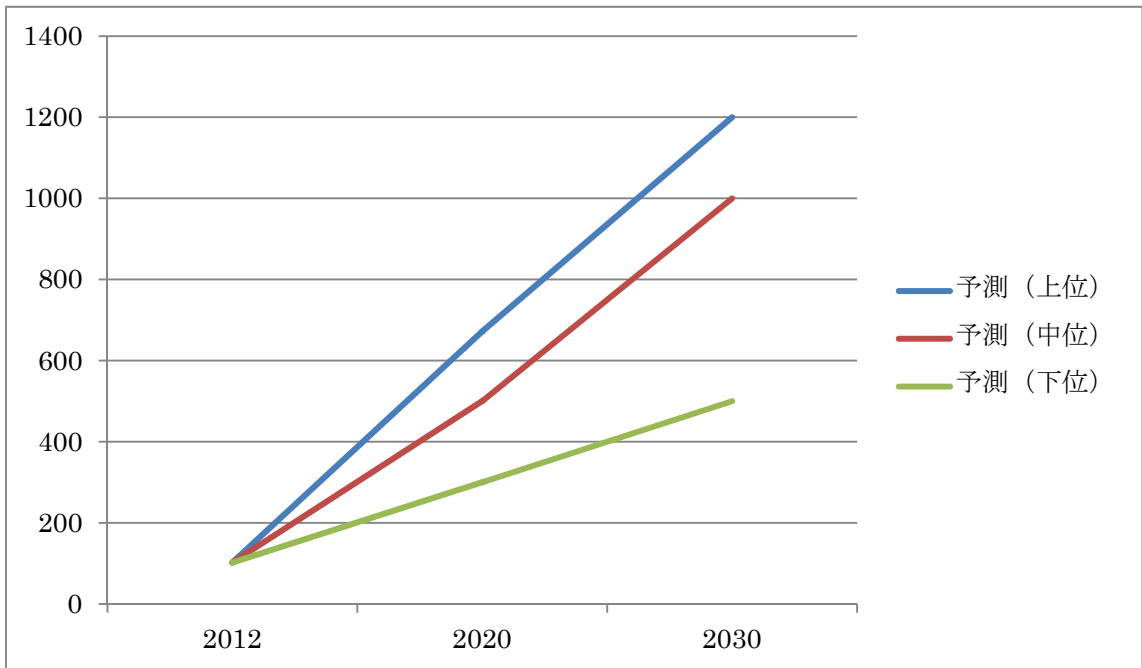
#### 12.3.1 Three Scenarios of Long Term Future Forecast

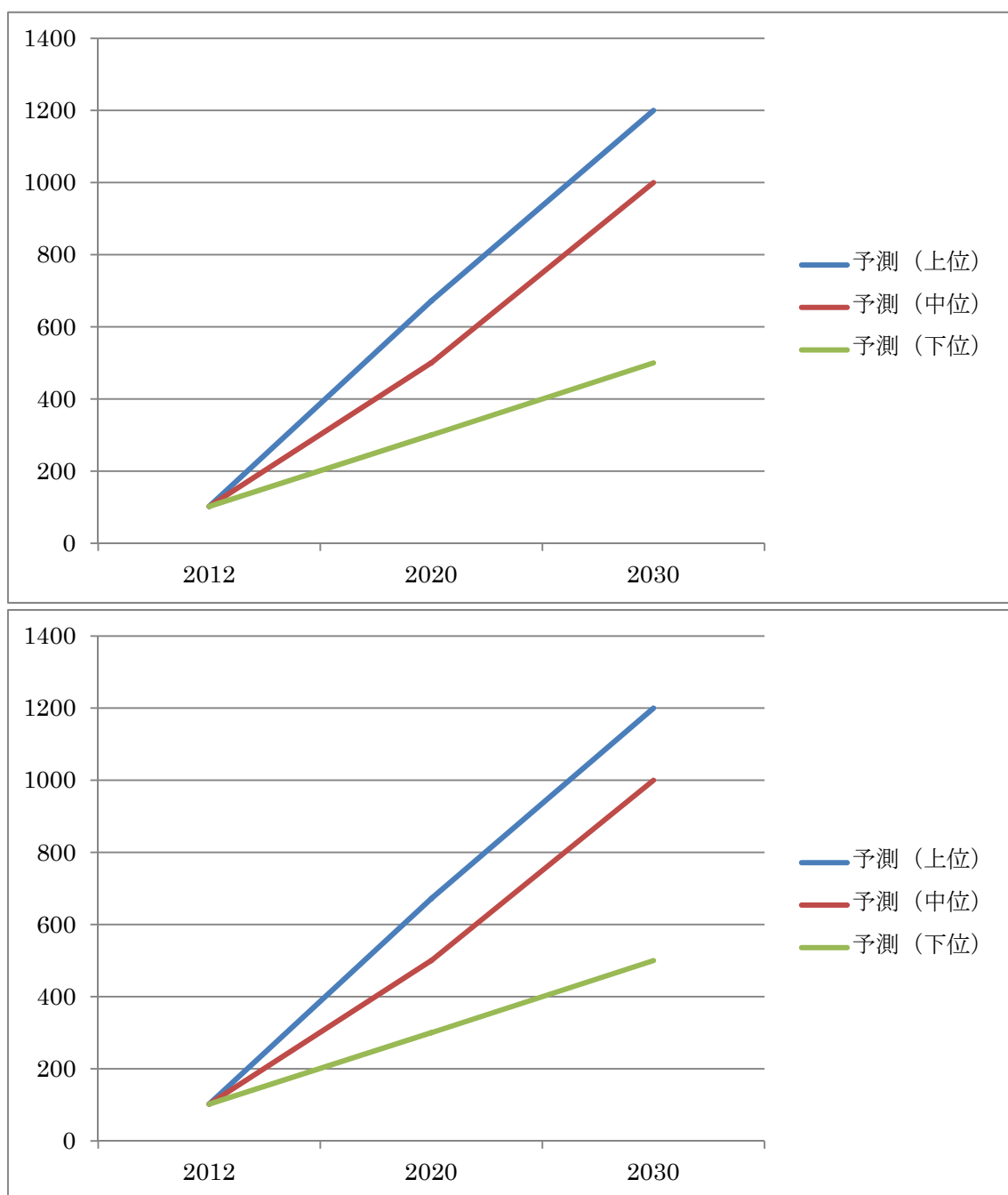
Based on the long term forecast presented in Chapter 7, a forecast with three scenarios is presented below for the period of 2012-2030.

**Table26 : Forecast of SEZ Area and Population in Bavet (2012—2030)**

| 年                 |                         | 2012   | 2015   | 2020    | 2030    |
|-------------------|-------------------------|--------|--------|---------|---------|
| Robust scenario   | Operation lot area (ha) | 102    | 256    | 672     | 1,200   |
|                   | No. of Workers          | 18,382 | 48,384 | 134,000 | 228,000 |
|                   | Population              | 37,000 | 58,060 | 174,000 | 342,000 |
| Moderate scenario | Operation lot area (ha) | 102    | 220    | 500     | 1,000   |
|                   | No. of Workers          | 18,382 | 47,580 | 94,500  | 189,000 |
|                   | Population              | 37,000 | 57,096 | 123,000 | 284,000 |
| Weak scenario     | Operation lot area (ha) | 102    | 170    | 300     | 500     |
|                   | No. of Workers          | 18,382 | 32,130 | 57,000  | 100,000 |
|                   | Population              | 37,000 | 38,556 | 74,000  | 150,000 |

**Source: Study team**





**Figure 9 : Long term Forecast of SEZ Area in Bavet (2012—2030) (Unit:ha )**

**Source: Study team**

The assumptions of the forecast is described in the main part of this report.

### **13. EXPECTED PROJECTS BY PUBLIC AND PRIVATE**

**Table27 : Short Term Projects for 2013-2015 (Excerpts)**

(\*\*\*: Short term, \*\*:Medium term, \*Long term)

| Problems   | Division of Roles  | Solutions  |
|--|--|--|
| 1. Labor Shortage                                  | Private organizations & Aid Agencies<br>Cambodia government & Aid Agencies<br>Cambodia government, private organizations, SEZ developers<br><br>CDC & Cambodia Gov.<br><br>Private organizations & CDC | ① Improvement of Village road : ***<br><br>② Widening of NR : ***<br><br>③ Construction of dormitories and housing for workers : ***<br><br>④ Arrangement for 15-17 year old workers to work : ***<br><br>⑤ Construction of residences for laborers and accommodation of those living beyond a reasonable commuting distance : ***   |
| 2. Power Shortage                                  | Private organizations<br>SEZ Developers<br>Private organizations<br>Private organizations<br>Cambodia Gov.& EDC<br><br>EDC & Aid agencies<br><br>EDC & Aid agencies                                    | ① Each company's installation of generator :***<br>② SEZ's installation of generator: ***<br>③ Group purchase ***<br>④ Sharing the use of the same generator : ***<br>⑤ Electric Transmission from Vietnam : ***<br>⑥ EDC's construction of electric lines and transforming station : Scheduled for 2015-end : **<br>⑦ EDC's continuous increase in their electric-generating capacity |
| 3. Narrow NR1 and bad village roads (rainy season) | Cambodia Gov. &ADB<br><br>Private organizations & Aid agencies<br>Cambodia Gov. & Aid agencies   | ① Early implementation of the ADB-proposed broadening of 8Km rail track, and its extension to 30km zones : ***<br>② Pavement of rural roads (by in-kind contribution of cement to villagers : ***<br>③ broadening/improvement of provincial roads : ***  |

Source: Study team

#### 14. PRIORITY PROJECTS AND SCHEDULE

**Table28 : Short Term Projects (Excerpts)**

| Project  | Relevant Aid Agencies                       | Problems and Issues Outlines   |
|--|---|--|
| ① Dispatch of experts  | JICA  | Experts are to do information gathering and problem-solving together with CDC, OSS SEZ developer.  |
| ② Prompt improvement of village roads through Grass-roots fund | JICA, NGO & Private organizations           | Concrete paving of village roads is one solution to the labor shortage issue. According to other countries' experiences, village road improvement has been advanced by providing equipment, materials and coordinators based on villagers' participation. It is recommendable to implement it as a pilot project urgently.                               |
| ③ Survey for counter measures for labor shortage               | JICA  | Labor shortage is serious and there will be shortage of tens of thousands of workers by 2015 and hundreds of thousands of workers will be needed by 2030. City development needs to be implemented for the development of workers housing in public-private partnership. The road map and action plan should be formulated for immediate implementation. |
| ④ Housing development by private organizations                 | Private organizations and JICA (PPP Office) | For urgent worker housing projects, two private plans have come up in two locations in Bavet. These projects may be able to be carried out by JVs of Japanese and local companies. It is recommendable to conduct a study such as "PPP FS" and implement immediately.  |

**Source: Study team**

**Table29 : Medium-Long Term Projects (Part of the full list)**

| Project                                | Relevant Aid Agencies             | Outline  |
|--|-----------------------------------|--|
| ① Capacity Building for CDC/CSEZA, OSS | Aid Agencies (JICA, ADB, IFC etc) | CDC/CSEZA is lack of human resources and it is difficult to properly manage, supervise and plan on SEZs. For example, LAO SEZ Authority had a TA of ADB and now has about 30 professional staff, supervising 4 SEZs in Laos.   |
| ② Amendment of SEZ sub-decree          | Aid Agencies (JICA, ADB, IFC etc) | The current SEZ sub-decree, which was approved in Dec. 2005, was considered to upgrade into a law but is still in the form of a sub-decree. So far 23 SEZs have been approved by CDC but the criteria of approval is unclear. Only 8 SEZs are currently operational. A draft SEZ law was prepared in 2008 with the assistance of IFC but is not yet finalized. |
| ③ Bavet City Master Plan               | Aid Agencies (ADB in particular)  | Bavet City Master Plan was formulated in 2009 with assistance of ADB. Since then, new SEZs (1,500ha in total) have been planned and constructed towards west. The master plan should be revised based on the present situation.  |

**Source: Study team**

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## **ABBREVIATION**

|            |   |
|------------|---|
| ADB        | Asia Development Bank                                       |
| AFTA       | ASEAN Free Trade Agreement                                  |
| ASEAN      | Association of South East Asian Nations                     |
| BSID       | Bureau of Supporting Industries Development                 |
| CDC        | Cambodia Development Council                                |
| CIB        | Cambodia Investment Board                                   |
| CJCC       | Cambodia-Japan Cooperation Center                           |
| CRC        | Conditional Registered Certificate                          |
| CSEZB      | Cambodia Special Economic Zone Board                        |
| EU         | European Union  |
| FOB        | Free on Board   |
| FRC        | Final Registered Certificate                                |
| GDP        | Gross Domestic Production                                   |
| JETRO      | Japan External Trade Organization                           |
| JICA       | Japan International Cooperation Agency                      |
| MAFF       | Ministry of Agriculture Forestry and Fisheries              |
| MIME       | Ministry of Mine and Energy                                 |
| MOC        | Ministry of Commerce  |
| OJT        | On the Job Training   |
| PMIS       | Sub-Committee on Investment of the Provinces-Municipalities |
| PPSEZ      | Phnom Penh Special Economic Zone                            |
| SME        | Small and Medium Enterprise                                 |
| QIP        | Qualified Investment Project                                |
| RDB        | Rural Development Bank                                      |
| RMA        | Rice Millers Association                                    |
| VAT        | Value Added Tax   |
| World Bank | —   |
| WTO        | World Trade Organization                                    |

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## Appendix



## 1. BACKGROUND

Since the end of the civil war, Cambodia has promoted reforms that would lead the nation towards democracy and a market economy, achieving a steady economic growth over the past 10 years. Agriculture, tourism, and a robust garment industry have been driving growth, but after the collapse of Lehman Brothers in 2008, the Cambodian economy has been damaged by consumer demand downturn in Europe and the U.S., a decrease in tourist arrivals and garment exports, and the stagnation of foreign direct investment (FDI).

In order to move away from an industrial structure dependent on the demand of specific foreign markets, Cambodia has been aiming at the diversification of its industrial structure while activating FDI, easing lack of domestic funds, increasing domestic productivity, promoting the transfer of technology, and creating employment.

In addition to the internal conditions mentioned above, external conditions have become factors in accelerating FDI in recent years. With the increase in labor costs in China, Thailand, and Vietnam, labor shortages, the 2011 floods in Thailand, Cambodia has enhanced its presence as a candidate country for secondary production of labor-intensive manufacturing industry.

On the other hand, an increasing number of Japanese SMEs consider overseas transfer of production base and business expansion to capture the demand of emerging countries, particularly in Asia, due to such recent conditions as the yen appreciation and high production costs. In particular, the ASEAN countries as host countries are becoming a leading target as "China plus one".

From the standpoint of both the Japanese and Cambodian sides, Japanese companies are expected to invest in Cambodia. However there are also challenges. Challenges for Cambodia are the fact that the strategy of the Cambodian government to attract investment is not always clear. Cambodia has not been able to boost the expansion of FDI by Japanese companies because industrial policy (manufacturing in particular) which takes into consideration infrastructure, human resources, and supply chain, and the direction of attracting FDI are unclear while there has been delays in development of hard and soft infrastructure based on planning urban and regional development and industrial location.

In addition, as the challenges of the Japanese side, small businesses do not have enough knowledge, finance, human resources and know-how of international business, facing many problems in invest-

ing overseas, in Cambodia in particular. From this point of view, it should be necessary to assist small and medium-sized businesses that seek overseas investments in order to do business with foreign countries. This need has been pointed out in the "Outline of support for overseas SMEs," compiled by the Small Business Administration in June 2011.

The use of the "rental factory" has been popular among Japanese companies looking to expand into the ASEAN countries, in order to reduce the initial cost in terms of risk mitigation. There is also information suggesting a supply shortage of rental factories in Indonesia, Vietnam etc. In Cambodia, the needs of factories (especially rental factories) and Special Economic Zones (SEZ) are expected to increase, in order to expand business opportunities for small and medium-sized enterprises.

Furthermore, it is important to keep in mind the development infrastructure for power to promote the production activities, water, waste disposal, drainage and the development of a city surrounding the SEZ where companies are located, as well as the rental factories and SEZs. In particular, in order to ensure a stable labor force and the development of comfortable living environment for expatriates from Japan, who stay a long period of time, it is necessary to consider the development of commercial facilities, transportation, education, medical care in the city, while keeping in mind a comprehensive development plan based on SEZ facility requirements.

Of the eight SEZs currently running in Cambodia, three SEZs are popular among Japanese companies, which are located in Bavet in Svay Rieng, near the Vietnam border, a strong willingness of Japanese companies has been observed to expand further there, leading to the idea that the area could be an area of industrial clusters. However, all necessary infrastructure systems - transportation, electric power supply, water, solid waste disposal, drainage, and sewerage networks, which are just as much the basis of production activity as the housing inventory in the entire area surrounding the production facilities, commercial facilities, transportation, and district facilities, education and health institutions, culture and entertainment activities, have not been fully developed. Also, the government of Cambodia shows a strong interest in the study of urban development plans around the production base, and consider measures to promote future industrial diversification and development clusters, that will lead towards the continuous business expansion of Japanese companies active in Svay Rieng Province.

## **2. ANALYSIS OF THE CURRENT STATE OF CAMBODIA'S INDUSTRIES AND MANUFACTURING BUSINESSES AND THEIR PROJECTIONS**

### **2.1 The Current State of Cambodia's Industries**

The economic census disclosed in 2011 describes the current state of Cambodia's industries, albeit in simple terms. The main points can be summarized as follows.

In terms of the number of companies, retailers, wholesalers, and motorcycle repair shops account for approximately 57%, manufacturing for approximately 15%, and hotels and restaurants for approximately 14%. Rice milling and sewing are the major players in manufacturing. In terms of the number of companies newly established, retailers, wholesalers, and motorcycle repair shops account for approximately 58%, hotels and restaurants for approximately 17%, and manufacturing for approximately 12%. These are followed by information and communications, real estate and development, hotels and restaurants, and entertainment, which are also showing growth.

In terms of the number of persons employed, retailers, wholesalers, and motorcycle repair shops account for approximately 33%, manufacturing for approximately 32%, and hotels and restaurants for approximately 12%. In manufacturing, rice milling, sewing, shoe-making, sugar refining, and structural metal production account for a large portion.

In terms of location, approximately 20% of the companies and approximately 33% of all persons employed are located in the capital of Phnom Penh. However, in terms of the number of companies newly established, the northern region and the eastern border region show a striking growth.

In terms of annual sales, manufacturing accounts for approximately 48%, out of which sewing, shoe-making, and plastic products (daily necessities) account for a large portion.

In terms of annual sales by region, Phnom Penh accounts for approximately 67% and Siem Reap for approximately 23%. Combined, these two locations account for approximately 90% of the total.

The above information from the census shows that Cambodia's industries are characterized by labor-intensive ones that involve simple assembly, comprising sewing, shoe-making, motorcycle repair, and plastic products (daily necessities), and reveals that these businesses operate mostly in Phnom Penh and Siem Reap. The trajectory of the country's industrial development can be delineated with future censuses conducted on a regular basis. However, to promote the improvement of existing industries and the development of new ones, subclassification using such [tools] as HS

codes will be even more helpful. For example, we cannot analyze the trends in the development of parts supply industries using the current categorization that combines retailers, wholesalers, and motorcycle repairs. This is because motorcycle repair businesses possess parts inventories. In the future, it is possible that supporting industries would develop through in-house manufacturing of parts.

To supplement the 2011 economic census, industrial products among exports show that the mainstay sewn products account for approximately 60%, while shoes account for approximately 20%. Aside from industrial products, the exports [include] rice, rubber, and marine products.

As you can see, Cambodia's industries mainly comprise sewing, shoe-making, and motorcycle repair, businesses that also identify those of Myanmar and Laos as the last entrants of ASEAN. To promote the improvement of existing industries and the development of new ones, technological transfer by foreign capital is vital. This is true just by looking at the case of sewing businesses. In 2011, the average unit price for exports to the U.S. was \$2.40/m<sup>2</sup> in Cambodia, while it was \$10.50/m<sup>2</sup> in Morocco, more than four times greater. This is because while the former receives orders from the U.S. for mainstay export products, the latter receives highly sophisticated orders that are based on dress patterns for the Paris Collection. Moreover, in terms of shoes, in 2011, the average unit price for exports to the U.S. was \$11.70/pair in Cambodia, while it was \$78.80/pair in France, which is over six times greater. To improve these existing industries, foreign companies that make orders to Cambodian companies must realize that improvements are being made to the quality and quantity of the products.

## **2-2. The Characteristics and Projections of Cambodia's Manufacturing Businesses, Which Rely Largely on Foreign Capital**

The following summarizes Cambodia's major manufacturing businesses (sewing, electrical and electronics, and machinery) and their projections.

### **(1) Sewing Industry**

#### **① Characteristics**

- The trade surplus posted by sewing businesses provides the resources to import other consumables and industrial goods. In this regard, sewing is Cambodia's biggest industry that possesses export competitiveness.
- In Cambodia, there are no nationally run sewing companies. Moreover, local sewing companies are weak, and the approval of wholly-owned foreign companies to enter the country's market

since 1994 has led to the dominance of foreign capital in the production and export of sewn products.

- The products are first characterized by the fact that they are largely knit. Knitting requires small investment, and transportation costs are cheap as the raw materials are not bulky. Moreover, knitting does not require a high level of skills as the laborers can catch up quickly to attain improvements in productivity. Usually, knit products (e.g., underwear, pajamas, nightwear, knit shirts, children's socks, and babies' clothing) post approximately 10% higher productivity than fabrics (e.g., work uniforms, business shirts, and suits). Similar to the situation in Cambodia is Bangladesh, which boasts a large production scale. As in Cambodia, sewn products account for a large portion of exports in Bangladesh. They are also similar in that they are mainstay low-priced products. However, because Bangladesh has built its expertise in sewing businesses for over a decade longer than Cambodia, the country is making a transition from knit products to fabrics, which offer a high added value. As a result, the average unit price for exports to the U.S. is KHR3.00/m<sup>2</sup>, which is slightly higher than that of Cambodia.
- Currently, approximately 80% and 15% of Cambodia's sewn products are exported to the U.S. and the E.U., respectively. In recent years, Japanese companies have been entering the market for fabrics in response to the rising labor costs in the neighboring countries.
- The second characteristic of Cambodian products is that they first focus on the production of undergarments, which are easy to produce and for which the quality standards are lax among outer garments (e.g., uniforms, training wear, jackets, short jackets, pants, and skirts), intermediate garments (e.g., pajamas, T-shirts, dress shirts, and sweaters), and undergarments (underwear). They are followed in the order of intermediate garments and outer garments.
- Exports comply with the ILO standards, making it possible to receive orders for large lots covering a small variety from the U.S. Exports to the E.U. are small lots covering a large variety. Thus, they account for a small portion of total exports. In particular, exports to Japan can be expanded, despite the stringent quality standards, in addition to orders for small lots covering a large variety. This is because Japanese companies are accelerating their entry from such places as China and Vietnam to Cambodia, where the labor cost is cheaper. The companies are also making efforts to improve workers' sewing skills. In Cambodia, production for Japan has already begun for products that do not require a high level of skills, that maintain a steady level of demand, and that do not vary in their patterns, such as overalls, uniforms, semi-business shirts, business shirts, casual shirts, polo shirts, T-shirts, pants, and easy-order men's clothing. Only a few short jackets and thick jeans are produced. This sets China and Vietnam apart from Cambodia in terms of sewing technology.

## ② Projections



- The industries in China, Vietnam, and Thailand are making a shift from sewing to electrical and electronic products, as well as bicycles and automobiles. Among these, sewing industries in these countries are showing strong signs that indicate a rapid rise in the rate of workers switching jobs, difficulties in securing laborers in sewing, and rising wages, among others.
- In particular, a numerical analysis of the impact of rising wages in China on the export of Cambodia's sewn products to the U.S.<sup>1</sup> shows that Cambodia would receive a positive impact. This is because as labor costs rise in China, more companies will shift to Cambodia and away from other countries.
- In Vietnam, the minimum wage is increasing among foreign companies. The increase in the minimum wage leads to a rise in overall wages to maintain a wage balance. It is expected to continue increasing. This wage increase triggers foreign labor-intensive manufacturing businesses to move from Vietnam to Cambodia, where wages are lower.
- In the past, nightwear and pajamas made with cotton and synthetic fibers were Cambodia's strongest products in terms of international competitiveness. Gradually, these undergarments are being replaced by intermediate and outer garments, such as cotton skirts, men's shirts made with fabric and men's clothing, which emphasize the silhouette of the body. These trends are already apparent with the entry of Nisshin Clothing, known for overalls (entered Cambodia in 2011), Towa, known for men's clothing (2011), ROCKS, known for women's and men's casuals, and Ronchesuta (2012), known for women's clothing.

However, while the Bavet region offers the advantage of its location with access to Ho Chi Minh's port(s), it has encountered the bottlenecks of [poor] infrastructure and labor. As such, unless these bottlenecks are resolved, it is impossible to manufacture products that maintain quality. It is therefore not easy to operate large sewing factories.

## **(2) Electrical and Electronics Industry**

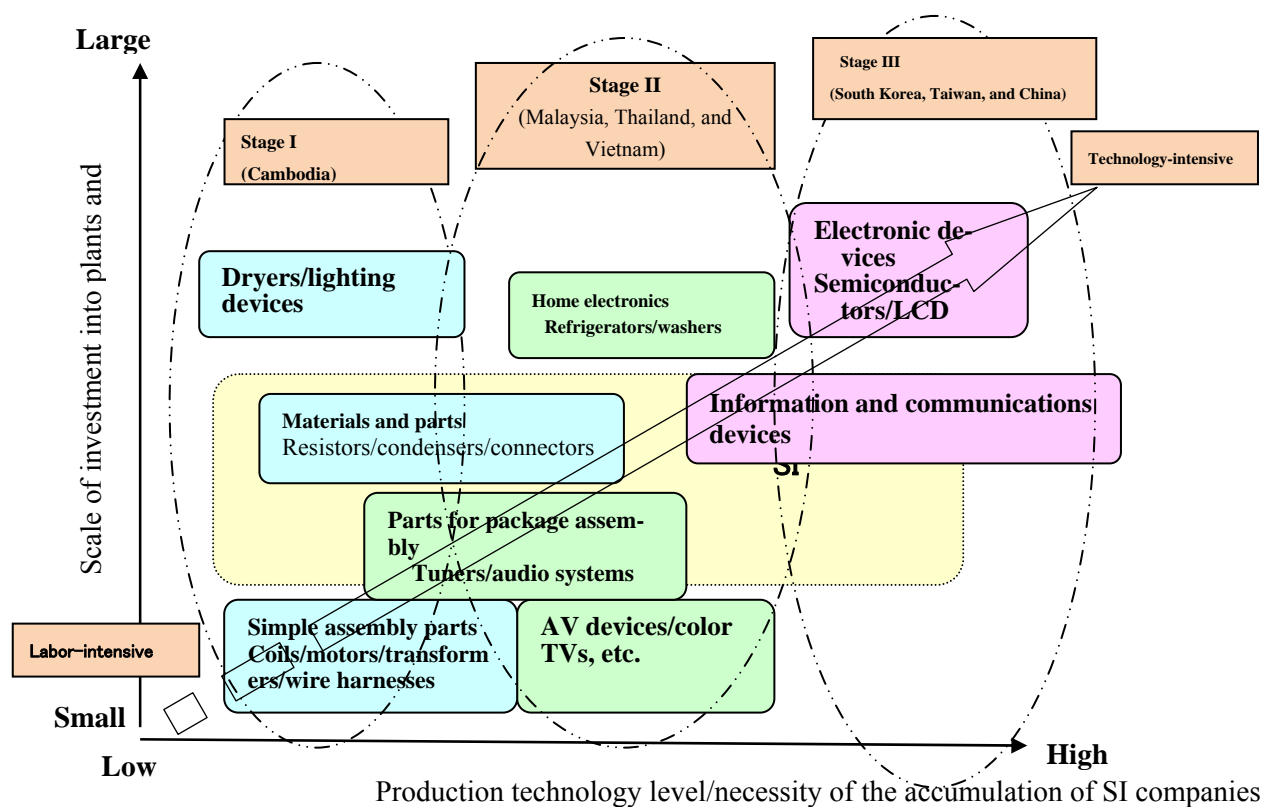
### **① Characteristics**

- Cambodia's electrical and electronics industry demonstrates potential for future growth, though it has only embarked on the beginning phase of the development backed by the entry of foreign companies. Some Japanese companies that are running businesses in neighboring countries such as Thailand and Malaysia have shown a strong interest in production in Cambodia by leveraging the country's cheap labor.

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<sup>1</sup> In  $\text{Camexpgrowth} = 8.66 + 50.40 \text{ Chinawage}$ ,  $\text{Camexpgrowth}$  refers to the growth in Cambodia's sewn products exported to the U.S., while  $\text{Chinawage}$  refers to the rise in wages among Chinese manufacturing businesses.

- The product fields, technical standards, and investment scales of the electrical and electronics industry are summarized in the following diagram. Generally speaking, the more you progress toward the upper-right corner [of the diagram], the more the products require [investment] in equipment. The products are produced in semi-developed countries. Specifically speaking, the production covers the pre-processing of semiconductors and LCD products. On the other hand, the more you progress toward the lower-right corner [of the diagram], the more labor-intensive the production. This is the zone in which production expands in developing countries, where cheap labor is available. Specifically speaking, in Stage I such as Cambodia, wire harnesses, coils, transformers, motors, and other products that only require simple assembly including coiling are thought to be promising, the fields into which [companies] are making an entry. In terms of the technologies introduced by foreign companies, the developments in Malaysia, Thailand, and Vietnam fall into Stage II, while South Korea, Taiwan, and China fall into Stage III.



**Figure 2-1: Stages of Entry by Electrical and Electronics Companies by Technological and Investment Levels**

Source: Study team

- Cambodia's strengths lie in its location, as the parts produced in Cambodia can be supplied to any destination hub of its neighboring countries. Meeting the delivery dates is important in remaining competitive in the electrical and electronics industry. Because Cambodia is adjacent to Malaysia, which boasts a highly developed electrical and electronics industry, it has the potential to supply products in a shorter time frame than China once the logistics system is in place in Cambodia.
- Catalyzed by the entry of Minebea (small motors, entered in 2010), the Japanese electrical and electronics companies that branched out into Cambodia include AsleElectronics (wire harnesses for home electronics, 2011), MARUNIX (wire harnesses for home electronics, 2011), DAIWA-ONKYO (mobile speakers, 2011), IZUMI DENSHI (aluminum frames for flat televisions, 2011), and Tokyo Parts (coils and transformers, 2012). These industries have entered Stage I of the above diagram.

## ② Projections

In terms of the potential for Japanese companies to enter Cambodia, the following three patterns can be projected based on an analysis of the basic locational requirements for the electrical and electronics industry, policies on the division of production within ASEAN among Japanese companies in Thailand, and the current trends in the entry to Vietnam among electrical and electronics companies, etc.

(i) Assembly process of wire harnesses: Wire harnesses are electrical wire parts that connect electrical components in automobiles and circuits and parts within electrical and electronic devices. As such, they require small production runs of a large variety of items. The process is extremely labor intensive, as it is difficult to automate the process of bundling various types (e.g., length, thickness) of cables. A shortage of production capabilities for harnesses is projected to occur in the ASEAN region. For this reason, Japanese companies, while focusing on Thailand and Vietnam, are looking to expand their production bases to Cambodia and the neighboring countries. In addition to Japanese companies, Thai companies are also looking to enter the industrial complexes within the borders of Cambodia.

(ii) Assembly process of coils and transformers: Electrical and electronic products use many parts produced in various coiling processes, such as coils, transformers, filters, converters, and vibrating motors. Their demand is expanding further. The coiling process could possibly be automated. However, if low-wage workers with dexterity can be secured, it would be most advantageous cost-wise to conduct an assembly that places coiling machines side by side with operators. As such, among Japa-

nese companies in ASEAN and China, there are those that are entering Cambodia based on the assumption that there is a stable supply of electricity.

(iii) Assembly of small electrical products: As for relatively small electrical products such as hair-dryers and other personal products and lighting equipment, Japanese and local companies in Thailand are looking to make products in countries with the cheapest possible labor. As this requires processing of metal and plastic parts, investment in manufacturing equipment such as presses and mold injectors is necessary. Moreover, a stable and reliable supply of electricity is necessary for a stable operation. Therefore, the entry of foreign companies to this field is contingent upon the preparation of industrial complexes with export processing capabilities that come with electrical facilities, etc., and container transportation capabilities. Over the long term, it is also contingent upon whether SI companies can be opened in the surrounding areas. As such, eyes are set on Cambodia as potential site for investment over the medium term once the infrastructure is in place in the country.

However, while the Bavet region offers the advantage of its location with access to Ho Chi Minh City's port(s), it has encountered the bottlenecks of [poor] infrastructure and labor. As such, unless these bottlenecks are resolved, it is impossible to manufacture products that maintain quality. It is therefore not easy to operate electrical and electronics factories.

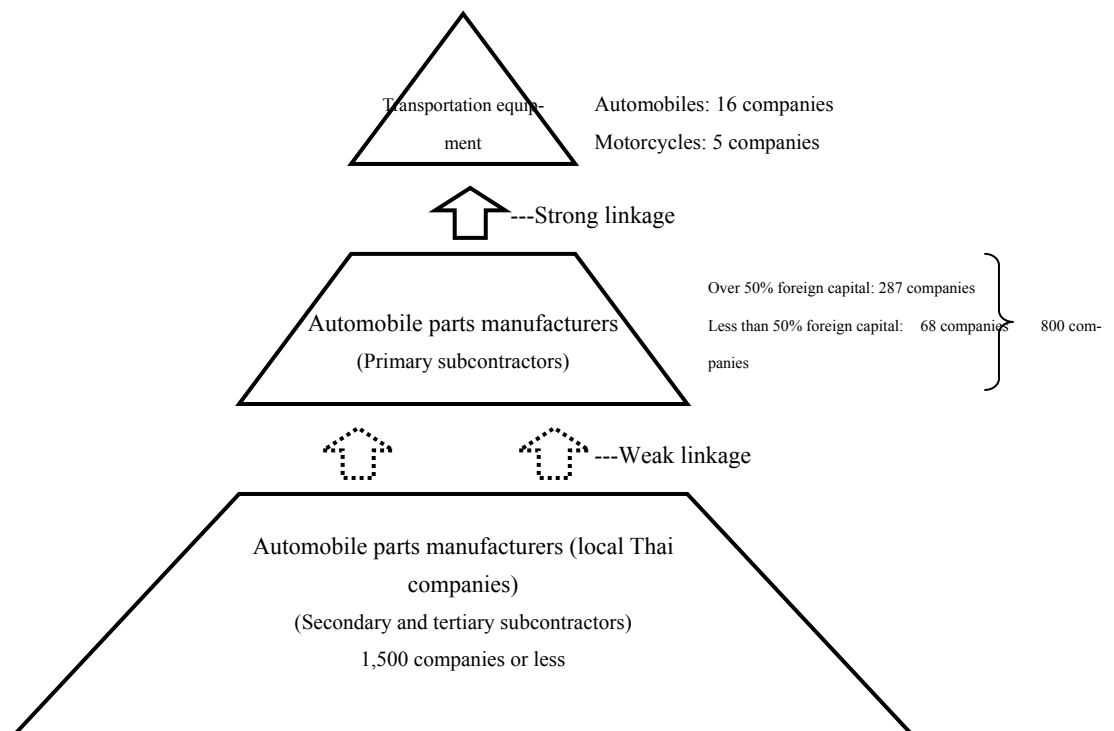
### **(3) Machinery**

#### **① Characteristics**

In terms of machinery, Cambodia has relied on imports. In turn, galvanized steel plates and motorcycles have been substituted by Japanese companies. According to Thailand Automotive Institute, as shown in the diagram below, sixteen automobile manufacturers and five motorcycle manufacturers currently have production bases in Thailand. All of these are foreign companies. Beneath these assemblers are 800 parts manufacturers as primary subcontractors (Tier 1). Moreover, there are 1,500 or fewer local Thai companies as secondary and tertiary subcontractors (Tier 2 and 3)<sup>2</sup>.

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<sup>2</sup> Revision of JETRO, "East Asia Economic Integration and the Roles of JETRO," June 2006 (original source: Thai Automotive Institute) to reflect the conditions in 2010.



**Figure 2-2: Transportation Equipment Industry (Automobiles and Bicycles) in Thailand**

**Source:** Created by Study team based on JETRO source(s) (original source: Thai Automotive Institute)

Japanese companies in Thailand, which focus on transportation equipment, designated Thailand as the center of production. At the same time, they are pushing ahead to build a horizontal division of production wherein they seek to cut production costs by allowing its factories and parts manufacturers in ASEAN to complement each other. Therefore, to cut costs, etc. against the backdrop of the rise in wages in Thailand and the appreciation of its currency, and so as to reinforce competitiveness against China, the companies are considering transferring their more labor-intensive processes to Cambodia.

In response to the development of AFTA, Thailand's automobile industry is implementing a phased tariff reduction within ASEAN. By 2014, tariff on all products will be eliminated. Thus, trade within the region is expected to rise sharply.

Against this backdrop, labor-intensive parts for automobile manufacturers in Thailand, such as automobile wire harnesses (Sumitomo Wiring Systems in 2011 and G.S. Eletech in 2012), automobile emblems (Marusan Plastic in 2012), and automobile air conditioner parts (Denso in 2013) [are now being manufactured] in Cambodia.

## **② Projections**

The fields that show promise in machinery include surface treatments in post-processing (plating, painting, and high-frequency), and assembly and wiring (print circuit processing, parts assembly, and mounting), all in the category of precision machinery. Moreover, in automobile parts, the promising fields include chassis and automobile body parts (e.g., fuel tanks, exhaust pipes, mufflers, window frames, seats, and air bags) and electrical parts and others (e.g., switches, meters, wipers, alarms, and heaters). However, [the success] all depends on securing electricity, waterworks and other industrial infrastructure, as well as labor. Therefore, in today's Bavet region, operation of machinery factories is not necessarily easy unless the bottlenecks are resolved.

### **2-3. Characteristics of Companies Entering Cambodia (Investing Country, Business Type, and Location)**

Although comprehensive statistics have not been disclosed, according to CSEZB sources (from 2006 to the end of 2012), the characteristics of the tenant companies in each SEZ can be summarized as follows.

- Increased rapidly from 2008. In 2012, there were 43 companies, reaching \$320 million.
- Companies include those from Japan, Thailand, South Korea, Malaysia, and Singapore.
- The business include not just the traditional industries of shoes and pouches, but also electrical and electronic parts, motorcycle parts, and labor-intensive electrical and electronic parts such as automobiles and plastics. They are diverse, including labor-intensive machine parts. In the Bavet region under review, there is a trend among foreign companies [specializing in] bolt nuts, plastics, coils and transformers, electrical locks, and clock parts.
- As for the SEZs, Phnom Penh, fully equipped with infrastructure, boasts the largest scale in terms of both the number of tenant companies and the investment amount. This is followed by Manhattan SEZ in the Bavet region by the Vietnam border (eastern region), Tai Seng SEZ, and Dragon King SEZ. These feature good access to the port(s) in southern Vietnam. Combined, these three SEZs rival Phnom Penh SEZ in terms of the number of tenant companies. The total

of the three SEZs in the Sihanouk region in Southern Cambodia is commensurate with approximately half of the number of tenant companies at Phnom Penh SEZ. The two around the border of Thailand (western region), or Poipet SEZ and Koh Kong SEZ, do not hold enough number of tenant companies from Thailand at this time.

**Table 2-1: Tenant Companies at SEZs (From 2006 to End of 2012)**

|                        | Number of companies and investment amount (from opening to 2012)   | Investing country  | Business types  |
|------------------------|--|--|---|
| Phnom Penh SEZ         | Total 55: \$260 million (8 in 2008 at \$30 million, 4 in 2009 at \$66 million, 14 in 2010 at \$44 million, 10 in 2011 at \$62 million, and 19 in 2012 at \$63 million)                         | Japan (29), Malaysia (6), Thailand and China (5 each), Singapore (4), Cambodia (2), South Korea and Vietnam (1 each), others (2) | Sewing (11), electrical and electronic parts (7), plastics (5), transportation equipment parts, shoes, and foods and beverages (4 each), farming (1), and others (19) |
| Manhattan SEZ          | Total 23: \$180 million (1 in 2006 at \$11 million, 3 in 2007 at \$11 million, 2 in 2009 at \$3 million, 5 in 2010 at \$20 million, 8 in 2011 at \$38 million, and 4 in 2012 at \$100 million) | Taiwan (6), China (3), Vietnam (2), Japan, U.S., and Russia (1 each), and unknown (9)  | Sewing (6), packing bags (6), shoes and automobiles (2 each), bottle nuts, plastics, and mattresses (1 each), and others (4)  |
| Tai Seng SEZ           | Total 22: \$90 million (2 in 2006 at \$4 million, 1 in 2009 at \$7 million, 7 in 2011 at \$23 million, 12 in 2012 at \$56 million)   | Japan (11), Taiwan (6), Singapore and China (1 each), and unknown (3)  | Sewing (9), automobiles, and shoes and pouches (3 each), coils and transformers (1), others (3), and unknown (3)  |
| Sihanoukville SEZ      | Total 27: \$71 million (4 in 2008 at \$9 million, 1 in 2009 at \$1 million, 7 in 2010 at \$14 million, 8 in 2011 at \$35 million, and 7 in 2012 at \$12 million)                               | China (21), Japan (2), and others (4)  | Sewing (5), shoes and pouches (4), automobiles (2), plastics, harnesses, aluminum TV frames, and steel processing (1 each), and others (12)                           |
| Sihanoukville Port SEZ | 1 in 2012 at \$71 million  | Malaysia   | Carton boxes  |
| Sihanoukville SEZ 1    | None   | None   | None  |
| Koh Kong SEZ           | Total 3: \$69 million (1 in 2009 at \$50 million and 2 in 2011 at \$19 million)  | Japan, Thailand, and South Korea (1 each)  | Automobile parts, sewing, and automobile parts (1 each)   |
| Poipet SEZ             | 1 in 2010 at \$0.8 million   | Thailand   | Jewelry packing   |
| Kampong Cham SEZ       | 1 in 2009 at \$26 million  | Japan  | Vegetable processing  |
| Goldfame Pak Shun      | Total 3: \$26 million (1 in 2007 at \$1 million and 2 in 2010 at \$25 million)   | Hong Kong (3)  | Sewing (2), printing and carton boxes (1)   |
| Annual changes         | 3 in 2006 at \$15 million<br>1 in 2007 at \$1 million<br>15 in 2008 at \$50 million  |  |   |

|  | Number of companies and investment amount (from opening to 2012)   | Investing country | Business types |
|--|--|-------------------|----------------|
|  | 10 in 2009 at \$153 million<br>29 in 2010 at \$138 million<br>2011 at \$177 million<br>43 in 2012 at \$320 million |                   |                |

Source: CSZEB

## 2-4. Characteristics of Japanese Companies

According to CIB's source (from 1994 to end of January 2013), there were over 80 Japanese companies that have entered Cambodia, excluding those that have withdrawn. The details are as follows.

**Table 2-2: Japanese Investments (Results from 1994 to 2009)**

| No. | Approved | Company name                         | Business types  | Investment amount (\$) | Notes  |
|-----|----------|--------------------------------------|---|------------------------|--|
| 1   | 1995.07  | Toyota (Cambodia) (formerly T.T.H.K) | Sale of Toyota automobiles and repair factor(ies)             | 562,500                |  |
| 2   | 1996.03  | Khau Chuly MKK                       | Concrete and asphalt  | 1,261,750              | Sold to MAEDA  |
| 3   | 1996.07  | Asuka Cambodia Development           | Five-star hotel(s)  | 8,550,000              | Withdrawn (currently the U.S. embassy)   |
| 4   | 1996.07  | Musashi Investment                   | Processing of marine products                                 | 329,500                | Withdrawn  |
| 5   | 1996.09  | Eastern Steel                        | Galvanized steel sheets                                       | 877,700                | Financed by Sumitomo Corporation. In March 2013, additional investment of 1,800,000. |
| 6   | 1997.12  | S.O.M Corporation                    | Manufacture of ready-mixed concrete                           | 294,000                | Withdrawn  |
| 7   | 1998.05  | ASEAN Joshin                         | Freezing  | 1,371,800              | Withdrawn  |
| 8   | 1999.03  | Cambodia Suzuki Motor                | Manufacture of bicycles                                       | 1,225,000              |  |
| 9   | 1999.05  | Direct International                 | Sewing  | 359,309                | Withdrawn  |
| 10  | 1999.11  | HATADA INTERNATIONAL CREATION        | Sewing  | 904,500                | Withdrawn  |
| 11  | 2000.09  | Shinkappu Apareru                    | Sewing  | 224,998                | Withdrawn  |
| 12  | 2002.03  | Hatada International Silk Research   | Farming (sericulture and silk export)                         | 2,190,000              | Withdrawn  |
| 13  | 2004.10  | Oriental Grass                       | Raw materials for cement (factory for pulverizing used tires) | 2,156,814              | Withdrawn  |
| 14  | 2006.12  | Riba Corporation                     | Sewing  | 2,097,806              | Withdrawn  |
| 15  | 2007.02  | Emario Shonan Ma-                    | Hawaii beach de-  | 26,949,88              | Sihanoukville Prov-  |



|    |         |                         |                                       |            |  |
|----|---------|-------------------------|---------------------------------------|------------|--|
|    |         | rine                    | velopment                             | 3          | ince   |
| 16 | 2007.05 | Emario Shonan Marine    | Rong Island development               | 52,888,052 | Sihanoukville Province   |
| 17 | 2007.11 | Asia Pack               | Manufacture of <i>noshi</i> envelopes | 2,052,505  | Withdrawn  |
| 18 | 2007.11 | Koh Kong Sugar Industry | Farming and processing of sugar cane  | 31,187,209 | Japanese investment: 10%   |
| 19 | 2008.08 | Koh Kong Sugar Industry | Operation of port(s)                  | 829,110    | Japanese investment: 10%   |
| 20 | 2008.08 | Tiger Wing              | Shoemaking                            | 1,930,000  | Phnom Penh SEZ   |
| 21 | 2008.08 | Yamaha Motor Cambodia   | Manufacture of bicycles               | 11,500,000 | Phnom Penh SEZ   |
| 22 | 2008.08 | KOBE BUSSAN CAMBODIA    | Processing of marine products         | 26,000,000 | Thary SEZ, withdrawn   |
| 23 | 2008.09 | DK Inc. (Doko)          | Sewing of men's clothing              | 6,641,460  | Tai Seng SEZ   |
| 24 | 2009.09 | Ajinomoto (Cambodia)    | Food processing                       | 5,270,000  | Phnom Penh SEZ, additional investment of 8,000,000 in 2011                 |
| 25 | 2008.11 | Stationery Cambodia     | Manufacture of stationery             | 7,000,000  | Withdrawn  |
| 26 | 2009.12 | Clean Circle            | Shoemaking                            | 1,770,000  | Phnom Penh SEZ   |
| 27 | 2009.03 | JC Marble               | Processing and export of marble       | 1,267,468  | Sihanoukville Province, additional investment of 4,162,000 in January 2011 |
| 28 | 2009.03 | K.O.S                   | Sewing (Japanese clothing)            | 3,495,976  | Takeo Province   |

Total (1994-2009): \$201,187,340

**Table 2-3: Japanese Investments (Results in 2010)**

| No. | Approved | Company name                                    | Business types                            | Investment amount (\$) | Location  |
|-----|----------|---|---|------------------------|---|
| 29  | 2010.07  | Haru Phnom Penh Comic Center (Harurarakansyobo) | Recycle of comic books                    | 648,135                | Phnom Penh SEZ  |
| 30  | 2010.07  | Disheruzu (Kouwa International)                 | Manufacture of heat-resistant sheets      | 500,000                | Phnom Penh SEZ  |
| 31  | 2010.10  | Proceeding                                      | Sewing (Japanese clothing)                | 1,581,470              | Phnom Penh SEZ  |
| 32  | 2010.10  | First Silk Trading                              | Sewing (Japanese clothing)                | 605,150                | Phnom Penh SEZ  |
| 33  | 2010.10  | Minebea   | Electronic parts (small motors)           | 22,652,417             | Phnom Penh SEZ, additional investment of 54,885,417 in January 2011 |
| 34  | 2010.11  | Morofuji  | Manufacture of polyethylene shopping bags | 9,342,126              | Manhattan SEZ   |

Total (2010): \$35,329,298

**Table 2-4: Japanese Investments (Results in 2011)**

| No. | Approved | Company name            | Business types                                     | Investment amount (US\$) | Location              |
|-----|----------|-------------------------|--|--------------------------|-----------------------|
| 35  | 2011.01  | O and M                 | Manufacture of leather products                    | 2,126,145                | Phnom Penh SEZ        |
| 36  | 2011.02  | Shimano                 | Shoemaking (cycling shoes)                         | 4,000,000                | Kampong Speu Province |
| 37  | 2011.02  | Combi                   | Sewing (baby slings)                               | 2,000,000                | Phnom Penh SEZ        |
| 38  | 2011.02  | YORKS                   | Sewing (women's gloves)                            | 1,268,092                | Tai Seng SEZ          |
| 39  | 2011.03  | Swany                   | Sewing (sports gloves)                             | 2,780,200                | Tai Seng SEZ          |
| 40  | 2011.03  | ASLE Electronics        | Manufacture of wire harnesses for home electronics | 4,200,000                | Sihanoukville SEZ     |
| 41  | 2011.03  | Sumitomo Wiring Systems | Wire harnesses for automobiles                     | 18,000,135               | Phnom Penh SEZ        |
| 42  | 2011.03  | F.T. Apparel            | Sewing (women's underwear) (Triumph)               | 2,075,298                | Phnom Penh City       |
| 43  | 2011.04  | Marunix                 | Manufacture of wire harnesses for home electronics | 4,711,000                | Phnom Penh SEZ        |
| 44  | 2011.06  | Daiwa Onkyo             | Mobile speakers                                    | 943,846                  | Phnom Penh SEZ        |
| 45  | 2011.05  | Nisshin Clothing        | Sewing (work                                       | 5,000,000                | Bavet, Svay Rieng     |

|    |         |                    |                                |           |                   |
|----|---------|--------------------|--------------------------------|-----------|-------------------|
|    |         |                    | uniforms)                      |           | Province          |
| 46 | 2011.06 | Towa               | Sewing (men's clothing)        | 5,256,678 | Tai Seng SEZ      |
| 47 | 2011.06 | NAKAYAMA           | Sewing (babies' underwear)     | 1,469,302 | Tai Seng SEZ      |
| 48 | 2011.06 | Fabric's Art       | Sewing (makeup bags)           | 2,408,566 | Phnom Penh City   |
| 49 | 2011.07 | Kyowa Seikan       | Paper packaging materials      | 1,644,455 | Phnom Penh SEZ    |
| 50 | 2011.07 | Izumi Denshi       | Aluminum frames for flat TVs   | 2,530,529 | Sihanoukville SEZ |
| 51 | 2011.10 | YAZAKI Corporation | Wire harnesses for automobiles | 8,892,000 | Koh Kong SEZ      |
| 52 | 2011.11 | Dorufin Janpu      | Manufacture of bags            | 2,025,450 | Phnom Penh City   |
| 53 | 2011.12 | Fonzu Pawa         | Brand bags                     | 527,000   | Phnom Penh SEZ    |
| 54 | 2012.12 | Ronchesuta         | Sewing (women's clothing)      | 2,859,470 | Tai Seng SEZ      |

Total (2011): \$74,718,166

**Table 2-5: Japanese Investments (Results in 2012)**

| No. | Approved            | Company name               | Business types                                 | Investment amount (\$) | Location               |
|-----|---------------------|----------------------------|--|------------------------|------------------------|
| 55  | 2012.02             | ROCKS                      | Sewing (women's and men's casuals)             | 3,689,740              | Phnom Penh SEZ         |
| 56  | 2012.03             | Japan Medical Products     | Sewing (medical gowns)                         | 10,631,675             | Phnom Penh SEZ         |
| 57  | 2012.04             | Mikasa                     | Sports balls                                   | 5,120,000              | Koh Kong SEZ           |
| 58  | 2012.04             | Japana (Alpen)             | Sewing (sports clothing)                       | 2,938,388              | Tai Seng SEZ           |
| 59  | 2012.05             | Hamon Grand International  | Sewing (Cambodia 51%)                          | 2,467,625              | Phnom Penh City        |
| 60  | 2012.06             | Yamato Konpo Unyu          | Packaging materials                            | 970,000                | Phnom Penh SEZ         |
| 61  | 2012.06             | Marusan Plastic            | Extruded plastic products (automobile emblems) | 1,283,000              | Phnom Penh SEZ         |
| 62  | 2012.07             | Oji Paper (Haruta Packing) | Corrugated cardboard boxes                     | 20,600,000             | Sihanoukville Port SEZ |
| 63  | 2012.07             | Taica                      | Insulation for sports shoes                    | 6,304,320              | Phnom Penh SEZ         |
| 64  | Land already leased | Kaken Hanbai               | Manufacture of fittings (electronic locks)     | 3,000,000              | Tai Seng SEZ           |
| 65  | 2012.08             | SC WADO Component          | Aluminum die-cast frames                       | 2,112,890              | Poipet City            |
| 66  | 2012.10             | HMM (Marubeni)             | Processing of acacia chips                     | 2,000,000              | Sihanoukville Province |
| 67  | 2012.10             | Tangeshin                  | Sewing (Japanese clothing)                     | 2,043,258              | Phnom Penh City        |

|    |         |                             |   |             |                          |
|----|---------|-----------------------------|---|-------------|--------------------------|
| 68 | 2012.10 | AEONMALL                    | Shopping center(s)                        | 205,000,000 | Phnom Penh City          |
| 69 | 2012.10 | Tokyo Parts                 | Electronic parts (coils and transformers) | 2,149,810   | Tai Seng SEZ             |
| 70 | 2012.10 | Papuru (Raperu Shekuchuru)  | Sewing (sewn dolls)                       | 2,018,178   | Tai Seng SEZ             |
| 71 | 2012.10 | Taiwa Seiki                 | Manufacture of rice milling plants        | 1,202,500   | Phnom Penh SEZ           |
| 72 | 2012.10 | Footmark                    | Sewing (swimsuits)                        | 890,000     | Phnom Penh SEZ           |
| 73 | 2012.10 | Phnom Penh Conbi (Cambodia) | Sewing (baby slings)                      | 9,800,000   | Phnom Penh SEZ           |
| 74 | 2012.10 | G.S.Electech                | Wire harnesses for automobiles            | 610,000     | Phnom Penh SEZ           |
| 75 | 2012.11 | Nikko Kinzoku               | Die-cast products                         | 3,125,000   | Phnom Penh SEZ           |
| 76 | 2012.11 | Rushian                     | Sewing (women's underwear)                | 2,000,000   | Phnom Penh SEZ           |
| 77 | 2012.11 | Hong Kong Yufen Garment     | Sewing                                    | 1,614,549   | Phnom Penh City          |
| 78 | 2012.12 | RKT                         | Sewing (men's clothing)                   | 7,488,406   | Tai Seng SEZ             |
| 79 | 2012.12 | Meikodo                     | Industrial needles                        | 2,000,000   | Phnom Penh SEZ           |
| 80 | 2012.12 | Nittetsu Mining             | Mining of minerals (copper)               | 2,144,584   | Kandar Province          |
| 81 | 2012.12 | Aidiaru Pashifikku          | Handbags                                  | 2,419,183   | Phnom Penh City          |
| 82 | 2012.12 | Fo Supirittsu               | Sewing (women's underwear)                | 3,000,000   | Phnom Penh SEZ           |
| 83 | 2012.12 | Oji Paper (tree planting)   | Tree planting                             | 17,000,000  | Kampong Chhnang Province |
| 84 | 2012.12 | Ankoru Antanau              | Processing of cassavas                    | 2,120,350   | Kampong Cham Province    |

Total (2012): \$327,743,456

**Table 2-6: Japanese Investments (Results in January 2013)**

| No. | Approved                      | Company name   | Business types                         | Investment amount (\$) | Location        |
|-----|-------------------------------|----------------|--|------------------------|-----------------|
| 85  | Application under preparation | Nihon Seimitsu | Clock parts                            | 10,000,000             | Dragon King SEZ |
| 86  | Application under preparation | Denso          | Air conditioning parts for automobiles | 3,000,000              | Phnom Penh SEZ  |
| 87  | Application under preparation | Taiyo Kogyo    | Flexible container bags                | 3,000,000              | Phnom Penh SEZ  |
| 88  | Application under             | Starts         | Three-star hotel(s)                    | 50,000,000             | Phnom Penh City |

|     |                               |                   |                                     |           |                          |
|-----|-------------------------------|-------------------|-------------------------------------|-----------|--------------------------|
|     | preparation                   |                   |                                     |           |                          |
| 89  | Application under preparation | Tanaka Foresight  | Eyeglasses parts                    | 3,000,000 | Phnom Penh SEZ           |
| 90  | Application under preparation | YTS International | Wire harnesses for home electronics | 3,000,000 | Phnom Penh SEZ           |
| 91  | Application under preparation | Fukuju            | Sewing (kimonos)                    | 2,000,000 | Phnom Penh SEZ           |
| 92  | Application under preparation | TUW               | Sewing                              | 5,000,000 | Kampong Chhnang Province |
| 103 | Company already established   | FUJI Industries   | Precision rubber                    | -         | (Poipet SEZ)             |

Total (as of January 2013): \$79,000,000

Source: CIB

From the above chart, the following characteristics can be derived regarding the entry of Japanese manufacturers.

- The entry of Japanese companies is remarkable. The investment amounted to \$320 million in 2012, surpassing the \$310 million in cumulative terms up to 2011.
- From 1994 to 2009, export products focused on sewn goods, shoes, and stationery, while motorcycles, galvanized steel plates, and processed foods catered to the domestic demand. On the other hand, from 2010 to January 2013, while sewn goods still accounted for a large portion of exports, business types were diversifying, encompassing electrical and electronic parts (small motors, wire harnesses, aluminum TV frames, coils and transformers, and mold plastics), automobile parts (air conditioner parts, wire harnesses, emblems, and aluminum die casts), and precision machinery (parts for clocks and eyeglasses).
- In terms of the locations of the companies, electrical and electronic parts manufacturers, automobile manufacturers, and those specializing in medium-priced sewn products, shoes, and bags, preferred Phnom Penh SEZ, which commands rents at relatively higher prices. Meanwhile, those specializing in low-priced sewn products, shoes, and bags tended to prefer Tai Seng SEZ and Manhattan SEZ because their rents are low, even though their infrastructure is subpar and not enough labor is available. Moreover, Koh Kong SEZ and Poipet SEZ were preferred among Thai automobile parts manufacturers, while Dragon King SEZ at the Vietnamese border (also facing such problems as subpar infrastructure and lack of labor) was preferred by Vietnamese precision machinery manufacturers.



### 3. DEVELOPMENT CONDITIONS OF EXISTING SPECIAL ECONOMIC ZONES AND FACTORIES IN BAVET REGION

#### 3-1. Layout of Special Economic Zones and Factories in Bavet Region

From the country border, the following special economic zones and factories were built or planned; Manhattan SEZ、Tai Seng Bavet SEZ、Tai Seng Bavet SEZ Sub、Dragon King SEZ、Nissin(Factory)、Shandong Industrial Park. Some factories are under operation, under preparation for operation, under construction.

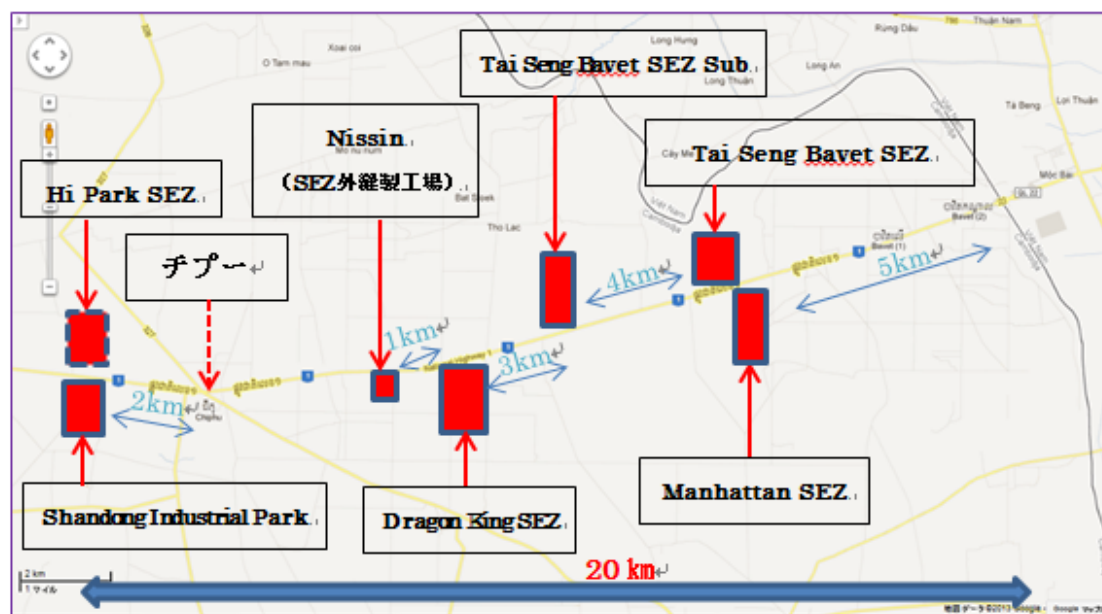


Figure 3-1: Layout of SEZs and Factories in Bavet

Source: Google Map modified by Study team

Manhattan SEZ is located at about 6km from the country border, south side along the National Road No.1. Tai Seng Bavet SEZ is located at on the other side of the Manhattan SEZ. Tai Seng Vabet SEZ Sub is located at additional 4km toward the Chipu. Dragon King SEZ is located at additional 3km, and Nissin Factory is located at additional 1km. Shandong Industrial Park is located at 2km from Chipu, south side along the National Road No.1. The newly authorized special economic zone in January 2013, named Hi Park SEZ, is supposed to be on the opposite side of the Shandong Industrial Park. There are 6 SEZs and 1 factory along the 20km distance on the National Road No. 1 from the country border toward Svay Rieng. Japan Rocks Factory Land is located at a few more km from the Shandong Industrial Park toward Svay Rieng.

#### 3-2. Infrastructure Conditions of Special Economic Zones in Bavet Region

The following table shows infrastructure conditions of SEZs in Bavet region.

**Table 3-1: Basic Infrastructure Conditions of SEZs**

| SEZ   | Planned Development Area               | Electricity                        | Water Supply   | Waste Water  | Drainage   | Road                             | Dormitory  |
|---|--|------------------------------------|--|--|--|----------------------------------|--|
| Manhattan SEZ<br>Developer: Manhattan International Co., Ltd            | 180ha by SEZ map, but 208ha by drawing | Present Capacity 6MW               | Water source: Under ground water<br><br>Supply by pipe in front of factory | Discharging to borrow pit excavated during land earth work | Discharging to rice field through u-channel along road   | Asphalt road without white lines | Under planning   |
| Tai Seng Bavet SEZ<br>Developer: Tai Seng Bavet SEZ Co., Ltd            | 125ha by sez map, but 205ha by drawing | Total capacity: 4MW                | Water source: Under ground water<br><br>Factory must have supply facility  |  | Discharging to borrow pit by the same pipe for rain and waste water<br><br>Flowing out to rice field | Concrete road was made last year | Development drawing indicates dormitory, not yet built |
| Dragon King SEZ<br>Developer: Dragon King Co., Ltd                      | 108ha by drawing                       | Plan to use lines along No. 1 road | Drawing indicated the places for treatment plants                          |  | Under construction, Under planning   |                                  |  |
| Shandong Industrial Park<br>Developer: Manhattan International Co., Ltd | 116ha by drawing                       | Same above                         | The same system as Manhattan SEZ   |  |  |                                  |  |
| Hi Park SEZ<br>Not confirmed  | 300ha by CDC information               | Under planning                     | Under planning   |  |  |                                  |  |

**Source: Study team**

It is clear that the existing SEZs do not satisfy the condition prescribed by SEZ sub decree that says “SEZ must have full infrastructure.” Manhattan SEZ seems to satisfy preliminary conditions of infrastructure. Water is supplied up to the underground pipe in front of factories. Waste water is discharging to the borrow pit which expects natural treatment. However, there are no treatment facilities offering a suitable cleaning process for factories to achieve the internationally satisfactory water quality level. It is also clear that waste water is unable to be cleaned only through borrow pit pond.



Tai Seng Bavet SEZ does not have both a water treatment plant and a waste water treatment plant. Specifically, the waste water pipe is co-used for rain water drainage that will make it impossible to discharge the waste water during the rainy season when the water flow volume becomes high.

### 3-3. Comparison to Phnom Penh Special Economic Zone (PPSEZ)

The following table summarizes basic infrastructure of PPSEZ.

**Table 3-2: Infrastructure of PPSEZ**

| SEZ                                   | Planned Development Area | Electricity         | Water Supply                        | Waste Water   | Drainage                | Road  | Dormitory  |
|---------------------------------------|--------------------------|---------------------|-------------------------------------|---------------|-------------------------|---|--|
| PPSEZ<br>Developer:<br>PPSEZ Co., Ltd | 360ha                    | EDC and Power Plant | Treatment Plant<br><br>Fire hydrant | Lagoon System | Dike and Retention Pond | Main w=33m,<br>Minor w=19.5m<br><br>Side walk | Available for 3,000 workers, Medical treatment place, Fire-fighting facility |

**Source: Study team**

The differences between PPSEZ and SEZs in Bavet region are summarized. Comparing to PPSEZ, the SEZs in Bavet region have the following disadvantages:

- Narrow side walk (not enough for workers to commute)
- Traffic jam conditions are very serious. Only one entrance/exit (PPSEZ has at least two places).
- The present electrical use has already reached to the capacity (Manhattan SEZ: 6MW, Tai Seng Bavet SEZ: 4MW) Factories are forced to temporarily stop using the electricity following the agreed non-electricity usage day. No additional self-generated power.
- Water source is under ground water which will cause land settlement in the future. No treatment plant.
- No waste water treatment plant which violates Cambodia's environmental standard.
- No rain water retention pond. If the whole factory lots are filled, the rain fall volumes will flow out inside the SEZ zone.
- Insufficient dormitory facilities for workers. If the number of commuting workers reaches its maximum, the factories will not be able to start production.

### 3-4. Infrastructure Conditions of Factories (outside SEZs) in Bavet Region

The following table shows infrastructure conditions of factories outside SEZs.

**Table 3-3: Infrastructure Conditions of Factories**

| Factory | Planned Development Area | Electricity                        | Water Supply  | Waste Water                                   | Drainage                  | Road                   | Dormitory     |
|---------|--------------------------|------------------------------------|---|---|---------------------------|------------------------|---------------|
| Nissin  | 5ha by CDC information   | Plan to use lines along No. 1 road | Water source: Under ground water<br>Needs supply facility | Flowing out to rice field through septic tank | Discharging to rice field | Concrete entrance road | Plan to build |
| Rocks   | 5ha by hearing           | Not confirmed.                     |   |   |                           |                        |               |

**Source: Study team**

In summary, there are 6 SEZs and 2 factories outside SEZs between the country border and the area surrounding Chipu. After investigating SEZ and factory independently, it is definitely necessary to investigate the agglomeration effect of these SEZs and factories. It is necessary to see how the total infrastructure capacity might become large. It is obvious that the agglomeration effect will create anticipated sudden shortage of the entire infrastructure system such as electricity, water, waste water, dormitory, etc.

### **3-5. Detailed Investigation of Factory Operating Conditions inside/outside SEZs**

In order to investigate factory operating conditions, the following categories are used for investigation.

- Factory under operation;
- Factory - already built, but not yet operating, preparing for operation;
- Factory - with signed Land lease agreement, but not yet built;
- Factory - expected to make contract with presently vacant lot

The above items have been investigated for the following SEZs and Factories.

Manhattan SEZ

Tai Seng Bavet SEZ

Tai Seng Bavet SEZ Sub

Dragon King SEZ

Nissin Factory

Shandong Industrial Park

Hi Park SEZ

Rocks Factory

(1) Manhattan SEZ

①SEZ Development Plan



Figure 3-2: Drawing of Development Plan (Manhattan SEZ)

Source : Manhattan SEZ Office

②SEZ Development Status





**Photo 3.1 Manhattan SEZ**

### ③SEZ Factory Operating Conditions

#### 1. Manhattan SEZ (Factory under Operation)

**Table 3-4: Manhattan SEZ (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note   |
|-------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|--|
| Data source             | Drawing of Development plan            | Data from labor bureau   | 100l/people/day             | 80% of water                      | Contract with EDC 6MW            |  |
| Tenant company          | 70,611                                 | 2,381                    | 238.10                      | 190.48                            | 0.58                             |  |
| Tenant company          | 69,760<br>About 50% of land            | 2,962                    | 296.20                      | 236.96                            | 0.58                             |  |
| Tenant company          | 19,760                                 | 66                       | 6.60                        | 5.28                              | 0.16                             | Signing board:Feng Hanger                      |
| Tenant company          | 10,000                                 | 145                      | 14.50                       | 11.60                             | 0.08                             |  |
| Tenant company          | 28,455                                 | 944                      | 94.40                       | 75.52                             | 0.24                             |  |
| Tenant company          | 44,481                                 | 1,542                    | 154.20                      | 123.36                            | 0.37                             | Bestway + Speedtech = 83,981.30 m <sup>2</sup> |
| Tenant company          | 54,216                                 | 27                       | 2.70                        | 2.16                              | 0.45                             |  |
| Tenant company          | 7,268                                  | 9                        | 0.90                        | 0.72                              | 0.06                             |  |
| Tenant company          | 10,887                                 | 200                      | 20.00                       | 16.00                             | 0.09                             |  |
| Tenant company          | 34,679                                 | 187                      | 18.70                       | 14.96                             | 0.29                             |  |

|                    |         |                        |          |          |      |   |
|--------------------|---------|------------------------|----------|----------|------|---|
| Tenant company     | 115,944 | 315                    | 31.50    | 25.20    | 0.96 |   |
| Tenant company     | 11,380  | 1,667                  | 166.70   | 133.36   | 0.09 |   |
| Tenant company     | 17,550  | 70                     | 7.00     | 5.60     | 0.15 |   |
| Tenant company     | 52,540  | 818                    | 81.80    | 65.44    | 0.44 | 50% of land building                    |
| Tenant company     | 12,465  | 114                    | 11.40    | 9.12     | 0.10 |   |
| Tenant company     | 39,500  | 213<br>(data from cdc) | 21.30    | 17.04    | 0.33 | Inside Bestway land                     |
| Tenant company     | 51,250  | 230                    | 23.00    | 18.40    | 0.42 |   |
| Tenant company     | 63,025  | 485<br>(data from cdc) | 48.50    | 38.80    | 0.52 | Remaining land 18,228.21 m <sup>2</sup> |
| Tenant company     | 10,650  | 150                    | 15.00    | 12.00    | 0.09 |   |
| Total 19 Factories | 724,410 | 12,525                 | 1,252.50 | 1,002.00 | 6.00 |   |

Source: Study team

## 2. Manhattan SEZ (Factory under preparation for operation, Factory built)

**Table 3-5: Manhattan SEZ (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people)           | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> )           | Note   |
|---------------------------|---|------------------------------------|-----------------------------|-----------------------------------|--|--|
| Data source               | Drawing of Development plan             | CDC application data               | 100l/person/day             | 80% of water                      | 0.103MW/ha By unit analysis(Chapter 5 2.1) |  |
| Tenant company            | 52,540                                  | 818<br>(Same as operation numbers) | 81.80                       | 65.44                             | 0.54                                       | Remaining 50% of land                                      |
| Tenant company            | 113,313                                 | 2,580                              | 258.00                      | 206.40                            | 1.17                                       |  |
| Tenant company            | 113,235                                 | 2,064                              | 206.40                      | 165.12                            | 1.17                                       |  |
| Tenant company            | 9,996                                   | 189                                | 17.89                       | 14.31                             | 0.10                                       | Nos. of Workers: Forecast by 189workers/ha (Chapter 5 2.2) |
| Total 4 Factories         | 289,084                                 | 5,651                              | 565.09                      | 452.07                            | 2.98                                       |  |

Source: Study team

## 3. Manhattan SEZ (Factory with Land Lease Agreement, Factory not built)

**Table 3-6: Manhattan SEZ (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people)                   | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> )               | Note                                    |
|--------------------|--|--|-----------------------------|-----------------------------------|--|---|
| Data source        | Drawing of Development plan            | 189/ha<br>By unit analysis (Chapter 5 2.2) | 100l/person/day             | 80% of water                      | 0.103MW/ha<br>By unit analysis (Chapter 5 2.1) |   |
| Tenant company     | 35,387                                 | 795  | 79.49                       | 63.59                             | 0.36   |   |
| Tenant company     | 69,760                                 | 2,962<br>(Same as previous nos.)           | 296.20                      | 236.96                            | 0.72   | Remaining 50% land                      |
| Tenant company     | 18,228                                 | 140<br>(Data from cdc)                     | 14.00                       | 11.20                             | 0.19   | Remaining land 18,228.21 m <sup>2</sup> |
| Tenant company     | 189,923                                | 3,461<br>(Data from cdc)                   | 346.10                      | 276.88                            | 1.96   |   |
| Tenant company     | 38,600                                 | 1,424<br>(Data from cdc)                   | 142.40                      | 113.92                            | 0.40   | CDC data only                           |
| Tenant company     | 42,240                                 | 60<br>(Data from labor bureau)             | 6.00                        | 4.80                              | 0.44   | CDC data only                           |
| Tenant company     | 13,334                                 | 252  | 25.20                       | 20.16                             | 0.14   | Drawing data only                       |
| Tenant company     | 15,547                                 | 294  | 29.38                       | 23.50                             | 0.16   | Drawing data only                       |
| Tenant company     | 10,015                                 | 189  | 18.93                       | 15.11                             | 0.10   | Drawing data only                       |
| Total 9 Factories  | 433,034                                | 9,577                                      | 957.70                      | 766.16                            | 4.46   |   |

**Source: Study team****4. Manhattan SEZ (No Contract, Factory expected to enter)****Table 3-7: Manhattan SEZ (No Contract, Factory expected to enter)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people)                   | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> )               | Note |
|--------------------------|---|--|-----------------------------|-----------------------------------|--|------|
| Data source              | Drawing of Development plan             | 189/ha<br>By unit analysis (Chapter 5 2.2) | 100l/person/day             | 80% of water                      | 0.103MW/ha<br>By unit analysis (Chapter 5 2.1) |      |

|                         |       |     |       |       |      |  |
|-------------------------|-------|-----|-------|-------|------|--|
| Vacant factory land lot | 9,761 | 217 | 21.74 | 17.39 | 0.10 |  |
|-------------------------|-------|-----|-------|-------|------|--|

Source: Study team

## 5.2 Tai Seng Bavet SEZ

### ①SEZ Development Plan



Figure 3-4: Drawing of Development Plan (Tai Seng Bavet SEZ)

Source: Tai Seng Bavet SEZ Co., Ltd. information modified by Study team



## ②SEZ Development Status



Figure 3-5: Present Operating Situation (Tai Seng Bavet SEZ)

Source: Tai Seng Bavet SEZ Co., Ltd. information modified by Study team



**Photo3.2: Tai Seng Bavet SEZ**

**③SEZ Factory Operating Conditions**

1. Tai Seng Bavet SEZ (Factory under Operation)

**Table 3-8: Tai Seng Bavet SEZ (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note       |
|-------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------------|
| Data source             | Drawing of Development plan            | Data from labor bureau   | 100l/People/day             | 80% of water                      | Actual data                      |            |
| DK (Japan)              | 24,718                                 | 1,611                    | 161.10                      | 128.88                            | 0.41                             | Real data  |
| Tenant company          | 10,062                                 | 119                      | 11.90                       | 9.52                              | 0.17                             | Same above |
| Tenant company          | 21,000                                 | 369                      | 36.90                       | 29.52                             | 0.34                             | Same above |
| Tenant company          | 66,691                                 | 840                      | 84.00                       | 67.20                             | 1.09                             | Same above |
| Tenant company          | 60,256                                 | 1,597                    | 159.70                      | 127.76                            | 0.99                             | Same above |
| Tenant company          | 11,575                                 | 30                       | 3.00                        | 2.40                              | 0.19                             | Same above |
| Tenant company          | 2,227                                  | 30                       | 3.00                        | 2.40                              | 0.04                             | Same above |
| Total                   | 196,529                                | 4,596                    | 459.60                      | 367.68                            | 3.22                             |            |

Source: Study team

2. Tai Seng Bavet SEZ (Factory under preparation for operation, Factory built)

**Table 3-9: Tai Seng Bavet SEZ (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note             |
|---------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------------------|
| Data source               | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |                  |
| Tenant company            | 12,523                                 | 237                      | 23.69                       | 18.95                             | 0.13                             |                  |
| Tenant company            | 15,000                                 | 284                      | 28.35                       | 22.68                             | 0.15                             |                  |
| Tenant company            | 16,322                                 | 227                      | 22.70                       | 18.16                             | 0.17                             | Worker: CDC data |
| Tenant company            | 14,053                                 | 507                      | 50.70                       | 40.56                             | 0.14                             | Worker CDC data  |
| Total                     | 57,910                                 | 1,254                    | 125.44                      | 100.35                            | 0.60                             |                  |

Source: Study team

3. Tai Seng Bavet SEZ (Factory with Land Lease Agreement, Factory not built)

**Table 3-10: Tai Seng Bavet SEZ (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source        | Drawing of                              | 189/ha                   | 100l/People                 | 80% of                            | 0.103MW/                         |      |

|                | Develop-<br>ment plan | (Chapter 5<br>2.2) | e/day  | water  | ha(Chapter<br>5 2.1) |                    |
|----------------|-----------------------|--------------------|--------|--------|----------------------|--------------------|
| Tenant company | 18,000                | 340                | 34.02  | 27.22  | 0.19                 | Name not confirmed |
| Tenant company | 14,250                | 269                | 26.93  | 21.54  | 0.15                 |                    |
| Tenant company | 44,060                | 833                | 83.27  | 66.62  | 0.45                 | ATX                |
| Tenant company | 50,000                | 945                | 94.50  | 75.60  | 0.52                 |                    |
| Tenant company | 24,328                | 460                | 45.98  | 36.78  | 0.25                 | Name not confirmed |
| Tenant company | 23,968                | 453                | 45.30  | 36.25  | 0.25                 | Name not confirmed |
| Total          | 174,606               | 3,300              | 330.01 | 264.01 | 1.80                 |                    |

Source: Study team

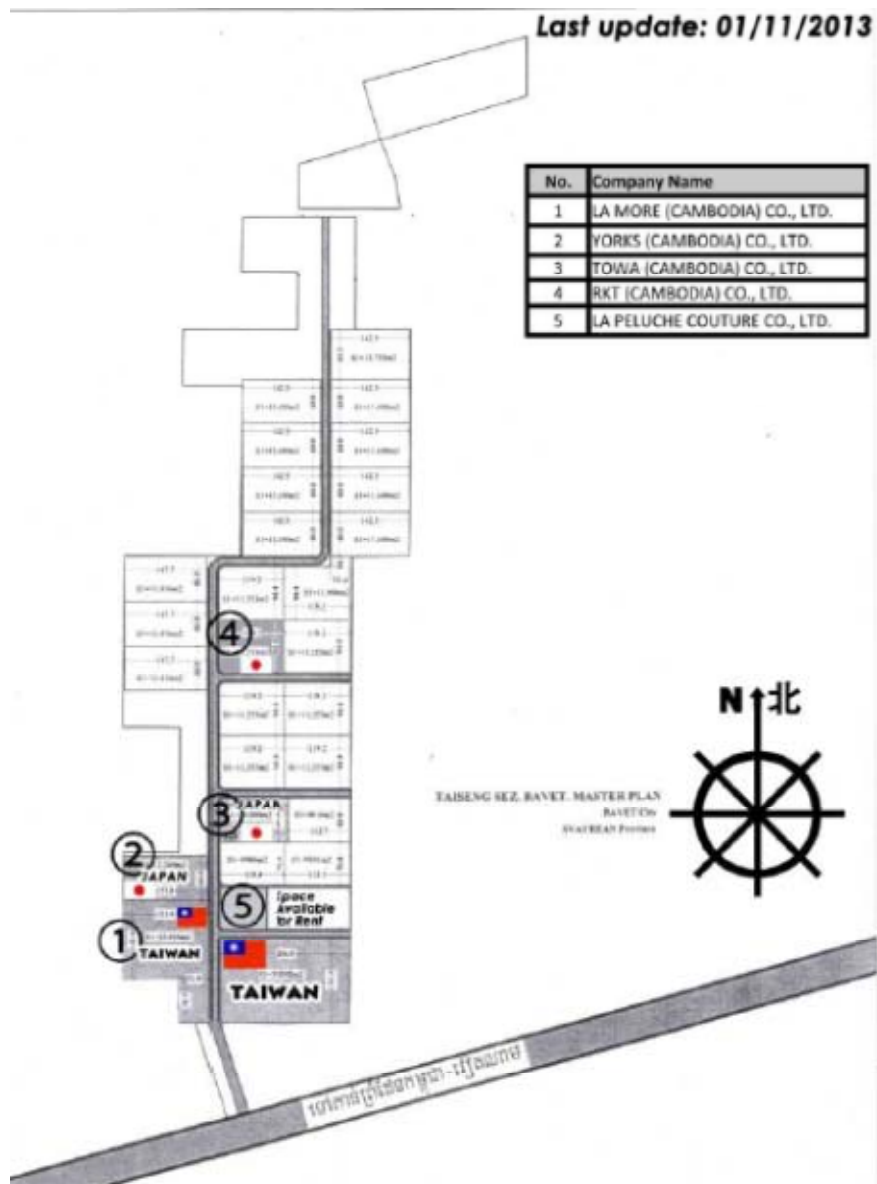
4. Tai Seng Bavet SEZ (No Contract, Factory expected to enter)

**Table 3-11: Tai Seng Bavet SEZ (No Contract, Factory expected to enter)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Vacant factory lot       | 649,883                                 | 12,283                   | 1,228.28                    | 982.62                            | 6.69                             |      |

Source: Study team

### ①SEZ Development Plan



**Figure 3-6: Drawing of Development Plan (Tai Seng Bavet SEZ Sub)**

Source: Tai Seng Bavet SEZ Co., Ltd. information modified by Study team

## ②SEZ Development Status

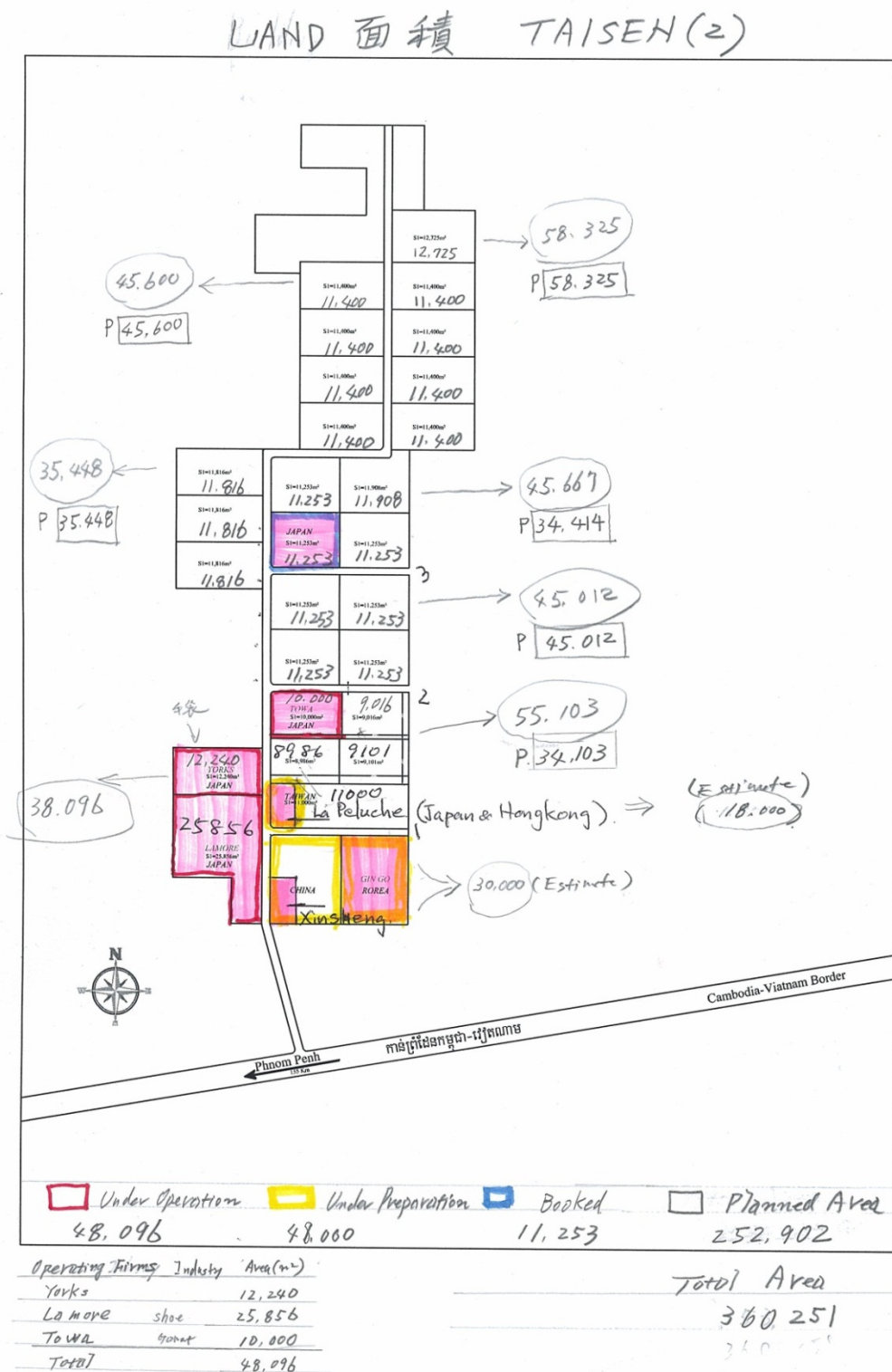


Figure 3-7: Factory Operating Conditions (Tai Seng Bavet SEZ Sub)

Source: Tai Seng Bavet SEZ Co., Ltd. information modified by Study team



**Photo3.3: Tai Seng Bavet SEZ Sub**

### ③SEZ Operation Condition

#### 1. Tai Seng Bavet SEZ Sub (Factory under Operation)

**Table 3-12: Tai Seng Bavet SEZ Sub (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note       |
|-------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------------|
| Data source             | Drawing of Development plan            | Data from labor bureau   | 100l/People/day             | 80% of water                      | Actual data                      |            |
| Tenant company          | 12,240                                 | 468                      | 46.80                       | 37.44                             | 0.20                             | Real data  |
| Tenant company          | 25,856                                 | 613                      | 61.30                       | 49.04                             | 0.42                             | Same above |
| Tenant company          | 10,000                                 | 100                      | 10.00                       | 8.00                              | 0.16                             | Same above |
| Total                   | 48,096                                 | 1,181                    | 118.10                      | 94.48                             | 0.79                             |            |

**Source: Study team**

#### 2. Tai Seng Bavet SEZ Sub (Factory under preparation for operation, Factory built)

**Table 3-13: Tai Seng Bavet SEZ Sub (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|---------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source               | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Tenant company            | 18,000                                 | 340                      | 34.02                       | 27.22                             | 0.19                             |      |
| Tenant company            | 30,000                                 | 567                      | 56.70                       | 45.36                             | 0.31                             |      |
| Total                     | 48,000                                 | 907                      | 90.72                       | 72.58                             | 0.49                             |      |

**Source: Study team**

3. Tai Seng Bavet SEZ Sub (Factory with Land Lease Agreement, Factory not built)

**Table 3-14: Tai Seng Bavet SEZ Sub (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source        | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha(Chapter 5 2.1)        |      |
| Tenant company     | 11,253                                 | 213                      | 21.27                       | 17.02                             | 0.12                             |      |
| Total              | 11,253                                 | 213                      | 21.27                       | 17.02                             | 0.12                             |      |

Source: Study team

4. Tai Seng Bavet SEZ Sub (No Contract, Factory expected to enter)

**Table 3-15: Tai Seng Bavet SEZ Sub (No Contract, Factory expected to enter)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha(Chapter 5 2.1)        |      |
| Vacant lot               | 252,902                                 | 4,780                    | 477.98                      | 382.38                            | 2.60                             |      |

Source: Study team



## 5.4 Dragon King SEZ

### ①SEZ Development Plan and Present Status

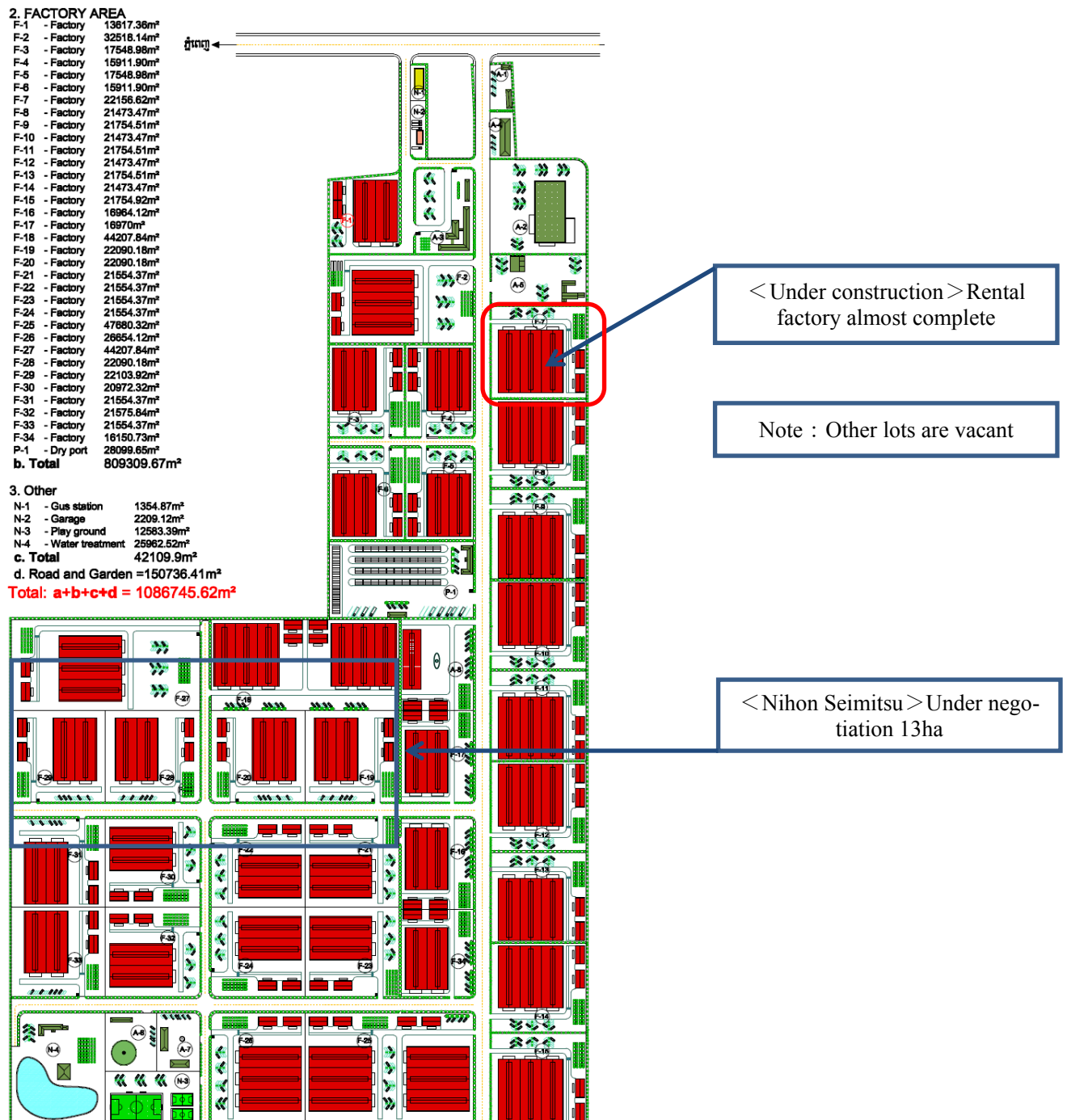


Figure 3-8: Drawing of Development Plan and Operating Condition (Dragon King SEZ)

Source: Dragon King SEZ information modified by Study team





**Photo3.4: Dragon King SEZ**



## ②SEZ Operating Condition

### 1. Dragon King SEZ (Factory under Operation)

**Table 3-16: Dragon King SEZ (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|-------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source             | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                      | 0                                      | 0                        | 0                           |                                   | 0                                |      |

**Source: Study team**

### 2. Dragon King SEZ (Factory under preparation for operation, Factory built)

**Table 3-17: Dragon King SEZ (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|---------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source               | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Rental factory            | 10,000                                  | 189                      | 18.90                       | 15.12                             | 0.10                             |      |
|                           |   |                          |                             |                                   |                                  |      |
| Total                     | 10,000                                  | 189                      | 18.9                        | 15.12                             | 0.10                             |      |

Source: Study team

3. Dragon King SEZ (Factory with Land Lease Agreement, Factory not built)

**Table 3-18: Dragon King SEZ (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note  |
|--------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|---|
| Data source        | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |   |
| Tenant company     | 13,000                                  | 6,500                    | 650.00                      | 520.00                            | 1.34                             | Under negotiation, Data of workers from, PPSEZ, Minebea |
|                    |   |                          |                             |                                   |                                  |   |
| Total              | 13,000                                  | 6,500                    | 650.00                      | 520.00                            | 1.34                             |   |

Source: Study team

4. Dragon King SEZ (Expected factory, no contract, and vacant lot)

**Table 3-19: Dragon King SEZ (Expected factory, no contract, and vacant lot)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Vacant lot               | 669,310                                 | 12,650                   | 1,265.00                    | 1,012.00                          | 6.89                             |      |

Source: Study team

## 5.5 Nissin Factory



**Photo3.5: Nissin Factory**

### ①Factory Operating Condition

#### 1. Nissin Factory (Factory under Operation)

**Table 3-20: Nissin Factory (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|-------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source             | Drawing of Development plan            | Site Hearing             | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Nissin (Japan)          | 50,000                                 | 80                       | 8.00                        | 6.40                              | 0.52                             |      |

**Source: Study team**

#### 2. Nissin Factory (Factory under preparation for operation, Factory built)

**Table 3-21: Nissin Factory (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|---------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source               | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                        | 0                                      | 0                        | 0                           |                                   | 0                                |      |

**Source: Study team**

#### 3. Nissin Factory (Factory with Land Lease Agreement, Factory not built)

**Table 3-22: Nissin Factory (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source        | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |

|    |   |   |   |  |   |  |
|----|---|---|---|--|---|--|
| NA | 0 | 0 | 0 |  | 0 |  |
|----|---|---|---|--|---|--|

Source: Study team

4. Nissin Factory (Expected factory, no contract, and vacant lot)

**Table 3-23: Nissin Factory (Expected factory, no contract, and vacant lot)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Vacant lot               | 0                                       | 0                        | 0                           |                                   | 0                                |      |

Source: Study team

5.6 Shandong Industrial Park (Source: Manhattan SEZ information modified by Study Team)

①SEZ Development Plan

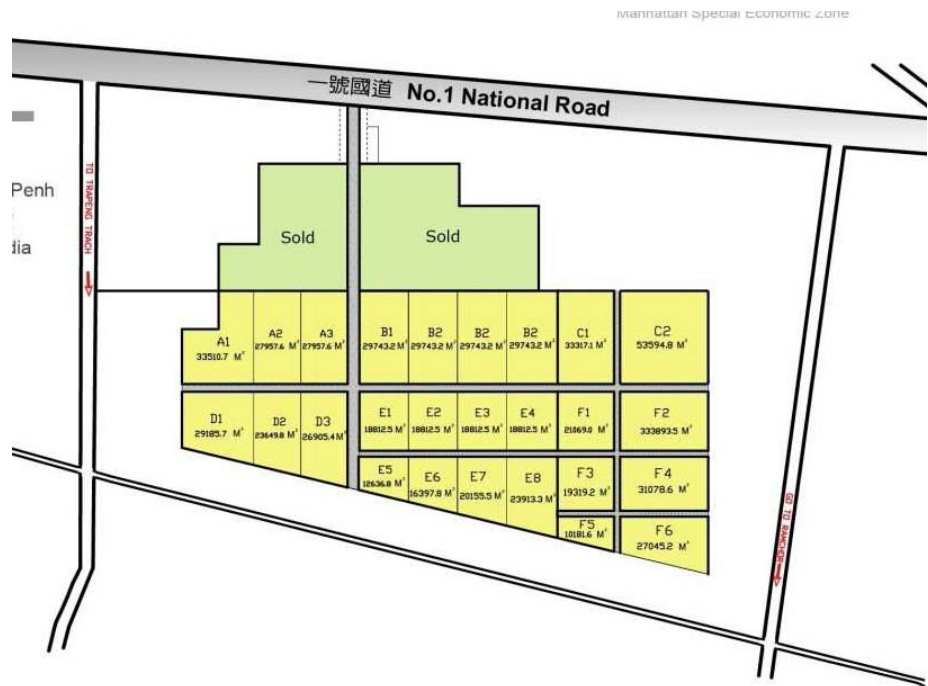


Figure 3-9: Drawing of Development Plan (Shandong Industrial Park)

②SEZ Development Status

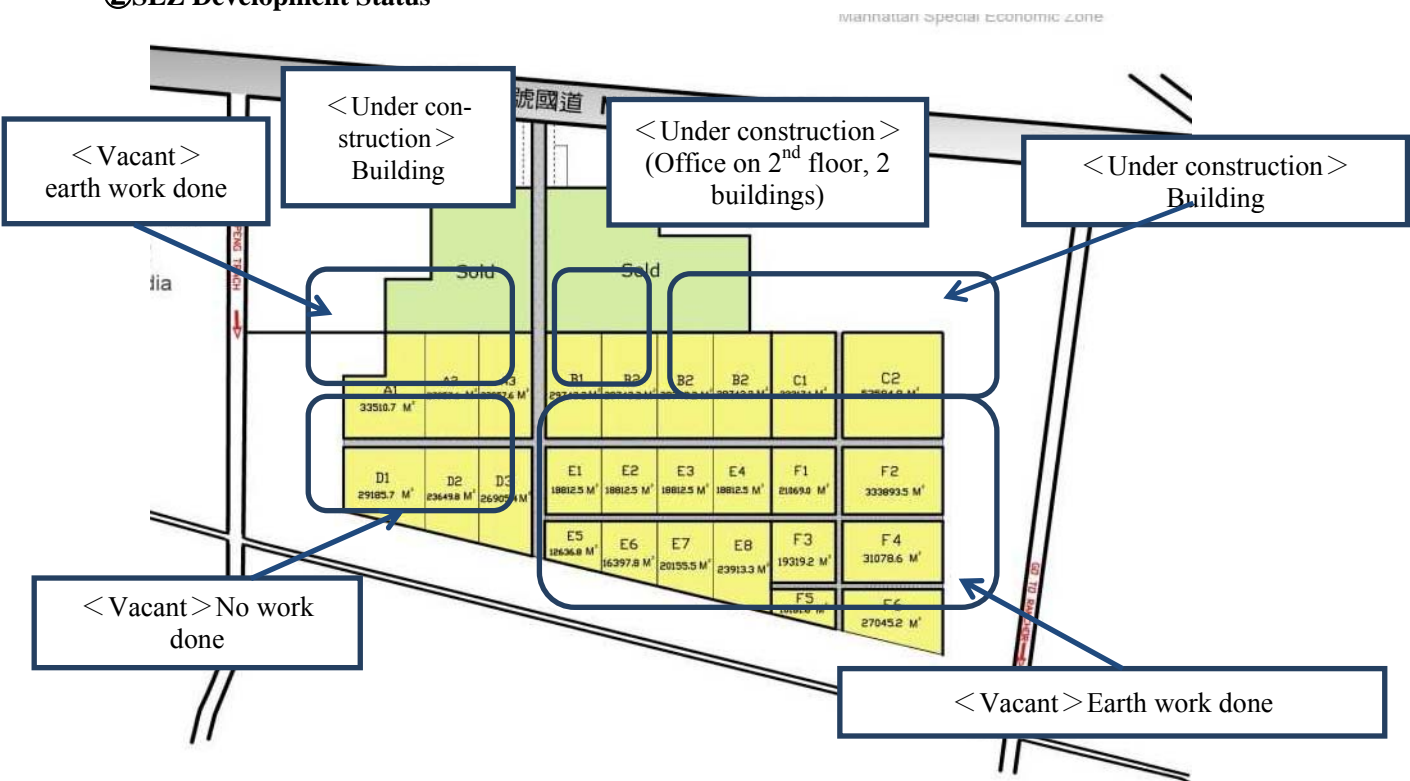


Figure 3-10: Factory Operating Conditions (Shandong Industrial Park)



**Photo3.5: Shandong Industrial Park**



### ③SEZ Operating Condition

#### 1. Shandong Industrial Park (Factory under Operation)

**Table 3-24: Shandong Industrial Park (Factory under Operation)**

| Factory under operation | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|-------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source             | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People /day            | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                      | 0                                       | 0                        | 0                           |                                   | 0                                |      |

**Source: Study team**

#### 2. Shandong Industrial Park (Factory under preparation for operation, Factory built)

**Table 3-25: Shandong Industrial Park (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot Area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note                            |
|---------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|---------------------------------|
| Data source               | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/Peopl e/day            | 80% of water                      | 0.103MW/h a (Chapter 5 2.1)      |                                 |
| Entrance Building         | 150,000                                 | 2,835                    | 283.50                      | 226.80                            | 1.55                             | 2 <sup>nd</sup> floor building, |

|          |            |       |        |        |      |                                    |
|----------|------------|-------|--------|--------|------|------------------------------------|
|          |            |       |        |        |      | ground floor is for rental factory |
| Building | 29,743.20  | 562   | 56.21  | 44.97  | 0.31 | Lot B1                             |
| Building | 29,743.20  | 562   | 56.21  | 44.97  | 0.31 | Lot B2                             |
| Total    | 209,486.40 | 3,959 | 395.92 | 316.74 | 2.17 |                                    |

Source: Study team

### 3. Shandong Industrial Park (Factory with Land Lease Agreement, Factory not built)

**Table 3-26: Shandong Industrial Park (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source        | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                 | 0                                       | 0                        | 0                           |                                   | 0                                |      |

Source: Study team

### 4. Shandong Industrial Park (Expected factory, no contract, and vacant lot)

**Table 3-27: Shandong Industrial Park (Expected factory, no contract, and vacant lot)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Vacant lot               | 606,505.60                              | 15,422                   | 1,542.22                    | 1,233.78                          | 6.25                             |      |

Source: Study team

## 5.7 Hi Park SEZ

### ①SEZ Operating Condition

#### 1. Hi Park SEZ (Factory under Operation)

**Table 3-28: Hi Park SEZ (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|-------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source             | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                      | 0                                      | 0                        | 0                           |                                   | 0                                |      |

Source: Study team

#### 2. Hi Park SEZ (Factory under preparation for operation, Factory built)

**Table 3-29: Hi Park SEZ (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|---------------------------|--|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source               | Drawing of Development plan            | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                        | 0                                      | 0                        | 0                           |                                   | 0                                |      |

Source: Study team

#### 3. Hi Park SEZ (Factory with Land Lease Agreement, Factory not built)

**Table 3-30: Hi Park SEZ (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source        | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                 | 0                                       | 0                        | 0                           |                                   | 0                                |      |

Source: Study team

#### 4. Hi Park SEZ (Expected factory, no contract, and vacant lot)

**Table 3-31: Hi Park SEZ (Expected factory, no contract, and vacant lot)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | 189/ha (Chapter 5 2.2)   | 100l/People/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| Vacant lot               | 2,100,000                               | 39,690                   | 3,969.00                    | 3,175.20                          | 21.63                            |      |

Source: Study team



## 5.8 Rocks Factory



**Photo3.5: Japan Rocks Factory Site**

### ① Factory Operating Condition

#### 1. Rocks Factory (Factory under Operation)

**Table 3-32: Rocks Factory (Factory under Operation)**

| Factory under operation | Factory land lot area(m <sup>2</sup> ) | Nos. of workers (people)             | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|-------------------------|--|--------------------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source             | Drawing of Development plan            | CDC data (Development authorization) | 100l/people/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                      | 0                                      | 0                                    | 0                           |                                   | 0                                |      |

**Source: Study team**

#### 2. Rocks Factory (Factory under preparation for operation, Factory built)

**Table 3-33: Rocks Factory (Factory under preparation for operation, Factory built)**

| Factory under preparation | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people)             | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|---------------------------|---|--------------------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source               | Drawing of Development plan             | CDC data (Development authorization) | 100l/people/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                        | 0                                       | 0                                    | 0                           |                                   | 0                                |      |

**Source: Study team**

#### 3. Rocks Factory (Factory with Land Lease Agreement, Factory not built)

**Table 3-34: Rocks Factory (Factory with Land Lease Agreement, Factory not built)**

| Contracted Factory                       | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people) | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note                    |
|--|---|--------------------------|-----------------------------|-----------------------------------|----------------------------------|-------------------------|
| Data source                              | Drawing of Development plan             | Site Hearing             | 100l/people/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |                         |
| Japan Rocks (Japan)<br>Under earth works | 50,000                                  | 3,000                    | 300.00                      | 240.00                            | 0.52                             | Nos. of worker: Hearing |

Source: Study team

#### 4. Rocks Factory (Expected factory, no contract, and vacant lot)

**Table 3-35: Rocks Factory (Expected factory, no contract, and vacant lot)**

| Factory with no contract | Factory land lot area (m <sup>2</sup> ) | Nos. of workers (people)           | Water (m <sup>3</sup> /day) | Waste water (m <sup>3</sup> /day) | Electricity (MW/m <sup>2</sup> ) | Note |
|--------------------------|---|------------------------------------|-----------------------------|-----------------------------------|----------------------------------|------|
| Data source              | Drawing of Development plan             | CDC data (Development application) | 100l/people/day             | 80% of water                      | 0.103MW/ha (Chapter 5 2.1)       |      |
| NA                       | 0                                       | 0                                  | 0                           |                                   | 0                                |      |

Source: Study team

## 6. Present Operating Conditions of Factories in Bavet Region

The following table summarizes the previous tables. It shows present agglomerating and operating factories inside and outside SEZs.

**Table 3-36: Present Operating Conditions of Factories in Bavet Region**

| Operating Conditions                     | Time(End of 2012~ January 2013) | Note   |
|--|---------------------------------|--|
| Total Developed Land Area (ha)           | 145.57                          | Assumed: Operating Factory Lot Area×100/70. (Difficult to measure the present developed area due to the ongoing construction.) |
| Land lot area of operating factories(ha) | 101.90                          |  |
| Nos. of operating factories (EA)         | 31                              | Inside SEZ: 6 (Japan)<br>Outside SEZ: 1 (Japan)  |
| Nos. of Workers(people)                  | 18,382                          |  |
| Water(m <sup>3</sup> /day)               | 1,838.20                        | Assumed: 100l/people/day   |
| Waste Water(m <sup>3</sup> /day)         | 1,470.56                        | 80% of Water Volume  |
| Electrical demand capacity(MW)           | 10.53                           | Manhattan and Tai Seng: 10MW   |

Source: Study team

Next table shows operating Japanese factories.

**Table 3-37: Operating Conditions of Japanese Factories**

| SEZ                    | Name of Factory | Industrial Category     | Operating Period |
|------------------------|-----------------|-------------------------|------------------|
| Manhattan SEZ          | Morifuji        | Plastic Bags            | Jan. 2011～       |
| Tai Seng Bavet SEZ     | DK              | Garment (Men's suits)   | Apr. 2009～       |
|                        | Swany           | Garment (Sport gloves)  | Feb. 2012～       |
|                        | Nakayama        | Garment (Baby clothes)  | Aug. 2012～       |
| Tai Seng Bavet SEZ Sub | Yorks           | Garment (Lady's gloves) | Feb. 2012～       |
|                        | Towa            | Garment (Men's suits)   | Sep. 2012～       |
| Outside SEZ            | Nissin          | Garment                 |                  |

**Source: Study team**

In summary, 6 SEZs and 1 factory have been clustered in Bavet region. It is clear that their demand for appropriate infrastructure is very high. This situation needs study of the supply capacity of the present infrastructure conditions and future demand forecasting as well as necessary subsequent action.

## 4. ANALYSIS OF FACTORS IN THE RELOCATION OF THE JAPANESE COMPANIES' PRODUCTION SITES AND THEIR ENTRY TO CAMBODIA AND BAVET

The following analyzes the factors leading to the relocation of the Japanese companies' production sites to Cambodia.

### 4-1. Comparison of Recent Wage Standards Among Developing Countries and the Factors in Entering Cambodia"

According to JETRO's analysis of major cities, the wage standards in Cambodia are significantly lower than those of others. This is the reason why industries with labor-intensive processes prefer relocation to Cambodia.

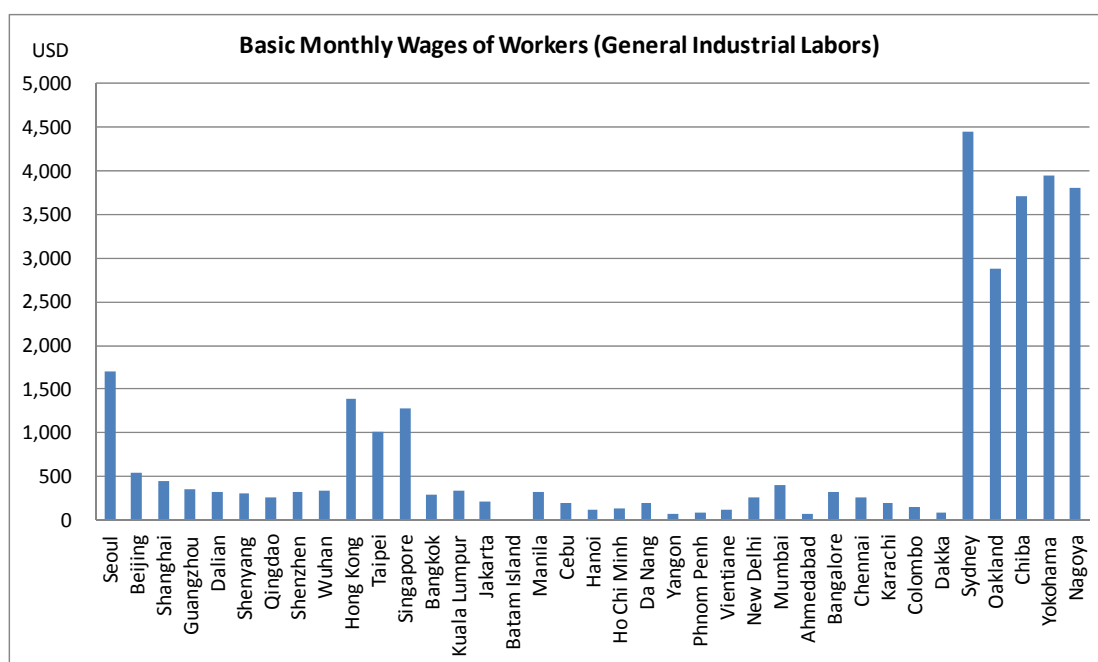
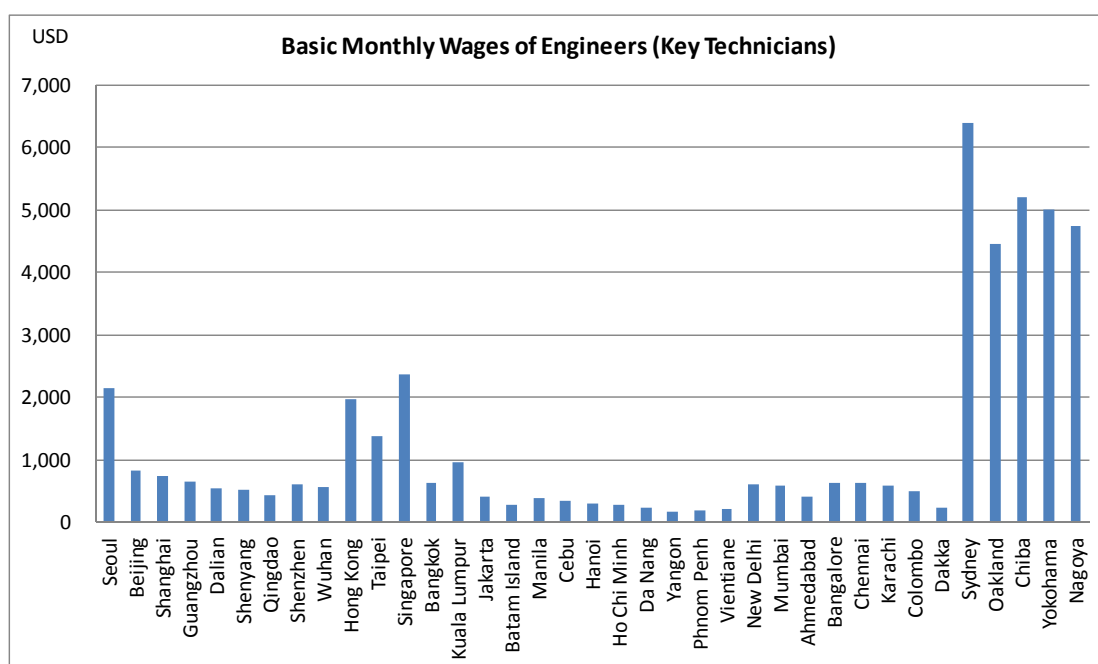


Figure 4-1: Basic Monthly Wages of Workers (General Industrial Labors)

Source: JETRO, "22nd Comparison of Investment-related Costs among Major Cities and Regions in Asia and Oceania (April 2012)"



**Figure 4-2: Basic Monthly Wages of Workers (Key Technicians)**

**Source: JETRO, "22nd Comparison of Investment-related Costs among Major Cities and Regions in Asia and Oceania (April 2012)"**

#### **4-2. Historical Analysis of Wages and Labor Productivity Among Neighboring Countries and the Factors in Entering Cambodia**

Next, in the neighboring countries such as China, Vietnam, and Thailand, the rate of wage increase surpassed the growth of labor productivity. This was especially remarkable in China and Vietnam. In both countries, since 2000, the governments increased the minimum wage annually by 10 to 20% or more in order to improve the standard of living among their citizens. Although this policy serves to expand purchasing power and benefit industries that cater to the domestic demand by selling their products in the domestic market, the higher sales prices becomes a disadvantage to export-based industries that leverage cheap, diligent labor. Upon creating the Phillips curves (refer to the graphs in the following pages), the following results were obtained through analysis.

(1) There is a trade-off between the rate of increase in the nominal wage rate and the unemployment rate. This means that a high unemployment rate may relax the rise in the nominal wage rate. However, since it has not crossed with the x-axis of the unemployment rate during the variable measurement period, foreign companies, which rapidly grew, absorbed the workers of local companies who became unemployed due to an economic downturn. As a result, a brake has not been placed on the increase in the nominal wage rate. Therefore, cost-push inflation, triggered by the entry of foreign companies, is observed among the neighboring countries.

(2) There is also a trade-off between the rate of increase in labor productivity and the unemployment rate. However, between 1997 and 2007, the period for which comparison can be made against the rate of increase in the nominal wage rate, surprisingly, the rate of increase in labor productivity fell continuously lower than the rate of increase in the nominal wage rate. This can be attributed to the fact that the governments did not implement the so-called income policy of controlling prices by matching the rate of increase in the nominal wage rate with that of labor productivity. For this reason, in terms of macroeconomics as whole, labor-intensive industries and small and medium-sized companies with small profit margins were hit even harder than capital-intensive industries and big companies that enjoy larger profit margins. This serves as the macroeconomic basis for the relocation of the Japanese companies' production sites from China and Vietnam to Cambodia, where the nominal wage standards are low and the rate of increase in the nominal wage is small. However, while this points to the macroeconomic conditions, each company formulates its own strategy. As such, the actual relocation of the production sites and the specific locations chosen differ. In particular, relatively more foreign companies are entering Bavi in recent years. Since the site is located at the Vietnamese border, it offers the convenience of access to the Vietnamese port(s). However, because accurate information regarding the local infrastructure and workers was not relayed, there remains a score of issues to be resolved in terms of inadequate infrastructure and lack of workers.

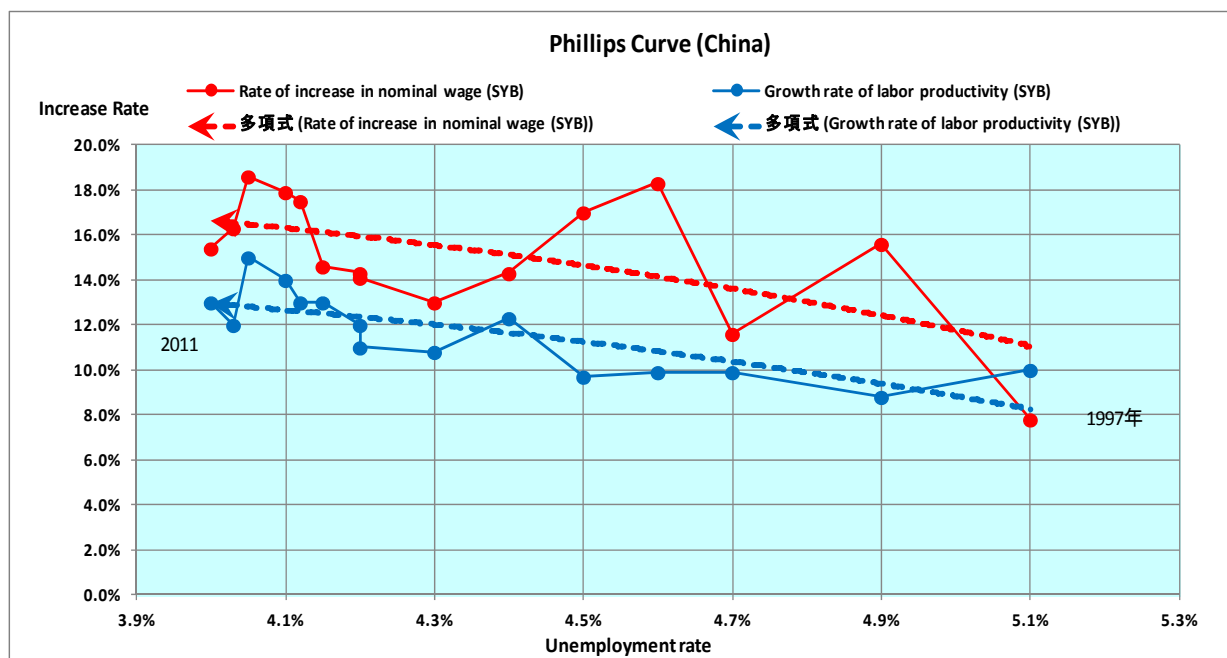


Figure 4-3: Phillips Curve (China)

Source: Created by Study team based on the documents of ILO, IMF, and GSO (General Statistics Office of Vietnam)

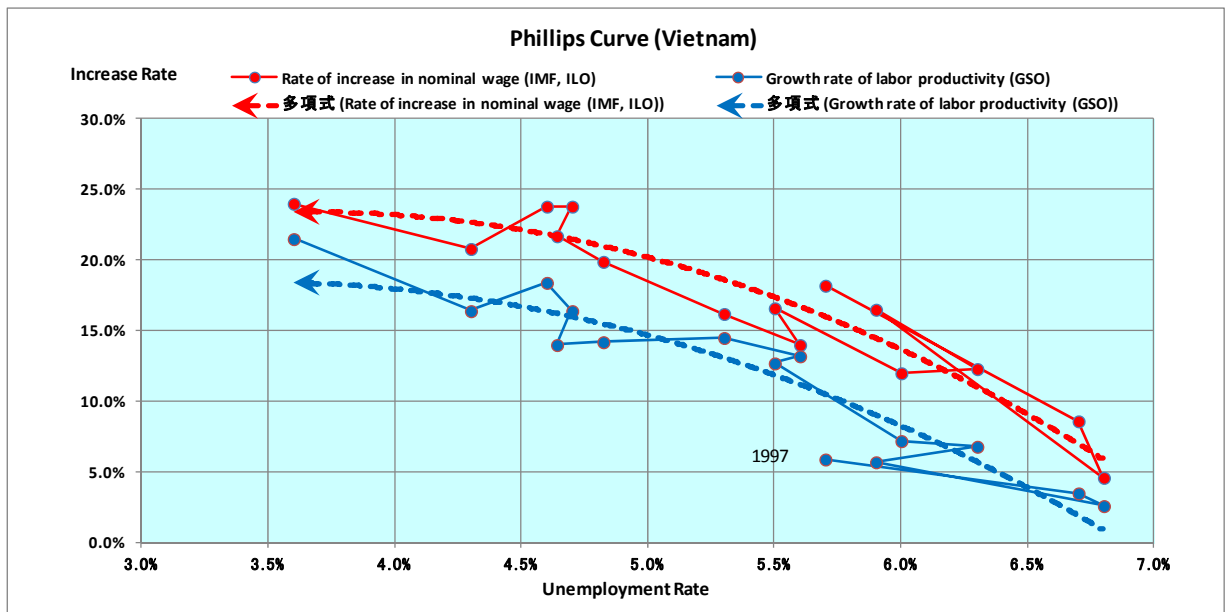


Figure 4-4: Phillips Curve (China)

Source: Created byStudy team based on the documents of ILO, IMF, and SYB (Statistical Year-book of China)

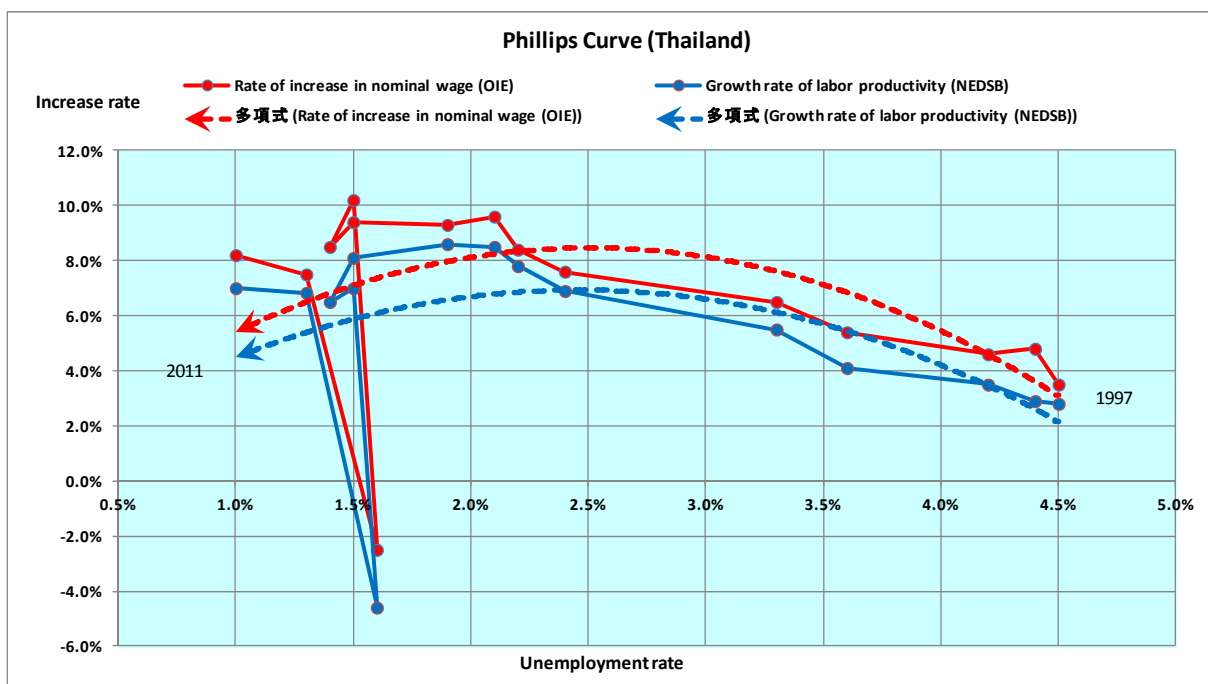


Figure 4-5: Phillips Curve (Thailand)

Note: The sharp decline is due to a flood.

Source: Created by Study team based on the documents of the Office of Industrial Economics (OIE) and National Economic and Social Development Board (NESDB)

### **3-3. Historical Analysis of Currency Rates Among Neighboring Countries and the Factors in Entering Cambodia**

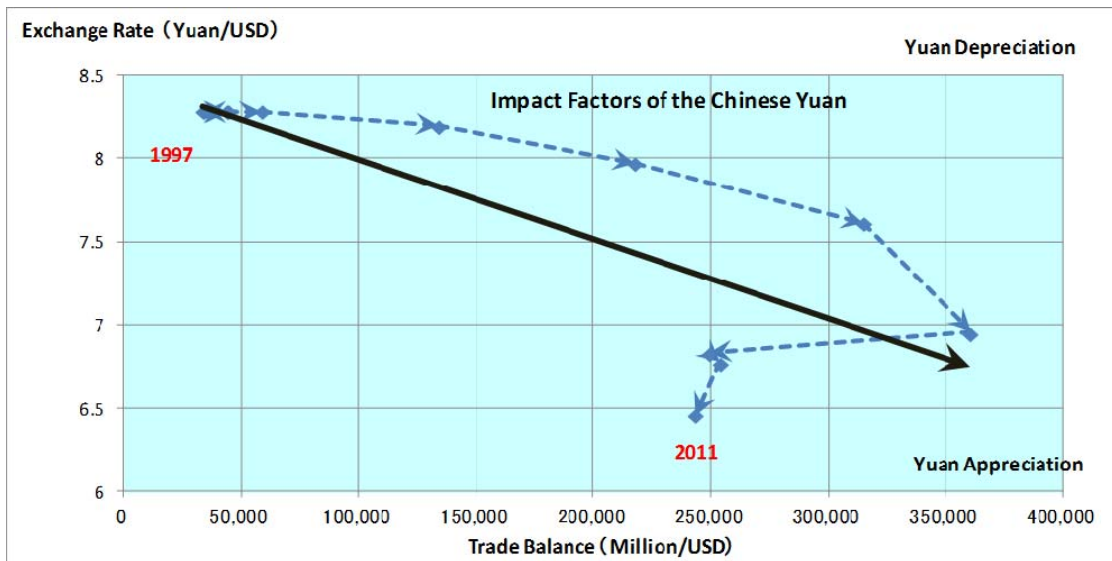
(1) The currency rates in China and Thailand remained strong against the dollar, while that in Vietnam remained low. The Chinese yuan was strong due to its trade surplus. On the other hand, the weak Vietnamese dong was due to its trade deficit. Moreover, the Thai baht was strong due to an overall account surplus, which owed to a significant relaxation of exchange control and transition to the floating exchange rate system.

(2) Recently, the Chinese yuan has become strong despite a slight decline in the trade surplus. This is because of the pressure exerted by the U.S. and European countries against revaluing the yuan. In contrast, the Vietnamese dong is faltering even though its trade deficit has slightly improved. This is because the sentiment for the dong is on the decline.

(3) The strong Chinese yuan and Thai baht work to suppress exports from the two countries. Moreover, labor costs in foreign currencies swell as a result, creating a disadvantage for the local production of the companies that enter those countries. In contrast, the weak Vietnamese dong should present an advantage to the companies that enter the countries to produce goods and services locally. However, as already discussed, the increase in Vietnam's nominal wage is remarkably high, which has not created a favorable condition for labor-intensive industries at all.

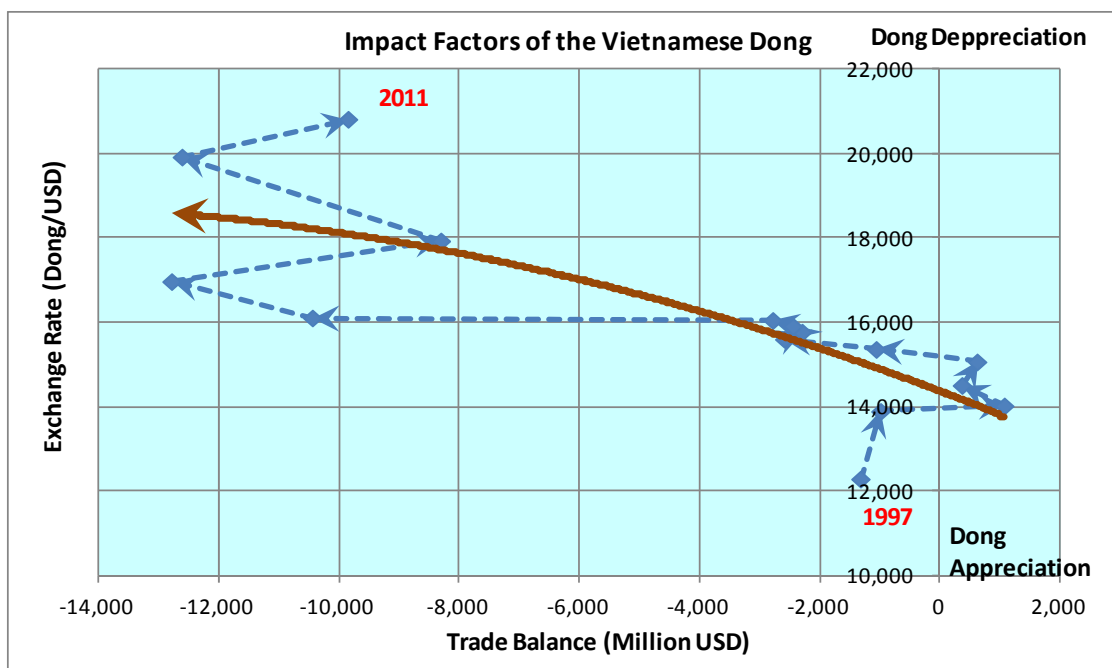
(4) For these reasons, the strong Chinese yuan and Thai baht have triggered the relocation of Japanese companies' production sites to Cambodia. Moreover, the weak Vietnamese dong has not deterred the relocation of Japanese companies' production sites to Cambodia.





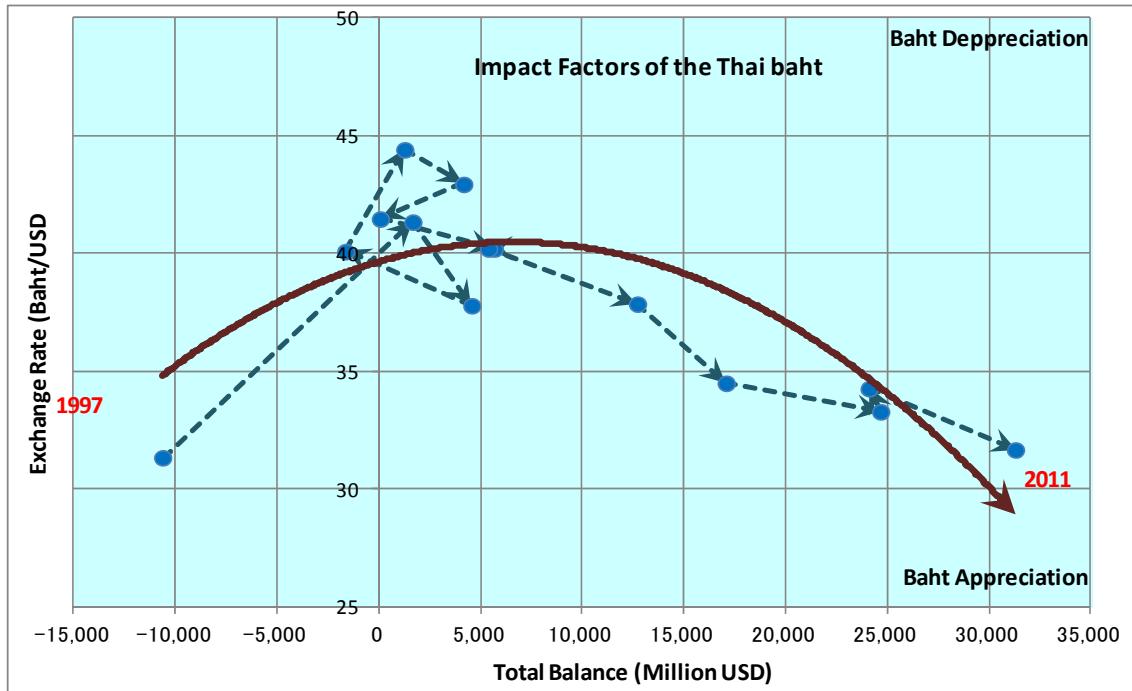
**Figure 4-6: Impact Factors of the Chinese Yuan**

Source: Created by Study team based on the documents of IFS



**Figure 4-7: Impact Factors of the Vietnamese Dong**

Source: Created by Study team based on the documents of IFS



**Figure 4-8: Impact Factors of the Thai Baht**

Source: Created by Study team based on the documents of IFS

#### 4-4. The Nominal Wage Rate and Electricity Cost Rate of Each Type of Japanese Manufacturing

(1) Manufacturers that enter Cambodia to seek cheap labor are labor-intensive. The degree of labor intensiveness can be measured by the high nominal wage rate against the amount of factory shipments. Moreover, because Cambodia lacks sufficient electric power to meet its demand, it accommodates industries that consume power in small amounts. The following page lists the industry types of Japanese companies starting from the highest ratio of nominal wage against the amount of factory shipments, and from the lowest ratio of electric power cost against the amount of factory shipments. The average ratio of nominal wage against the amount of shipments in manufacturing in Japan is 14%.

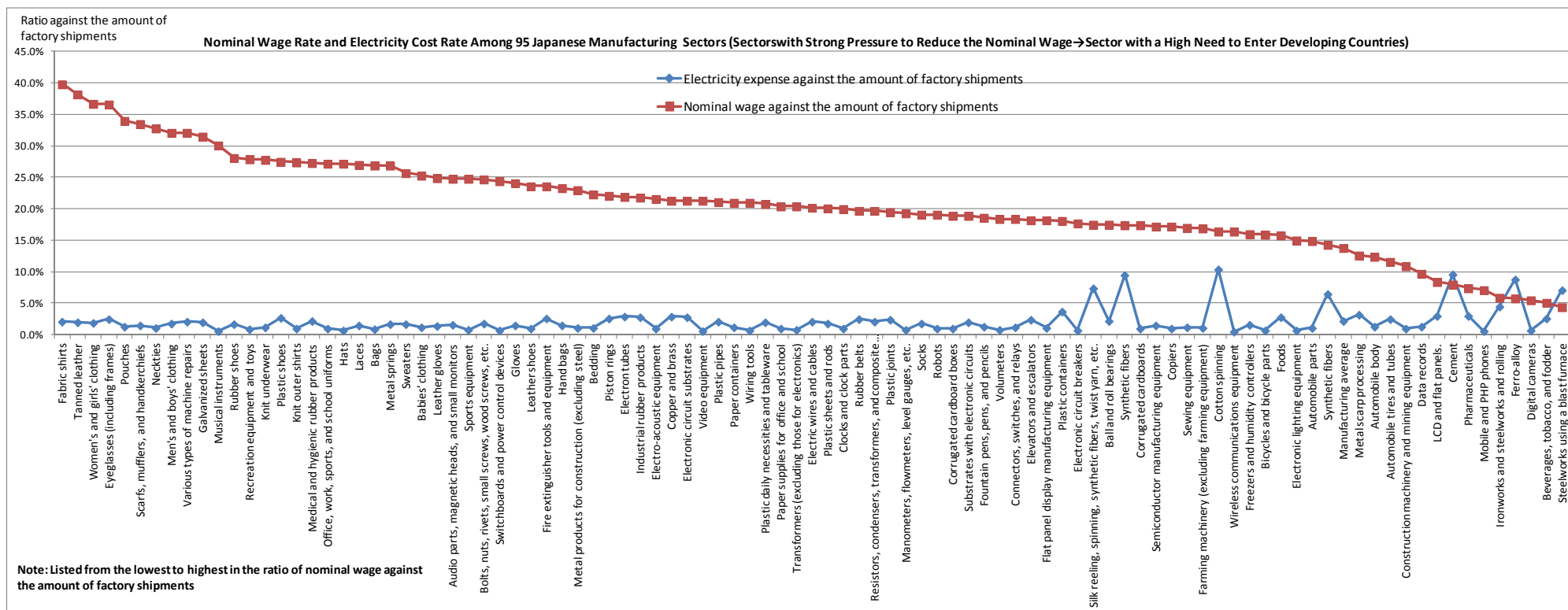
(2) The ratio of nominal wage against the amount of factory shipments is over 30% for general sewing, eyeglasses, shoes, bags, gloves, and hats, galvanizing processes, machine repairs, recreational equipment and musical instruments, and metal springs, etc.

(3) The same ratio is over 20% and less than 30% for audio parts, small motors, sports equipment, bolt nuts and screws, switchboards and power controllers, fire extinguishers, final processing of

metal products for construction, wire harnesses, mold plastics, clock and clock parts, corrugated cardboard boxes, stationery, etc.

(4) In contrast, in capital-intensive industries (process industries), those with a ratio that falls below 10% include CDs and DVDs, LCD and flat panels, cement, pharmaceuticals, mobile phones, iron-works, steelworks and rolling, etc.

(5) In fact, the companies that have entered Cambodia specialize in fields that demonstrate a high ratio of nominal wage against the amount of factory shipments, such as general sewing, eyeglasses, shoes, bags, gloves, and hats, galvanizing processes, metal springs, audio parts, small motors, coils and transformers, bolt nuts and screws, wire harnesses, mold plastics, clocks and clock parts, corrugated cardboard boxes, stationery, bicycles, construction materials, etc. These industries will prioritize Phnom Penh as long as they require that infrastructure is in place and labor can be secured. However, there are quite a few companies who have entered the Bavet region, which offers cheap rent, despite lacking these requirements. This is based on corporate strategy and does not rely on the government's policy on the choice of industrial locations.



**Figure 4-9: Nominal Wage Rate and Electricity Cost Rate Among Japanese Manufacturing Sectors**

Source: Created based on the data in "Statistical Charts on the Industry and by Industry Type" in 2010 Statistical Charts on Industry (Research and Statistics Department, Minister's Secretariat, Ministry of Economy, Trade, and Industry (METI))

(6) Chinese companies are also making forays into Cambodia. When studying the nominal wage ratio by business type in China, the order is very similar with that for Japan. We have already discussed that Chinese companies specializing in sewing and other labor-intensive companies have entered Cambodia, which can also be concluded from this data.

**Table 4-1: The Nominal Wage Ratio by Business Type According to Economic Research Center, Renmin University of China**

| Industrial Sector             | Nominal wage/manufacturing cost |
|-------------------------------|---------------------------------|
| Sewn products                 | 41.6%                           |
| Crafts                        | 39.9%                           |
| Wood processing and furniture | 35.1%                           |
| Non-metal processing          | 29.6%                           |
| Paper packaging               | 28.6%                           |
| Automobiles                   | 26.7%                           |
| Metal processing              | 25.6%                           |
| Chemicals                     | 25.0%                           |
| Metal rolling and processing  | 22.0%                           |
| Electrical                    | 21.8%                           |
| Office equipment              | 19.8%                           |
| Spinning                      | 18.3%                           |

**Note:** The amount of factory shipments could not be obtained.

**Source:** Economic Research Center, Renmin University of China, "2010 Analysis of Input and Output"

(7) In Vietnam, the nominal wage ratios by business type are not disclosed. For this reason, the Japanese companies that have entered Vietnam in the early phase were studied. The study shows that Japanese companies began entering Vietnam from around 1991. The popularity of Vietnam among Japanese companies came to take full effect with the conclusion of the peace agreement between Cambodia and Vietnam in 1992 and the cancellation of the economic sanctions against Vietnam by the U.S. government in 1994. Actually, the reception of foreign companies in Vietnam was in full swing when Tan Thuan Industrial Park opened in 1993, triggering the construction of other industrial parks.

(8) The Japanese companies that entered Vietnam in the 1990s were not the same ones that are entering Cambodia today. However, they are labor-intensive industries that require cheap labor. The chart below shows the Japanese companies that entered Vietnam in the 1990s. Some of them have partially entered Cambodia, making them the possible candidates for entering Cambodia in a broader sense. However, the decision to designate Vietnam or Thailand as the main production site in ASEAN, or to newly enter Cambodia, Myanmar, or Laos, etc., varies widely according to each company's strategy. Since around 2000, Vietnam has received an increasing number of parts-supply industries, largely motorcycles and automobiles. In addition, the country has received capital-intensive (process) and technology-intensive industries, namely cement, CDs and DVDs, LCD and flat panel TVs and monitors, mobile phones, industries related to oil refineries, etc. Moreover, from 2010s, pharmaceuticals, shipbuilding, iron works, steel works and rolling, and petrochemical plants have also begun to enter Vietnam.

**Table 4-2: Japanese Companies That Entered Vietnam in the 1990s**

|      | Business type (name of parent company)   |
|------|--|
| 1990 | Corrugated cardboard (Rengo)   |
| 1993 | Wire harnesses for automobiles (Furukawa Electric)   |
| 1994 | Paint (Nippon Paint), joints (TECHNO Holdings)   |
| 1995 | Instant noodles (Acecook), mold plastics (DAIWA PLASTICS), infrastructural pumps (Ebara), underwear (Gunze), terminals for connectors and mold plastic parts |

|      | Business type (name of parent company)   |
|------|--|
|      | (RHYTHM KYOSHIN), sewing machine needles (Organ Needle), Tenma (mold plastics), women's clothing (Yasuda Hosei)  |
| 1996 | Spices (Ajinomoto), copper wire rods (Furukawa Electric), mold plastics (Eidaiko), print substrates (Fujitsu), bags for containers (Nihon Matai), metal processing (MK Seiko), motorcycles (Suzuki), wire harnesses for automobiles (YAZAKI), mold plastics (Muto Seiko)   |
| 1997 | Motorcycles (Honda), motorcycle parts (Goshi Giken), rechargeable batteries for motorcycles and four-wheeled vehicles (Yuasa), antennae for automobiles (Harada Industry), control cables for motorcycles and automobiles (HI-LEX), assembly of trucks and buses (Hino Motors), uniforms (Co-Cos Nobuoka), small motors (Mabuchi Motor), switchboards and control panels (Nishishiba Electric), brakes for motorcycles and automobiles (Nissin Kogyo), sewing (Nomura Trading), galvanized sheets (Sumitomo Corporation), wire harnesses (Sumitomo Electric Industries), sheets for motorcycles and automobiles (Toyota Boshoku), uniforms (ITOCHU), women's underwear (Wacoal), uniforms (Marubeni) |
| 1998 | Women's bags (AS'TY), motorcycle and automobile parts (Mitsuba), ink ribbons (Shirasaki), galvanized sheets (Maruichi Steel Tube), motorcycles (Yamaha Motor), sanitary ware (INAX)  |
| 1999 | Small motors (Nidec), flexible circuit substrates (Nitto Denko)  |

Source: Toyo Keizai, "List of Companies Expanding Overseas (2012)"

### 5) Trends Among Japanese Companies Entering Cambodia and Bavet

In this research, interviews were conducted with Japanese companies in Ho Chi Minh City in Vietnam and Bavet. In Ho Chi Minh City, information regarding [the companies'] interest in entering Cambodia and Bavet was obtained. Meanwhile, in Bavet, information was obtained regarding the business environments from the perspective of Japanese companies that have entered the region. Of course, in the case of the latter, there is the pressing necessity to address the issues of inadequate infrastructure and lack of workers.

In this research, the number of the companies interviewed is small, as the on-site fieldwork was conducted in the time frame of less than one month. Based on this, qualitative projections were drawn from the interviews.

### (1) Results of Interviews with Japanese Companies in Ho Chi Minh City

Table 4-3: Results of Interviews with Japanese Companies in Ho Chi Minh City

| Company name | Year entered Vietnam | Business types  | The ratio of labor cost against the amount of factory shipments  | Interest in entering Cambodia and Bavet  |
|--------------|----------------------|---|--|--|
| Company1     | 1996                 | Production of floor mats for automobiles and plastic covers for baths. Export all products to Japan | 15% The extrusion process is capital-intensive. Post-processing (adjustments by cutting the spillover parts) is labor-intensive. | No interest. The extrusion process is capital-intensive. Therefore, high electricity cost and unstable electricity supply would impact the production. |
| Company2     | 1995                 | Mold plastic parts (for motorcycles, automobiles, PCs, cameras, eye drops, lipsticks, etc.) Ex-     | 15%  | Because machines must be used, must have a stable supply of cheap electricity. In this regard, Cambodia presents con-                                  |

| Company name | Year entered Vietnam | Business types  | The ratio of labor cost against the amount of factory shipments | Interest in entering Cambodia and Bavet   |
|--------------|----------------------|---|---|---|
|              |                      | ports to Japan: local prime-contractor sales: local internal sales=20:50:30   |   | cerns. Because the labor cost ratio is not high, rival companies also do not yet have interest in Cambodia or Bavet.  |
| Company3     | 1997                 | Production of stationery (collection tapes and glue tapes). Export to the parent company in Japan. Re-export by the parent company to Japan, U.S., and Asia.  | High at 25%.  | The executive(s) from the Tokyo headquarters surveyed Cambodia two to three times and are now considering entering Cambodia. However, Cambodian workers are known in Vietnam to exhibit low productivity and lack diligence. For these reasons, [I] would like to visit Cambodia and check the country with [my] own eyes.  |
| Company4     | 1995                 | Production of eye-glass frames, watch bands, watch frames, and fishing gear. Excels in technologies for super hard ceramics, pure titanium, non-nickel super-hard materials, and shape-memory alloys. [Export] all products to the headquarters in Japan, which are then re-exported to each country. | Very high at 75%  | The manufacture of watches in Japan is concentrated in China. Because of the growing anti-Japanese sentiment in China, CASIO has internally decided to transfer its production framework to ASEAN to avert risks. In response, Nissey has proposed to CASIO to eventually launch an all-in-one CASIO factory at Dragon King SEZ in Bavet. This proposal was accepted. On January 18, 2013, the launch of a 13ha factory at Dragon King SEZ was approved at Nissey's Board of Directors' Meeting. Than Thuan factory in Vietnam will differentiate itself by producing high and medium-end products and handling casts and surface treatments. The Dragon King factory will produce low-end products, and handle pressing, |

| Company name | Year entered Vietnam  | Business types  | The ratio of labor cost against the amount of factory shipments  | Interest in entering Cambodia and Bavet   |
|--------------|---|---|--|---|
|              |   |   |  | casing, and assembly.   |
| Company5     | 1995  | Production of needles for sewing machines. Share in Japan is 80%, while worldwide share is 15% (following Germany). Export all products to the headquarters in Japan. | 30% and 50% if produced in Japan. The reason why the labor cost ratio is high despite being an industry that is based on machines is because 56 processes are required to make one needle for sewing machines. Both small machines and human hands are required. The labor cost ratio is high, but fixed expenses are reduced because of the high worldwide share. | Eight Vietnamese technicians (general manager level) have acquired the technology over eighteen years since the opening and supervise the workers. For these reasons, if the operation is to be transferred to Cambodia, these eight technicians will no longer be able to work with [us]. Although the labor cost ratio is high, [we] cannot go anywhere else. |
| Company6     | MURAY A began operations in 1996. The company was acquired in 2004. | Production of women's underwear. Export all products to Japan   | 20% (the reason why it is low for a sewing business is because [we] cut down on indirect labor such as administration and accounting)  | The issue in Vietnam is that the rapid growth of labor cost is eating the profit away. At the moment, the headquarters in Japan is considering entry to Cambodia, Myanmar, and Bangladesh. The problem with Cambodia is that the cities are underdeveloped. For this reason, it is not easy to secure labor.  |
| Company7     | 1997  | Production of various types of uniforms. Export all products to Japan.  | 50% (the labor cost ratio of most sewing companies at Tan Thuan EPZ falls between 40% and 50%). In the production of uniforms, the unit price of factory shipments is especially cheap.  | [We] are interested in entering Cambodia. The Bavet region offers easy access to Bavet, so [our] eyes are focused on that location.   |
| Company8     | 1995  | Production of collection tapes, glue tapes, files, and sta-   | 20% The correction tapes are labor-intensive at  | Labor-intensive items such as correction tapes may be transferred for   |



| Company name | Year entered Vietnam   | Business types   | The ratio of labor cost against the amount of factory shipments   | Interest in entering Cambodia and Bavet  |
|--------------|--|--|---|--|
|              |  | plers. 5% is sold to Vietnam, and 95% is exported to the headquarters in Japan.  | 25% and the files are machine-intensive at 15%.   | production in Cambodia in the future.  |
| Company9     | Launched by Shirasaki Vietnam fifteen years ago. Acquired in 2012. | Production of ink and fabric ribbons. Export all products.   | 20% We will face difficulties if it surpasses 20% along with future wage increases.   | Because the company was acquired only recently, it will take a long time to recover the investment. For the time being, there are no plans to enter Cambodia.  |
| Company10    | 1995   | Processing of mold plastics. The products are shipped within Vietnam for use in washing machines (Haier and Panasonic), refrigerators (Haier), televisions (Panasonic), motors (Samsung), battery cases (Yamaha and Honda), exterior parts (Yamaha, Honda, and Suzuki), etc. | Low at 10%. Because the operation is capital-intensive, higher raw materials would impact the profit more than increases in labor cost. | Because [the products] are sold within Vietnam, if they are to be made in Cambodia, they may not satisfy the quality standards of the customers in Vietnam. For this reason, it is too early for the company to consider entering Cambodia.  |
| Company11    | 1997   | Production, processing, and sale of secondary sewing materials and sewing of women's casuals. The demand is expanding both within the country and abroad. In particular, many sewing materials are secured from Bavet to Vietnam.  | Because the company is a trading company, this standard does not apply.   | Phnom Penh offers advantages in terms of the size of the sewing population. However, the size in Bavet is low. With the way things are now, it would be difficult to improve productivity and quality in the sewing business. When there are so many workers quitting as in Bavet, [workers] will not acquire skills and productivity and quality do not stabilize. Once the infrastructure is in place in 2015, there will be many Japanese sewing companies transferring to Myanmar. |
| Company12    | 1998   | Design, construction, and sale of wa-  | Because the company is a construc-  | In light of the future increase in [Japanese com-  |

| Company name | Year entered Vietnam | Business types   | The ratio of labor cost against the amount of factory shipments  | Interest in entering Cambodia and Bavet   |
|--------------|----------------------|--|--|---|
|              |                      | ter treatment equipment to accommodate the launch of factories. Water quality tests. Sale of various types of chemicals for improving water quality. All products are sold within Vietnam.   | tion company, this standard does not apply.  | panies] entering Bavet, there will be a need for relatively large purifying facilities.   |
| Company13    | 2004                 | Production of high-pressure, oil-pressure pumps and parts. The main use is for machines (Komatsu, Hitachi Construction Machinery, and Caterpillar). The products are indirectly exported to China, which accounts for 40% of the world's demand for construction machinery. 100% to the headquarters in Japan. Re-exported from Japan to China, etc. | 15% (in Japan, high at 25%).   | The business is not labor-intensive. As such, future sites for entry would not be somewhere with cheap labor but ones with large markets, such as Central and South America. Because of the quality and quantity of the workers, [we] are not interested in Cambodia. |
| Company14    | 2006                 | All-in-one production of aluminum products, including dies, surface-treatment, and extrusion (frame for solar panels <for Japan and Europe, including KYOCERA and Panasonic>, sashes). 40% to Japan, 40% to Vietnam, 10% to Thailand, and 10% to others. However, in each country, 90% to Japanese companies.  | Around 7%, since [the company] is in a process industry. Going forward, there will be more workers and technicians as the level of processes becomes high. There would therefore be a demand for higher wages. | Because Cambodia lacks adequate electric power supplies, it would not be a candidate. Moreover, because [the company] is in a process industry, cheap labor alone would not present an advantage.   |

**Note: Shaded cells indicate an interest in Cambodia and Bavet.**

**Source: Created by Study team**

**(2) Results of Interviews with Japanese and Taiwanese Companies That Have Already Entered Bavet (February 7, 2013)**

**Table 4-4: Results of Interviews with Japanese and Taiwanese Companies That Have Already Entered Bavet (February 7, 2013)**

| <b>Company name</b> | <b>Business type</b>   | <b>Reasons for entering</b>  | <b>Business and management after entry</b>   |
|---------------------|--|--|--|
| Company15           | Production of men's clothing (for export to Japan)           | "The president of the headquarters chose this site, enticed by the words of Forval."   | The workers' productivity is extremely poor, amounting merely to 50% of Chinese factories. Losses from errors amount to 30%. The workers were recruited through Forval, who takes two-months' worth of wages as commission. Moreover, as for the problem faced by the company itself, it has not appointed full-time supervisor(s) in sewing. Because [the company] is nowhere near solvency, [Mr.] Tanaka is thinking of selling the factory.   |
| Company16           | Production of polyethylene and vinyl bags (exports to Japan) | Instead of building additions to the Shanghai factory, compared Vietnam with this location in Cambodia. Because [a] rival company entered Vietnam, [the company] selected this location. | During the first year since the launch, six Chinese workers from the Shanghai factory came to supervise. The productivity is 70% of the Shanghai factory. The workers were recruited through Forval. There is a significant shortage of electric power.  |
| Company17           | Underwear for babies (exports to Japan)                      | Wage increases and lack of labor at the Fushun factory   | The Fushun factory was launched sixteen years ago. The sewing specialist(s) from that time were also brought along to supervise here. There are five full-time Chinese staff who supervise. Improvements were made so that daily production increased from 200 to 1,000. Nonetheless, this is merely half of the productivity at the Fushun factory. Hoping for improved productivity in the future. [We] think that the rate of losses can be reduced to 2%.<br>There are many workers who travel the distance of 25 kilometers. Those who live closer have already been taken by companies who established themselves earlier. Moreover, the first ones to leave are those that live farther away. Many workers are hired away by Taiwanese and Chinese companies. |
| Company18           | Production of women's gloves                                 | The factories in Tianjin, Shandong, and Kunshan  | Once [we] made a switch to controlling processes by product type, an   |

| Company name | Business type                            | Reasons for entering  | Business and management after entry  |
|--------------|--|---|--|
|              | (for export to Japan)                    | are being scaled down due to wage increases and labor issues. In China, [companies] cannot withdraw without the government's approval. Therefore, operations continue against [our] will through balanced contraction. Commission-based processing is also done in Bangladesh and the Philippines.  | improvement was successfully made from 50% to 70% that of Chinese factories in a year. Right now, [we] plan to set the standard work time, calculate the standard cost, and analyze the standard cost.<br>90% of the workers travel to work by trucks. There are workers who spend around two hours to travel to work, with one hour or more plus walking. Traveling 30 kilometers takes an hour. The attrition rate is between 10% and 15%.<br>At Bavet, [the company] seeks to recover in five years, so the land is leased for five years. After that, because wage increase is thought to be inevitable also in Myanmar, [we] are thinking of entering Ethiopia, a Catholic country. [I] actually went to survey the site. In general, it looked good. |
| Company19    | Dying of cotton fabric (indirect export) | Sewing companies have transferred from China to Cambodia. [We] can benefit from GSP in Cambodia and Myanmar. The site is 14ha. [The company] supplies dyed fabric to brand sewing companies in Phnom Penh and Ho Chi Minh City. Through these locations, [the company] indirectly exports to major companies, including Puma (U.S.), Benetton (U.S.), Mizuno (Japan), and UNIQLO (Japan). In terms of products directly delivered, 45% are to Phnom Penh and 45% are to Ho Chi Minh City. | The dying machine(s) are controlled by computer(s). As such, for electricity, power generator(s) using heavy oil have been installed. The generation cost is 29%, double the EDC. Because the operation is capital-intensive, Cambodians are involved only during the final process(es). Machine processing is done by foreigners. The quality of workers is poor. The attrition rate is 7%. The core workers are Chinese, Taiwanese, and Malaysian, who account for 25% of all workers (300 persons). The company is fully equipped with water and sewage system(s), as well as water treatment facilities.   |

Source: Created by Study team

#### 4-6. Summary of the Data Regarding the Choice of Bavet as an Industrial Site Through This Research

(1) Cambodia's neighboring countries, including Japan, China, Thailand, and Vietnam, are faced with the necessity to transfer their sewing, electrical and electronic, and machinery industries, which are labor-intensive. The backdrop to this trend is higher wages, difficulty in securing labor, and higher exchange rate(s). The first industry facing the need to transfer their production is sewing

businesses that manufacture low-fashion everyday wear. The second industry encompasses the assembly of wire harnesses for electrical and electronic devices, assembly of coils and transformers, and assembly of small electronics. The third industry includes surface treatment (galvanizing, painting, and high frequency) in post-processing and assembly and wiring (print circuit processing, assembly of parts, mounting, etc.) in precision machinery, chassis and automobile components (fuel tanks, exhaust pipes, mufflers, window frames, seats, air bags, etc.) in automobile parts, and electrical components and others (switches, meters, wipers, alarms, heaters, etc.).

(2) For empirical analysis, the following were conducted: comparative analysis of recent wage standards among developing countries; historical analysis of wages and labor productivity among the neighboring countries; historical analysis of currency rates among the neighboring countries; analysis of the nominal wage rate and electricity cost rate among Japanese manufacturing businesses; analysis of the nominal wage ratio by business type in China; analysis of Japanese companies that entered Vietnam in the early phase (1990s); and interviews with Japanese and some Taiwanese companies in Ho Chi Minh City in Vietnam and the Bavet region. As a result, it is projected that companies mentioned in (1) would enter the Bavet region in the future.

(3) Conducting each study revealed that the reasons why the Bavet region is selected are as follows: ease of access to the developed port(s) of Ho Chi Minh City; the excellent road infrastructure between Ho Chi Minh City and Bavet; the production linkage with the factories in Ho Chi Minh City; and the cheap rent in Bavet. In particular, Cai Mep-Thi Vai Port in the province adjacent to Ho Chi Minh City (Ba Ria Vung Tau Province) is an open port located in alignment with Shanghai and Singapore. Daily direct services are available to Europe, U.S., and Japan. The time cost is far better than those at Laem Chabang Port in Thailand and Sihanoukville Port in Cambodia, which are located within a bay. For these reasons, Bavet has the potential to draw a large number of industries. On the other hand, there are issues of labor shortage, inadequate electric power and water systems at industrial complexes named "SEZ," and activities by consultant(s) that were identified to have solicited investment without disclosing these problems. The interviews in Bavet, combined with these issues, also showed that, undeniably, companies may have been misinformed in selecting the locations for investment.

(4) These issues can be categorized into two: those that ought to be resolved by companies who entered Bavet, and those that require public aid. The companies, implementing bodies of SEZs, and third-party developers must take commercial initiatives to build dormitories and commercial facilities to secure labor and install power generators and water systems. In Vietnam, industrial park(s) developed by VSIP (Singapore) are accompanied by dormitories and commercial facilities in the neighboring area(s). While [they] have not received any public aid, at Thang Long Industrial Park, demand is being made to the Japanese government to provide public aid for such facilities. As long as there is VSIP's precedent, it would not be easy to receive public aid that breaks the balance. In this regard, the same applies to Cambodia. In any case, in terms of the infrastructure, the start is to carefully inspect the agreements concluded between the Cambodian government and the implementing bodies of SEZs, as well as those between the implementing bodies of SEZs and the tenant companies.

"The Survey of Japanese-Affiliated Companies in Asia and Oceania" conducted by JETRO in 2012 shows the directions for business development in the next one-two years by country/region. According to the survey result for 3,805 Japanese companies, the high ratio of business expansion needs in the invested countries are put in order as (i) Lao PDR (94%), (ii) India (84%), (iii) Bangladesh (82%), (iv) Indonesia (77%) and Cambodia (77%). Incidentally, Vietnam (66%), China (52%) are dropped from the previous survey in 2011. On the contrary, the ratio of needs for downsizing and relocating to a third country/region or withdrawal is gone up for China (5.8%), Vietnam (2.0%) from the previous survey in 2011. Additionally, Cambodia is shown as nothing (0%) in the year 2012 survey.

When we apply the latter ratio to accumulated numbers of Japanese companies invested in China (total 23,000 firms) and Vietnam (total 1,500 firms) until the end of 2012, we can get the numbers of

companies which have intentions of downsizing and relocating to a third country/region or withdrawal as 1,330 firms from China and 30 firms from Vietnam. If the existing shortage of labor force and lack of infrastructure in Bavet will be solved in the future, the investment for relocation will be stimulated from China and Vietnam to there, though the converse is also true in case of no improvement in Bavet.

## 5. PROBLEMS WITH INFRASTRUCTURE CONDITIONS OF EXISTING SEZs AND FACTORIES

### 5-1. Special Conditions of Infrastructures in Bavet Region

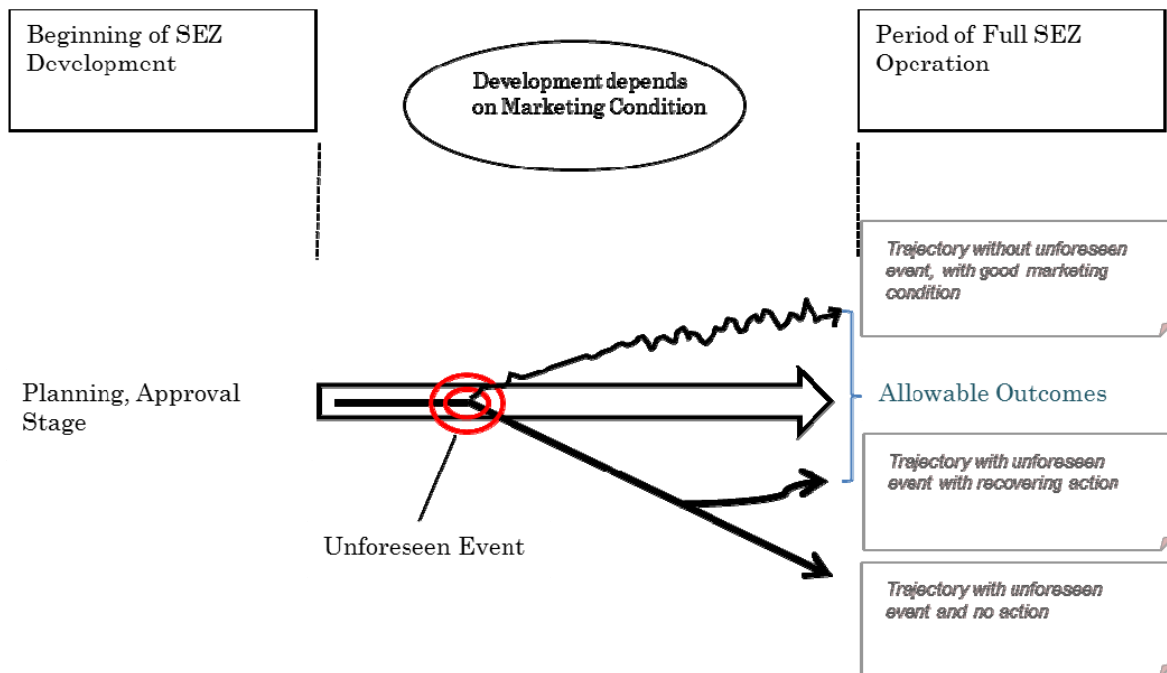
In terms of world economic situations, due to changes in Chinese labor cost, China cannot be the only one major industrial base, anymore. Many of them tend to move toward south-east Asia. Specifically Cambodia has a tax advantage as a least developed country. In this respect, country borders such as Bavet have a great advantage to form a joint production process between Cambodia, where small parts can be made, and Vietnam, where whole products are assembled. Foreign investors pay attention to Bavet because of the relatively low labor cost with plenty of workers and the closest distance to Vietnam. Manhattan SEZ and Tai Seng Bavet SEZ started operation in 2006 in Bavet region. Following them, a few more SEZs were authorized by CDC.

**Table 5-1: SEZs and Factories in Bavet Region**

| SEZ                      | Operation Condition   | Remarks or Problems with Infrastructure                                    |
|--------------------------|---|--|
| Manhattan SEZ            | 19 Factories are operating.                                       | Electric power shortage, Poor transportation for workers, Frequent strikes |
| Tai Seng SE              | 5 Factories are operating.  | Above + improper waste water system  |
| Tai Seng Sub             | 3 Factories are operating.  | Same above   |
| Dragon King SEZ          | Under land developing.<br>1 Factory is under construction.        |  |
| Shandong Industrial Park | Under land developing.<br>A few factories are under construction. |  |
| Hi Park SEZ              | Jan. 2013, SEZ development plan was authorized.                   | Total development area is 300ha.   |
| Nissin Factory           | Factory was built in 2012. Under operation.                       | Land area is 5ha. Self- infrastructure.                                    |
| Rocks Factory            | 5ha land is under construction.                                   | To be self-infrastructure  |

**Source: Study team**

However, in 2012, infrastructure problems started coming out; shortage of electricity, improper waste water system, poor transportation system for workers, insufficient dormitory and strikes. The main cause of those problems is from agglomerating effect of several SEZs and factories. The location of SEZs and the time of development were coincidentally near and close. Agglomerating SEZs, which are composed from independent SEZ, creates huge infrastructure demand suddenly and unexpectedly. With the situation as it is, some factories have been experiencing a hard time to continue the operation. Urgent remedies are strongly required.



**Figure 5-1: Development Scenarios due to Occurrence of Agglomerating Effect**

Source: Study team

## 5-2. Unit for Forecasting Future Development

The unit is necessary for forecasting future infrastructure demand. The unit is calculated using existing actual data of electrical consumption (metering monitoring data), numbers of workers, and numbers of factories.

### (1) Unit for Forecasting ElectricPower Demand

The unit is calculated by the existing monitoring metering data recorded by the Tai Seng Bavet operation team. The date of December 2012 (Tai Seng Bavet SEZ and Tai Seng Bavet SEZ Sub) is used. A copy of the data is seen on the next page.



**Table 5-2: Tai Seng Bavet SEZ (date of December 2012)**

| TAI SENG SEZ BAVET CO.,LTD<br>SUB, KILOWATT METER HOUR RECORDING<br>THE MONTH ENDED FOR DECEMBER 31,2012 |                     |            |            |              |                                    |
|--|---------------------|------------|------------|--------------|------------------------------------|
| No   | Client / Owner Name | Dec. (kwh) | Nov. (kwh) | Actual (kwh) | Remark                             |
| 1  |                     | 331900     | 301784     | 30116        |                                    |
| 2  |                     | 4943.9     | 4909.5     | 34.4         |                                    |
| 3  |                     | 211472.6   | 207801.6   | 3671         | x10                                |
| 4  |                     | 669012.5   | 668929.2   | 83.3         | x10                                |
| 5  |                     | 173178.4   | 158089.8   | 15088.6      | x10                                |
| 6  |                     | 391419     | 380826.4   | 10592.6      | x10                                |
| 7  |                     | 272538.1   | 239745.1   | 32793        | x10                                |
| 8  |                     | 173700.9   | 160376.4   | 13324.5      |                                    |
| 9  |                     | 20799      | 18235      | 2564         |                                    |
| 10   |                     | 8410.8     | 8118.5     | 292.3        |                                    |
| 11   |                     | 18202.4    | 17324.9    | 877.5        |                                    |
| 12   |                     | 3346       | 2967       | 379          | new install(old kwh) BY SIAOFEN LY |
| 13   |                     | 396.1      | 329.5      | 66.6         | new install by SIAOFEN LY          |
| 14   |                     | 12521      | 12501.9    | 19.1         | ឈប់ប្រើក្នុងខែ ១២៖                 |
| 15   |                     | 7187.5     | 7175.4     | 12.1         | ឈប់ប្រើក្នុងខែ ១២៖                 |
| 16   |                     | 15367.1    | 15363.2    | 3.9          | ឈប់ប្រើក្នុងខែ ១២៖                 |
| 17   |                     | 88771.4    | 74073.1    | 14698.3      | new Install by HUA LY              |
| 18   |                     | 81966.9    | 59395.7    | 22571.2      | new install by HUA LY              |
| 19   |                     | 147.5      | 147.5      | 0            | ដាច់ខ្សែ Not use                   |
| 20   |                     | 21936      | 19817      | 2119         | new install by SIAOFEN LY          |
| 21   |                     | 1463       | 1422       | 41           |                                    |
| 22   |                     | 18.6       | 18.6       | 0            | new install by SIAOFEN LY          |
| 23   |                     | 1175.8     | 810.4      | 365.4        | new install by SIAOFEN LY          |
| 24   |                     | 144.6      | 0          | 144.6        | x10 and 1kw.h =800 ៛               |
| 25   |                     | 12597.1    | 0          | 12597.1      | new install by SIAOFEN LY          |
| 26   |                     | 669169.5   | 669012.5   | 157          | x10 and 1kw.h =800 ៛               |
| 27   |                     |            | 0          | 0            |                                    |
| 28   |                     |            | 0          | 0            |                                    |
| 29   |                     |            | 0          | 0            |                                    |
| 30   |                     |            | 0          | 0            |                                    |
| 31   |                     |            | 0          | 0            |                                    |
| 32   |                     |            | 0          | 0            |                                    |
| 33   |                     |            | 0          | 0            |                                    |
| 34   |                     |            | 0          | 0            |                                    |
| 35   |                     |            | 0          | 0            |                                    |
| 36   |                     |            | 0          | 0            |                                    |
| 37   |                     |            | 0          | 0            |                                    |
| 38   |                     |            | 0          | 0            |                                    |

Source: Tai Seng SEZ

Using these data and operating factory lot area, the unit is calculated.

**Table 5-3: Calculation of Unit for Forecasting Electric Power Demand in the Future (Based on Data of Tai Seng Bavet SEZ / Tai Seng Bavet SEZ Sub)**

Data of Taisen SEZ / Taisen SEZ / Taisen SEZ / Taisen SEZ / Taisen SEZ

**TAI SENG SEZ BAVET CO. LTD**  
**SUB-MICROWATT METER HOUR RECORDING**  
**THE MONTH ENDED FOR DECEMBER 31, 2012**

| No | Client / Owner Name | Dec. (kwh) | Nov. (kwh) | Actual (kwh) | Consumption (kwh) | Remark                              |
|----|---------------------|------------|------------|--------------|-------------------|-------------------------------------|
| 1  |                     | 331900     | 301784     | 30116        | 30,116.00         |                                     |
| 2  |                     | 4943.9     | 4909.5     | 34.4         | 34.40             |                                     |
| 3  |                     | 211472.6   | 207801.6   | 3671         | 36,710.00         | x10                                 |
| 4  |                     | 669012.5   | 668929.2   | 83.3         | 833.00            | x10                                 |
| 5  |                     | 173178.4   | 158089.8   | 15088.6      | 150,888.00        | x10                                 |
| 6  |                     | 391419     | 380626.4   | 10592.6      | 105,926.00        | x10                                 |
| 7  |                     | 272538.1   | 239745.1   | 32793        | 327,930.00        | x10                                 |
| 8  |                     | 173700.9   | 160376.4   | 13324.5      | 13,324.50         |                                     |
| 9  |                     | 20799      | 18235      | 2564         | 2,564.00          |                                     |
| 10 |                     | 8410.8     | 8118.5     | 292.3        | 292.30            |                                     |
| 11 |                     | 18202.4    | 17324.9    | 877.5        | 877.50            |                                     |
| 12 |                     | 3346       | 2967       | 379          | 379.00            | new install old kw h) BY SIAOFEN LY |
| 13 |                     | 396.1      | 329.5      | 66.6         | 66.60             | new install by SIAOFEN LY           |
| 14 |                     | 12521      | 12501.9    | 19.1         | 19.10             | new install by HJIA LY              |
| 15 |                     | 7187.5     | 7175.4     | 12.1         | 12.10             | new install by SIAOFEN LY           |
| 16 |                     | 15367.1    | 15363.2    | 3.9          | 3.90              | new install by SIAOFEN LY           |
| 17 |                     | 88771.4    | 74073.1    | 14698.3      | 14,698.30         | new install by HJIA LY              |
| 18 |                     | 81966.9    | 59395.7    | 22571.2      | 22,571.20         | new install by HJIA LY              |
| 19 |                     | 147.5      | 147.5      | 0            | 0.00              | Not use                             |
| 20 |                     | 21936      | 19817      | 2119         | 2,119.00          | new install by SIAOFEN LY           |
| 21 |                     | 1463       | 1422       | 41           | 41.00             |                                     |
| 22 |                     | 18.6       | 18.6       | 0            | 0.00              | new install by SIAOFEN LY           |
| 23 |                     | 1175.8     | 810.4      | 365.4        | 365.40            | new install by SIAOFEN LY           |
| 24 |                     | 144.6      | 0          | 144.6        | 1,446.00          | x10 and 1kwh =800 *                 |
| 25 |                     | 12597.1    | 0          | 12597.1      | 12,597.10         | new install by SIAOFEN LY           |
| 26 |                     | 669169.5   | 669012.5   | 157          | 1,570.00          | x10 and 1kwh =800 *                 |
| 27 |                     |            | 0          | 0            |                   |                                     |
| 28 |                     |            | 0          | 0            |                   |                                     |
| 29 |                     |            | 0          | 0            |                   |                                     |
| 30 |                     |            | 0          | 0            |                   |                                     |
| 31 |                     |            | 0          | 0            |                   |                                     |
| 32 |                     |            | 0          | 0            |                   |                                     |
| 33 |                     |            | 0          | 0            |                   |                                     |
| 34 |                     |            | 0          | 0            |                   |                                     |
| 35 |                     |            | 0          | 0            |                   |                                     |
| 36 |                     |            | 0          | 0            |                   |                                     |
| 37 |                     |            | 0          | 0            |                   |                                     |
| 38 |                     |            | 0          | 0            |                   |                                     |

|                        |            |                    |
|------------------------|------------|--------------------|
| Total                  | 725,382.40 |                    |
| Total (Taisen 1)       | 629,852.60 |                    |
| Total (Taisen 1 Other) | 3,329.80   |                    |
| Total (Taisen 2)       | 91,001.6   |                    |
| Total (Taisen 2 Other) | 1,198.40   | To check 725,382.4 |

| Distributed Zone        | Area (m <sup>2</sup> ) | Area (ha) | (1) Total (kwh) | (2) = (1) / 25 days (kwh) | (3) = (2) / 8hrs (kw) | (4) = (3) / 1000 (MW) |
|-------------------------|------------------------|-----------|-----------------|---------------------------|-----------------------|-----------------------|
| Total of Taisen 1       | 196,529                | 19.65     | 633,182.40      | 25,327.30                 | 3,165.91              | 3.17                  |
| Total of Taisen 2       | 48,096                 | 4.81      | 92,200.00       | 3,688.00                  | 461.00                | 0.46                  |
| Total of Taisen 1 and 2 | 244,625                | 24.46     | 725,382.40      | 29,015.30                 | 3,626.91              | 3.63                  |

|  |          |   |             |
|--|----------|---|-------------|
| Factory Area under operation (Taisen 1+2)                    | 24.46 ha | Coefficient to calculate Electrical Demand by Factory Lot                     | 0.148 MW/ha |
| Factory Area under operation (Manhattan 1)                   | 72.44 ha | Electricity MW should be close to   | 6.07 MW     |
|  |          | Coefficient to calculate Electrical Demand by Factory Lot                     | 0.084 MW/ha |
| Factory Area under other operation (Taisen 1+2, Manhattan 1) | 96.90 ha | Electricity MW should be close to   | 9.7 MW      |
|  |          | Coefficient to calculate Electrical Demand by Factory Lot                     | 0.100 MW/ha |
|  |          | The 0.100 MW/ha should be used to calculate the demand under other condition. |             |

**Based on Contract with EDC (Present Situation)**

|  |          |   |             |
|--|----------|---|-------------|
| Taisen SEZ   |          | Electricity MW should be close to   | 4 MW        |
| Factory Area under operation (Taisen 1+2)                    | 24.46 ha | Coefficient to calculate Electrical Demand by Factory Lot                     | 0.164 MW/ha |
| Manhattan SEZ  |          | Electricity MW should be close to   | 6.00 MW     |
| Factory Area under operation (Manhattan 1)                   | 72.44 ha | Coefficient to calculate Electrical Demand by Factory Lot                     | 0.083 MW/ha |
| For the Future Demand Calculation                            |          | Electricity MW should be close to   | 10.0 MW     |
| Factory Area under other operation (Taisen 1+2, Manhattan 1) | 96.90 ha | Coefficient to calculate Electrical Demand by Factory Lot                     | 0.103 MW/ha |
|  |          | The 0.103 MW/ha should be used to calculate the demand under other condition. |             |

Source: Study team

**(2) Unit for Forecasting Numbers of Workers**

The unit for forecasting numbers of workers (Workers/Factory lot area) is calculated by the figures of workers (Manhattan SEZ and Tai Seng Bavet SEZ, Tai Seng Bavet SEZ Sub) which were collected from the Bavet Labor Bureau.

**Table 5-4: Numbers of Laborers in Bavet Region**

| ល.រ | ឈ្មោះសហគ្រាស/ភ្នំស្ថាន                           | ចំនួនកម្មករនិយោជិតនៃភ្នំស្ថាន |        |         |      |                         |      |         |        | សេចក្តីផ្សេងៗ                      |
|-----|--|-------------------------------|--------|---------|------|-------------------------|------|---------|--------|------------------------------------|
|     |  | ខ្មែរ                         |        | ច្បារតា |      | មកពីសង្កាត់<br>ព្រៃឈើតា |      | សរុបរួម |        |                                    |
|     |  | សរុប                          | ស្រី   | សរុប    | ស្រី | សរុប                    | ស្រី | សរុប    | ស្រី   |                                    |
| A   | វិស័យផលិតកម្ម                                    |                               |        |         |      |                         |      |         |        |                                    |
| I   | ផ្នែកកាត់ដេរសំលៀកបំពាក់ វាយនភ័ណ្ឌ និងដេរស្បែកជើង |                               |        |         |      |                         |      |         |        |                                    |
| ១   |  | 1420                          | 1394   | 0       | 0    | 10                      | 2    | 1430    | 1396   | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស           |
| ២   |  | 287                           | 259    | 0       | 0    | 2                       | 1    | 289     | 260    | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស           |
| ៣   |  | 198                           | 192    | 0       | 0    | 2                       | 2    | 200     | 194    | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស           |
| ៤   |  | 183                           | 136    | 0       | 0    | 1                       | 0    | 184     | 136    | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស           |
| ៥   |  | 2367                          | 2172   | 0       | 0    | 14                      | 9    | 2381    | 2181   | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ៦   |  | 1632                          | 1459   | 0       | 0    | 35                      | 18   | 1667    | 1477   | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ៧   |  | 2918                          | 2399   | 0       | 0    | 44                      | 18   | 2962    | 2417   | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ៨   |  | 939                           | 812    | 0       | 0    | 5                       | 2    | 944     | 814    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ៩   |  | 299                           | 84     | 0       | 0    | 16                      | 2    | 315     | 86     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ១០  |  | 148                           | 127    | 0       | 0    | 2                       | 0    | 150     | 127    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ១១  |  | 811                           | 680    | 0       | 0    | 7                       | 1    | 818     | 681    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតទេន |
| ១២  |  | 1591                          | 1442   | 14      | 7    | 6                       | 0    | 1611    | 1449   | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
| ១៣  |  | 98                            | 72     | 0       | 0    | 2                       | 0    | 100     | 72     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
| ១៤  |  | 118                           | 103    | 0       | 0    | 1                       | 0    | 119     | 103    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
| ១៥  |  | 601                           | 484    | 9       | 4    | 3                       | 0    | 613     | 488    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
| ១៦  |  | 465                           | 450    | 0       | 0    | 3                       | 0    | 468     | 450    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
| ១៧  |  | 18                            | 10     | 0       | 0    | 1                       | 0    | 19      | 10     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
| ១៨  |  | 368                           | 335    | 0       | 0    | 1                       | 0    | 369     | 335    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសពាយ សេង   |
|     | សរុបរួម  | 14,461                        | 12,610 | 23      | 11   | 155                     | 55   | 14,639  | 12,676 |                                    |
| II  | ផ្នែកផលិតកម្មផ្សេងៗ                              |                               |        |         |      |                         |      |         |        |                                    |

|          |                              |        |        |     |    |     |    |        |        |                                    |
|----------|------------------------------|--------|--------|-----|----|-----|----|--------|--------|------------------------------------|
| ១        |                              | 6      | 1      | 34  | 2  | 0   | 0  | 40     | 3      | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស           |
| ២        |                              | 1507   | 380    | 3   | 0  | 32  | 6  | 1542   | 386    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៣        |                              | 63     | 44     | 0   | 0  | 3   | 1  | 66     | 45     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៤        |                              | 23     | 3      | 0   | 0  | 4   | 3  | 27     | 6      | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៥        |                              | 144    | 104    | 1   | 1  | 0   | 0  | 145    | 105    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៦        |                              | 59     | 45     | 0   | 0  | 1   | 0  | 60     | 45     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៧        |                              | 185    | 162    | 0   | 0  | 2   | 0  | 187    | 162    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៨        |                              | 8      | 0      | 1   | 0  | 0   | 0  | 9      | 0      | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ៩        |                              | 67     | 45     | 0   | 0  | 3   | 1  | 70     | 46     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ១០       |                              | 190    | 31     | 10  | 0  | 0   | 0  | 200    | 31     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ១១       |                              | 227    | 180    | 0   | 0  | 3   | 0  | 230    | 180    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ១២       |                              | 73     | 57     | 0   | 0  | 3   | 0  | 76     | 57     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ១៣       |                              | 111    | 85     | 0   | 0  | 3   | 1  | 114    | 86     | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេនហាតឆេន |
| ១៤       |                              | 713    | 239    | 112 | 43 | 15  | 7  | 840    | 289    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសតាយ សេង   |
| ១៥       |                              | 1541   | 616    | 0   | 0  | 56  | 7  | 1597   | 623    | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសតាយ សេង   |
|          | សរុបរង                       | 4,917  | 1,992  | 161 | 46 | 125 | 26 | 5,203  | 2,064  |                                    |
|          | សរុបវិស័យផលិតកម្មទាំងអស់     | 19,378 | 14,602 | 184 | 57 | 280 | 81 | 19,842 | 14,740 |                                    |
| <b>B</b> | <b>វិស័យសេវាកម្ម</b>         |        |        |     |    |     |    |        |        |                                    |
| <b>I</b> | <b>ផ្នែកកាស៊ីណូ-សណ្ឋាគារ</b> |        |        |     |    |     |    |        |        |                                    |
| ១        |                              | 663    | 417    | 29  | 14 | 30  | 13 | 722    | 444    |                                    |
| ២        |                              | 550    | 304    | 24  | 14 | 41  | 11 | 615    | 329    |                                    |
| ៣        |                              | 468    | 236    | 37  | 22 | 40  | 14 | 545    | 272    |                                    |
| ៤        |                              | 865    | 379    | 27  | 17 | 42  | 7  | 934    | 403    |                                    |
| ៥        |                              | 162    | 118    | 24  | 21 | 9   | 3  | 195    | 142    |                                    |
| ៦        |                              | 602    | 357    | 0   | 0  | 14  | 5  | 616    | 362    |                                    |
| ៧        |                              | 227    | 70     | 6   | 3  | 6   | 1  | 239    | 74     |                                    |
| ៨        |                              | 377    | 144    | 15  | 10 | 3   | 1  | 395    | 155    |                                    |
| ៩        |                              | 119    | 77     | 0   | 0  | 0   | 0  | 119    | 77     |                                    |
| ១០       |                              | 110    | 68     | 0   | 0  | 0   | 0  | 110    | 68     |                                    |

|            |  |       |       |     |     |     |    |       |       |  |
|------------|--|-------|-------|-----|-----|-----|----|-------|-------|--|
| ១១         |  | 182   | 93    | 3   | 3   | 5   | 0  | 190   | 96    |  |
| ១២         |  | 178   | 83    | 5   | 2   | 0   | 0  | 183   | 85    |  |
| ១៣         |  | 249   | 161   | 11  | 1   | 0   | 0  | 260   | 162   |  |
| ១៤         |  | 234   | 124   | 0   | 0   | 8   | 3  | 242   | 127   |  |
| ១៥         |  | 262   | 126   | 1   | 1   | 3   | 1  | 266   | 128   |  |
| ១៦         |  | 640   | 168   | 23  | 19  | 22  | 2  | 685   | 189   |  |
| ១៧         |  | 185   | 83    | 1   | 1   | 4   | 0  | 190   | 84    |  |
| ១៨         |  | 245   | 107   | 30  | 22  | 4   | 1  | 279   | 130   |  |
| ១៩         |  | 133   | 60    | 7   | 2   | 0   | 0  | 140   | 62    |  |
|            | សរុបរង                                   | 6,451 | 3,175 | 243 | 152 | 231 | 62 | 6,925 | 3,389 |  |
| <b>II</b>  | <b>ផ្នែកសន្តិសុខឯកជន</b>                 |       |       |     |     |     |    |       |       |  |
| ១          |  | 30    | 6     | 0   | 0   | 2   | 1  | 32    | 7     |  |
| ២          |  | 65    | 12    | 0   | 0   | 0   | 0  | 65    | 12    |  |
| ៣          |  | 37    | 2     | 0   | 0   | 0   | 0  | 37    | 2     |  |
| ៤          |  | 20    | 3     | 0   | 0   | 0   | 0  | 20    | 3     |  |
| ៥          |  | 22    | 4     | 0   | 0   | 0   | 0  | 22    | 4     |  |
|            | សរុបរង                                   | 174   | 27    | 0   | 0   | 2   | 1  | 176   | 28    |  |
| <b>III</b> | <b>ផ្នែកធនាគារ និង មីក្រូហិរញ្ញវត្ថុ</b> |       |       |     |     |     |    |       |       |  |
| ១          |  | 65    | 17    | 0   | 0   | 0   | 0  | 65    | 17    |  |
| ២          |  | 43    | 8     | 0   | 0   | 0   | 0  | 43    | 8     |  |
| ៣          |  | 37    | 12    | 0   | 0   | 0   | 0  | 37    | 12    |  |
| ៤          |  | 106   | 27    | 0   | 0   | 0   | 0  | 106   | 27    |  |
| ៥          |  | 21    | 8     | 0   | 0   | 0   | 0  | 21    | 8     |  |
| ៦          |  | 12    | 2     | 0   | 0   | 0   | 0  | 12    | 2     |  |
| ៧          |  | 59    | 17    | 0   | 0   | 0   | 0  | 59    | 17    |  |
| ៨          |  | 13    | 2     | 0   | 0   | 0   | 0  | 13    | 2     |  |
| ៩          |  | 18    | 7     | 0   | 0   | 0   | 0  | 18    | 7     |  |
| ១០         |  | 15    | 3     | 0   | 0   | 0   | 0  | 15    | 3     |  |
| ១១         |  | 14    | 4     | 0   | 0   | 0   | 0  | 14    | 4     |  |



|    |                          |               |               |            |            |            |            |               |               |                                   |
|----|--------------------------|---------------|---------------|------------|------------|------------|------------|---------------|---------------|-----------------------------------|
|    | សរុបរង                   | 403           | 107           | 0          | 0          | 0          | 0          | 403           | 107           |                                   |
| IV | ផ្នែកសេវាកម្មផ្សេងៗទៀត   |               |               |            |            |            |            |               |               |                                   |
| ១  |                          | 16            | 3             | 0          | 0          | 9          | 0          | 25            | 3             | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស          |
| ២  |                          | 15            | 3             | 1          | 0          | 3          | 1          | 19            | 4             | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស          |
| ៣  |                          | 65            | 14            | 8          | 1          | 0          | 0          | 73            | 15            | ក្រៅតំបន់សេដ្ឋកិច្ចពិសេស          |
| ៤  |                          | 27            |               | 0          | 0          | 3          | 1          | 30            | 1             | ក្នុងតំបន់សេដ្ឋកិច្ចពិសេសមេមហាផេន |
|    | សរុបរង                   | 123           | 20            | 9          | 1          | 15         | 2          | 147           | 23            |                                   |
|    | សរុបវិស័យសេវាកម្មទាំងអស់ | <u>7.151</u>  | <u>3.329</u>  | <u>252</u> | <u>153</u> | <u>248</u> | <u>65</u>  | <u>7.651</u>  | <u>3.547</u>  |                                   |
|    | សរុបរួមទាំងអស់           | <u>26.529</u> | <u>17.931</u> | <u>436</u> | <u>210</u> | <u>528</u> | <u>146</u> | <u>27.493</u> | <u>18.287</u> |                                   |

Source: Svay Rieng Department of Labor

### (3) Summary of Unit Calculation

In the following tables, the units for forecasting infrastructure demand are summarized.

#### ①Unit for forecasting Electric Power Capacity

Table 5-5: Coefficient (MW/ha) Based on Current Contract with EDC)

| Taisen SEZ   | Factory Lot Area (ha) | Contract with EDC: 4MW            |             |
|--|-----------------------|-----------------------------------|-------------|
| Factory Area under Operation (Taisen 1 + 2)                    | 24.46 ha              | Rate (Electricity / Factory Area) | 0.164 MW/ha |
| Manhattan SEZ  | Factory Lot Area (ha) | Contract with EDC: 6MW            |             |
| Factory Area under Operation (Manhattan)                       | 72.44 ha              | Rate (Electricity / Factory Area) | 0.083 MW/ha |
| Coefficient (MW/ha) for Forecasting Future Factory Development |                       |                                   |             |
| Factory Area under Operation (Taisen 1+2, Manhattan)           | Factory Lot Area (ha) | Contract with EDC: 10MW           |             |
|  | 96.90ha               | Rate (Electricity / Factory Area) | 0.103 MW/ha |

Source: Study team

#### ②Unit for forecasting Numbers of Workers

Table 5-6: Coefficient (Nos. of Workers /ha) Based on Present Working Numbers

| Taisen SEZ  | Factory Lot Area (ha) | Nos. of Workers | Unit (Workers/ha) |
|---|-----------------------|-----------------|-------------------|
| Factory Area under Operation (Taisen 1 + 2)                         | 24.46 ha              | 5,777           | 236               |
| Manhattan SEZ   | Factory Lot Area (ha) | Nos. of Workers | Unit (Workers/ha) |
| Factory Area under Operation (Manhattan)                            | 72.44 ha              | 12,525          | 162               |
| Coefficient (Workers/ha) for Forecasting Future Factory Development |                       |                 |                   |
| Factory Area under Operation (Taisen 1+2, Manhattan)                | Factory Lot Area (ha) | Nos. of Workers | Unit (Workers/ha) |
|   | 96.90ha               | 18,302          | 189               |

Source: Study team

### ③Unit for Forecasting Numbers of Factories

**Table 5-7: Coefficient (Nos. of Factories /ha) Based on Present Factory Numbers**

| Taisen SEZ   | Factory Lot Area (ha) | Nos. of Factories | Unit (Factories/ha) |
|--|-----------------------|-------------------|---------------------|
| Factory Area under Operation (Taisen 1 + 2)                                  | 24.46 ha              | 11                | 0.450               |
| Manhattan SEZ  | Factory Lot Area (ha) | Nos. of Factories | Unit (Factories/ha) |
| Factory Area under Operation (Manhattan)                                     | 72.44 ha              | 19                | 0.262               |
| <b>Coefficient (Factories/ha) for Forecasting Future Factory Development</b> |                       |                   |                     |
| Factory Area under Operation (Taisen 1+2, Manhattan)                         | Factory Lot Area (ha) | Nos. of Factories | Unit (Factories/ha) |
|  | 96.90ha               | 30                | 0.310               |

Source: Study team

#### 5-3. Forecasting Based on the Development Plan (Original Development Drawing)

Presently, the special economic zones are developing land following the original drawing of development plan. For the purpose of forecasting future infrastructure demand of SEZs, in terms of factory lot areas, the land area is categorized by the following 4 conditions of factories on land lots;

- 1) Factory - under operation
- 2) Factory - under preparation for operation, building construction nearly completed
- 3) Factory - with land leasing agreement but building construction not yet completed
- 4) Expected Factory - having no contract yet, and land still vacant

Using the factory lot area data of condition (1), the unit for forecasting the numbers of workers, factories, and electric power capacity are calculated.

Then, if the factory lot area of conditions (2), (3), or (4) is given, the infrastructure demand in conditions (2), (3), or (4) is to be calculated. Since the original drawing of the development plan is available, the forecasting has been done. The result is shown in the following tables.

### 5.3.1 Manhattan SEZ

**Table 5-8: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

Source: Study team

**Table 5-9: Operating Schedule**

| SEZ or Factory | Year |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|
|                | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Manhattan SEZ  |      |      |      |      |      |      |      |      |      |
|                |      |      |      |      |      |      |      |      |      |
|                |      |      |      |      |      |      |      |      |      |
|                |      |      |      |      |      |      |      |      |      |

Source: Study team

The following table is generated based on the information in the tables on factory operation status presented in 3.5.1 of Chapter 3.

Step(1): The total numbers of Table 3.4 (operational) are put into the column of 2012 of Table 5-10.

Step(2): The total numbers of Table 3.5 (built and under preparation) are added to the column 2012 of Table 5-10, putting the sum into the 2013 column.

Step(3): The total numbers of Table 3.6 (booked and not built) are added to the column 2013 of Table 5-10, putting the sum into the 2014 column.

Step(4): The total numbers of Table 3.7 (not booked) are added to the column 2014 of Table 5-10, putting the sum into the 2015 column.

Step(5): All the lots are assumed to be fully operational in 2015 as per the original development plan 2015.

**Table 5-10: Forecasting Infrastructure Demand**

| Time (Year)                       | Year   |        |        |        |        |        |        |        |        |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
| Development Area (ha)             | 103.49 | 144.78 | 206.65 | 208.04 | 208.04 |        | 208.04 | 208.04 | 208.04 |
| Factory Area (ha)                 | 72.44  | 101.35 | 144.65 | 145.63 | 145.63 | 145.63 | 145.63 | 145.63 | 145.63 |
| Nos. of Factories                 | 19     | 23     | 32     | 33     | 33     | 33     | 33     | 33     | 33     |
| Nos. of Workers                   | 12,525 | 18,176 | 27,753 | 27,970 | 27,970 | 27,970 | 27,970 | 27,970 | 27,970 |
| Water (m <sup>3</sup> /day)       | 1,251  | 1,818  | 2,775  | 2,797  | 2,797  | 2,797  | 2,797  | 2,797  | 2,797  |
| Waste Water (m <sup>3</sup> /day) | 1,002  | 1,454  | 2,220  | 2,238  | 2,238  | 2,238  | 2,238  | 2,238  | 2,238  |
| Electric Power (MW)               | 6.00   | 8.98   | 13.44  | 13.54  | 13.54  | 13.54  | 13.54  | 13.54  | 13.54  |

Source: Study team

### (2) Tai Seng Bavst SEZ

**Table 5-11: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |



|   |  |
|---|--|
| Factory with signed land lease, no building |  |
| Expected Factory, land is vacant            |  |

Source: Study team

**Table 5-12: Operating Schedule**

| SEZ or Factory        | Year |      |      |      |      |      |      |      |      |
|-----------------------|------|------|------|------|------|------|------|------|------|
|                       | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Tai Seng<br>Bavet SEZ |      |      |      |      |      |      |      |      |      |
|                       |      |      |      |      |      |      |      |      |      |
|                       |      |      |      |      |      |      |      |      |      |
|                       |      |      |      |      |      |      |      |      |      |

Source: Study team

The following table is generated based on the information in the tables on factory operation status presented in 3.5.2 of Chapter 3.

Step(1): The total numbers of Table 3.8 (operational) are put into the column of 2012 of Table 5-13.

Step(2): The total numbers of Table 3.9 (built and under preparation) are added to the column 2012 of Table 5-13, putting the sum into the 2013 column.

Step(3): The total numbers of Table 3.10 (booked and not built) are added to the column 2013 of Table 5-13, putting the sum into the 2014 column.

Step(4): 1/3 of the total numbers of Table 3.11 (not booked) are added to the column 2014 of Table 5-13, putting the sum into the 2015 column. The 2016 and 2017 columns are generated in the same manner by adding 1/3 of the total number of Table 3.11

Step(5): All the lots are assumed to be fully operational in 2017 as per the original development plan.

**Table 5-13: Forecasting Infrastructure Demand**

| Time (Year)                       | Year  |       |       |        |        |        |        |        |        |
|-----------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
|                                   | 2102  | 2013  | 2014  | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
| Development Area (ha)             | 28.08 | 36.35 | 61.29 | 92.24  | 123.19 | 154.13 | 154.13 | 154.13 | 154.13 |
| Factory Area (ha)                 | 19.65 | 25.44 | 42.90 | 64.57  | 86.23  | 107.89 | 107.89 | 107.89 | 107.89 |
| Nos. of Facto-ries                | 8     | 12    | 18    | 25     | 32     | 38     | 38     | 38     | 38     |
| Nos. of Workers                   | 4,596 | 5,850 | 9,150 | 13,245 | 17,339 | 21,433 | 21,433 | 21,433 | 21,433 |
| Water (m <sup>3</sup> /day)       | 460   | 585   | 915   | 1,324  | 1,734  | 2,143  | 2,143  | 2,143  | 2,143  |
| Waste Water (m <sup>3</sup> /day) | 368   | 468   | 732   | 1,060  | 1,387  | 1,715  | 1,715  | 1,715  | 1,715  |
| Electricity (MW)                  | 3.22  | 3.82  | 5.62  | 7.85   | 10.08  | 12.31  | 12.31  | 12.31  | 12.31  |

Source: Study team

### (3) Tai Seng Bavet SEZ Sub

**Table 5-14: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

Source: Study team

**Table 5-15: Operating Schedule**

| SEZ or Factory | Year |
|----------------|------|
|----------------|------|

| tory      | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------|------|------|------|------|------|------|------|------|------|
| Tai Seng  |      |      |      |      |      |      |      |      |      |
| Bavet SEZ |      |      |      |      |      |      |      |      |      |
| Sub       |      |      |      |      |      |      |      |      |      |

Source: Study team

The following talbe is generated based on the information in the tables on factory operation status presented in 3.5.3 of Chapter3.

Step(1): The total numbers of Table3.12 (operational) are put into the column of 2012 of Table 5-16.

Step(2): The total numbers of Table3.13 (built and under preparation) are added to the column 2012 of Table 5-13, putting the sum into the 2016 column.

Step(3): The total numbers of Table3.14 (booked and not built) are added to the column 2013 of Table 5-16, putting the sum into the 2014 column.

Step(4): 1/3 of the total numbers of Table3.15 (not booked) are added to the column 2014 of Table 5-16, putting the sum into the 2015 column. The 2016 and 2017 columns are generated in the same manner by adding 1/3 of the total number of Table3.15

Step(5): All the lots are assumed to be fully operational in 2017 as per the original development plan.

**Table 5-16: Forecasting Infrastructure Demand**

| Time (Year)                       | Year  |       |       |       |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                   | 2102  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  |
| Development Area (ha)             | 6.87  | 13.73 | 15.34 | 27.38 | 39.42 | 51.46 | 51.46 | 51.46 | 51.46 |
| Factory Area (ha)                 | 4.81  | 9.61  | 10.73 | 19.16 | 27.60 | 36.03 | 36.03 | 36.03 | 36.03 |
| Nos. of Factories                 | 3     | 5     | 6     | 9     | 12    | 14    | 14    | 14    | 14    |
| Nos. of Workers                   | 1,181 | 2,088 | 2,301 | 3,894 | 5,487 | 7,081 | 7,081 | 7,081 | 7,081 |
| Water (m <sup>3</sup> /day)       | 118   | 209   | 230   | 389   | 549   | 708   | 708   | 708   | 708   |
| Waste Water (m <sup>3</sup> /day) | 94    | 167   | 184   | 312   | 439   | 566   | 566   | 566   | 566   |
| Electric Power (MW)               | 0.79  | 1.28  | 1.40  | 2.27  | 3.14  | 4.00  | 4.00  | 4.00  | 4.00  |

#### (4) Dragon King SEZ

**Table 5-17: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

Source: Study team

**Table 5-18: Operating Schedule**

| SEZ or Factory  | Year |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|
|                 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Dragon King SEZ |      |      |      |      |      |      |      |      |      |
|                 |      |      |      |      |      |      |      |      |      |
|                 |      |      |      |      |      |      |      |      |      |

Source: Study team

The following table is generated based on the information in the tables on factory operation status presented in 3.5.4 of Chapter 3.

Step(1): The total numbers of Table 3.16 (operational) are put into the column of 2012 of Table 5-19.

Step(2): The total numbers of Table 3.17 (built and under preparation) are added to the column 2012 of Table 5-19, putting the sum into the 2013 column.

Step(3): The total numbers of Table 3.18 (booked and not built) are added to the column 2013 of Table 5-19, putting the sum into the 2014 column.

Step(4): 1/4 of the total numbers of Table 3.19 (not booked) are added to the column 2014 of Table 5-19, putting the sum into the 2015 column. The 2016, 2017 and 2018 columns are generated in the same manner by adding 1/4 of the total number of Table 3.19

Step(5): All the lots are assumed to be fully operational in 2018 as per the original development plan.

**Table 5-19: Forecasting Infrastructure Demand**

| Time (Year)                       | Year |      |       |       |        |        |        |        |        |
|-----------------------------------|------|------|-------|-------|--------|--------|--------|--------|--------|
|                                   | 2012 | 2013 | 2014  | 2015  | 2016   | 2017   | 2018   | 2019   | 2020   |
| Development Area (ha)             | 0.00 | 1.34 | 18.80 | 41.27 | 63.74  | 86.21  | 108.67 | 108.67 | 108.67 |
| Factory Area (ha)                 | 0.00 | 1.00 | 14.00 | 30.73 | 47.47  | 64.20  | 80.93  | 80.93  | 80.93  |
| Nos. of Factories                 | 0    | 1    | 2     | 7     | 12     | 17     | 23     | 23     | 23     |
| Nos. of Workers                   | 0    | 189  | 6,689 | 9,851 | 13,014 | 16,176 | 19,339 | 19,339 | 19,339 |
| Water (m <sup>3</sup> /day)       | 0    | 19   | 669   | 985   | 1,301  | 1,618  | 1,994  | 1,994  | 1,994  |
| Waste Water (m <sup>3</sup> /day) | 0    | 15   | 535   | 788   | 1,041  | 1,294  | 1,547  | 1,547  | 1,547  |
| Electric Power (MW)               | 0.00 | 0.10 | 1.44  | 3.17  | 4.89   | 6.61   | 8.34   | 8.34   | 8.34   |

Source: Study team

## (5) Shandong Industrial Park

**Table 5-20: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

Source: Study team

**Table 5-21: Operating Schedule**

| SEZ or Factory | Year |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|
|                | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Shandong       |      |      |      |      |      |      |      |      |      |
| I.P.           |      |      |      |      |      |      |      |      |      |

Source: Study team

The following table is generated based on the information in the tables on factory operation status presented in 3.5.6 of Chapter 3.

Step(1): The total numbers of Table 3.24 (operational) are put into the column of 2012 of Table 5-22.

Step(2): The total numbers of Table 3.25 (built and under preparation) are added to the column 2012 of Table 5-22, putting the sum into the 2013 column.

Step(3): 1/4 of the total numbers of Table 3.27 (not booked) are added to the column 2013 of Table 5-22, putting the sum into the 2014 column. The 2015, 2016 and 2017 columns are generated in the same manner by adding 1/3 of the total number of Table 3.27

Step(4): All the lots are assumed to be fully operational in 2017 as per the original development plan.

**Table 5-22: Forecasting Infrastructure Demand**

| Time (Year)                       | Year |       |       |       |        |        |        |        |        |
|-----------------------------------|------|-------|-------|-------|--------|--------|--------|--------|--------|
|                                   | 2012 | 2013  | 2014  | 2015  | 2016   | 2017   | 2018   | 2019   | 2020   |
| Development Area (ha)             | 0.00 | 29.93 | 51.59 | 73.25 | 94.91  | 116.57 | 116.57 | 116.57 | 116.57 |
| Factory Area (ha)                 | 0.00 | 20.95 | 36.11 | 51.27 | 66.44  | 81.60  | 81.60  | 81.60  | 81.60  |
| Nos. of Factories                 | 0    | 6     | 11    | 16    | 21     | 25     | 25     | 25     | 25     |
| Nos. of Workers                   | 0    | 3,959 | 6,825 | 9,691 | 12,557 | 15,442 | 15,442 | 15,442 | 15,442 |
| Water (m <sup>3</sup> /day)       | 0    | 396   | 683   | 969   | 1,226  | 1,542  | 1,542  | 1,542  | 1,542  |
| Waste Water (m <sup>3</sup> /day) | 0    | 317   | 546   | 775   | 1,005  | 1,234  | 1,234  | 1,234  | 1,234  |
| Electric Power (MW)               | 0.00 | 2.16  | 3.72  | 5.28  | 6.84   | 8.40   | 8.40   | 8.40   | 8.40   |

Source: Study team

## (6) Hi Park SEZ

**Table 5-23: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

Source: Study team

**Table 5-24: Operating Schedule**

| SEZ or Factory | Year |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|
|                | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Hi Park SEZ    |      |      |      |      |      |      |      |      |      |

Source: Study team

The following table is generated based on the information in the tables on factory operation status presented in 3.5.7 of Chapter 3.

Step(1): 1/6 of the total numbers of Table 3.31 (not booked) are put into the 2015 column. The 2016-2020 columns are generated in the same manner by adding 1/6 of the total number of Table 3.31

Step(5): All the lots are assumed to be fully operational in 2020 as per the original development plan.

**Table 5-25: Forecasting Infrastructure Demand**

| Time (Year)                       | Year |      |      |       |        |        |        |        |        |
|-----------------------------------|------|------|------|-------|--------|--------|--------|--------|--------|
|                                   | 2012 | 2013 | 2014 | 2015  | 2016   | 2017   | 2018   | 2019   | 2020   |
| Development Area (ha)             | 0.00 | 0.00 | 0.00 | 50.00 | 100.00 | 150.00 | 200.00 | 250.00 | 300.00 |
| Factory Area (ha)                 | 0.00 | 0.00 | 0.00 | 35.00 | 70.00  | 105.00 | 140.00 | 175.00 | 210.00 |
| Nos. of Factories                 | 0    | 0    | 0    | 11    | 22     | 33     | 44     | 55     | 65     |
| Nos. of Workers                   | 0    | 0    | 0    | 6,615 | 13,230 | 19,845 | 26,460 | 33,075 | 39,690 |
| Water (m <sup>3</sup> /day)       | 0    | 0    | 0    | 662   | 1,323  | 1,985  | 2,646  | 3,308  | 3,969  |
| Waste Water (m <sup>3</sup> /day) | 0    | 0    | 0    | 529   | 1,058  | 1,588  | 2,117  | 2,646  | 3,157  |
| Electric Power (MW)               | 0.00 | 0.00 | 0.00 | 3.61  | 7.21   | 10.82  | 14.42  | 18.03  | 21.63  |

Source: Study team

**(7) Nissin Factory**

**Table 5-26: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

**Source: Study team**

**Table 5-27: Operating Schedule**

| SEZ or Factory | Year |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|
|                | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Nissin Factory |      |      |      |      |      |      |      |      |      |

**Source: Study team**

The following table is generated based on the information in the tables on factory operation status presented in 3.5.5 of Chapter3.

Step(1): The total numbers of Table3.20 (operational) are put into the 2012 column.

Step(5): The 2013- 2020 columns are assumed to be the same under operation.

**Table 5-28: Forecasting Infrastructure Demand**

| Time (Year)                       | Year |      |      |      |      |      |      |      |      |
|-----------------------------------|------|------|------|------|------|------|------|------|------|
|                                   | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Development Area (ha)             | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Factory Area (ha)                 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Nos. of Factories                 | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| Nos. of Workers                   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Water (m <sup>3</sup> /day)       | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Waste Water (m <sup>3</sup> /day) | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Electric Power (MW)               | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 |

**Source: Study team**

## (8) Japan Rocks Factory

**Table 5-29: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory under operation                       |  |
| Factory under preparation, building completed |  |
| Factory with signed land lease, no building   |  |
| Expected Factory, land is vacant              |  |

Source: Study team

**Table 5-30: Operating Schedule**

| SEZ or Factory | Year |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|
|                | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Rocks Factory  |      |      |      |      |      |      |      |      |      |

Source: Study team

The following table is generated based on the information in the tables on factory operation status presented in 3.5.8 of Chapter 3.

Step(1): 1/2 of the total numbers of Table 3.34 (operational) are put into the 2015 column. The 2016 column is generated in the same manner by adding 1/2 of the total number of Table 3.34

Step(3): The 2017- 2020 columns are assumed to be the same under operation.

**Table 5-31: Forecasting Infrastructure Demand**

| Time (Year)                       | Year |      |      |       |       |       |       |       |       |
|-----------------------------------|------|------|------|-------|-------|-------|-------|-------|-------|
|                                   | 2012 | 2013 | 2014 | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  |
| Development Area (ha)             | 0.00 | 0.00 | 0.00 | 2.50  | 5.00  | 5.00  | 5.00  | 5.00  | 5.00  |
| Factory Area (ha)                 | 0.00 | 0.00 | 0.00 | 2.50  | 5.00  | 5.00  | 5.00  | 5.00  | 5.00  |
| Nos. of Factories                 | 0    | 0    | 0    | 1     | 1     | 1     | 1     | 1     | 1     |
| Nos. of Workers                   | 0    | 0    | 0    | 1,500 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| Water (m <sup>3</sup> /day)       | 0    | 0    | 0    | 150   | 300   | 300   | 300   | 300   | 300   |
| Waste Water (m <sup>3</sup> /day) | 0    | 0    | 0    | 120   | 240   | 240   | 240   | 240   | 240   |
| Electric Power (MW)               | 0.00 | 0.00 | 0.00 | 0.26  | 0.52  | 0.52  | 0.52  | 0.52  | 0.52  |

Source: Study team

## (9) Agglomeration Effect of SEZs and Factories

The previous study has done assuming the normal SEZ development progress which had seen at PPSEZ. The latest SEZ of Hi Park is supposed to fill all the factory land lots and start operation by 2020.

If the basic infrastructure such as electric power, water supply, waste water discharge and workers availability have no constraints, then each SEZ and factory will be able to continue their operation from present to 2020 when all the planned factory lots are occupied and operational. Then, the agglomerating results will be as follows;

- Total Development Area: 949ha
- Total Factory Land Lot Area: 672ha
- Operating Factory: 200
- Numbers of Workers: 134,015
- Water (m<sup>3</sup>/day): 13,401

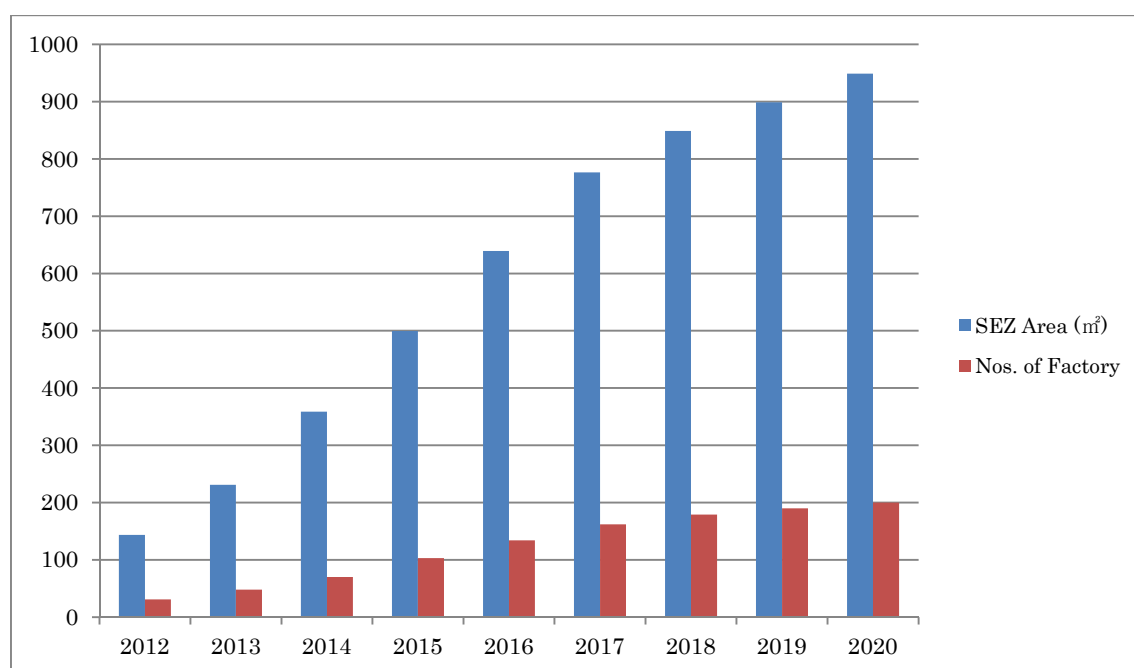
- Waste Water (m<sup>3</sup>/day): 10,721
- Electric Power Capacity (MW): 69

A big size SEZ based city will be created in Bavet region. The forecasting table and graph are shown next.

**Table 5-32: Agglomerating Result of SEZs and Factories**

| Year                              | 2012   | 2013   | 2014   | 2015   | 2016   | 2017    | 2018    | 2019    | 2020    |
|-----------------------------------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| SEZ Area (ha)                     | 143.44 | 231.13 | 358.67 | 499.68 | 639.30 | 776.41  | 848.87  | 898.87  | 948.87  |
| Factory Lot Area (ha)             | 101.90 | 163.35 | 253.39 | 353.86 | 453.37 | 550.35  | 602.08  | 637.08  | 672.08  |
| Nos. of Factories                 | 31     | 48     | 70     | 103    | 134    | 162     | 179     | 190     | 200     |
| Nos. of Worker                    | 18,382 | 30,342 | 52,798 | 72,846 | 92,677 | 111,007 | 120,785 | 127,400 | 134,015 |
| Water (m <sup>3</sup> /day)       | 1,838  | 3,034  | 5,279  | 7,284  | 9,267  | 11,100  | 12,078  | 12,740  | 13,401  |
| Waste Water (m <sup>3</sup> /day) | 1,470  | 2,427  | 4,223  | 5,827  | 7,414  | 8,880   | 9,662   | 10,192  | 10,721  |
| Electric Power (MW)               | 10.53  | 16.86  | 26.14  | 36.50  | 46.74  | 56.72   | 62.05   | 65.66   | 69.26   |

Source: Study team



**Figure 5-2: Agglomerating Result of SEZs and Factories**

Source: Study team



#### **5-4. Unforeseen Conditions in Bavet Region**

Special economic zones and factories are facing with lots of problems. The serious matters are picked up and details are reported

##### **5-4-1 Effects by the Unforeseen Conditions**

There are several effects which has been causing very big trouble to the tenants.

###### **(1) Effects by Electrical Shortage**

Since Manhattan SEZ and Tai Seng SEZ (Main/Sub) completed the land development as SEZ, lots of international tenants have begun operations within a short period. Consequently the electrical consumption increased drastically and power cuts have been occurring these days. According to hearing at EDC (Phnom Penh and Svay Rieng), this region depends on the electrical power supply from Vietnam. The total capacity for Manhattan SEZ is 6MW and for Tai Seng Bavet SEZ (Main/Sub) is 4MW, respectively. Judging from monthly electric power consumption monitoring data, it is obvious that the capacity for these SEZs is already full. This is the reason why the power cut has been occurring so frequently. Among the factories inside the SEZs, there are plastic product makers that cannot cope with the sudden power cuts during their production process. With the situation as it is, the tenants inside the SEZs have set up a working time sharing (schedule of spontaneous work or non-work time schedule) with each other. If these situations continue long, some factories might be forced to give up their production in the region.

###### **(2) Effects by Waste Water Treatment System**

Manhattan SEZ has installed waste water discharging pipes under the internal roads. They have a pond to collect the discharged waste water. So far it seems no problems have emerged with this system. However if all the factories were to operate at once, the natural pond would not be enough to clear the waste water effluent standard of Cambodia. Tai Seng SEZ (Main/Sub) does not have a waste water discharging pipe and the waste water from factories are flowing into the rain water collecting pipe. Both the rain water and waste water are flowing into the borrow pit which was excavated during the infrastructure construction. It is clear that this waste water system does not satisfy the aforementioned standard. If this situation continues long, the waste water might seriously damage the surrounding rice field.

###### **(3) Effects by Water Supply Treatment System**

###### **(3) Effects by Water Supply Treatment Facility**

Manhattan SEZ has installed water supply pipe underground along the internal road. Tenants are taking the water from the pipe in front. Tai Seng Bavet SEZ has not installed the water supply pipe and tenants are taking the water by setting up makeshift underground wells by themselves. Specifically in the case of Tai Seng Bavet SEZ (Main/Sub), by taking the underground water from the narrow space, water shortage and ground settlement might occur.

###### **(4) Effects by Transportation System for Workers**

Several SEZs are located along the National Road No.1 within a short distance of each other. This situation is creating very serious congestion during the commuting time. A few people have been killed by the traffic accidents. If this situation continues long, workers might hesitate to work in this region.

###### **(5) Effects by Commuting Workers**

The population of the entire Svay Rieng Province is about 600,000 and that of Bavet is about 40,000. Presently about 1,200 workers are working and about 6,000 workers at Manhattan SEZ are working at Tai Seng Bavet SEZ (Main/Sub). The total numbers of workers are approaching to the total numbers of workers commuting. Within a short period, a dormitory might be necessary. SEZs are already facing worker shortages and about 15% of workers are looking for a factory that will pay a higher salary. If this situation continues long, strikes might happen more frequently and SEZs will experience difficulties in finding new workers. In this respect, some functions of a dormitory is indispensable.

#### 5-4-2 Reasons for Occurrence of Unforeseen Events

Cambodia is now recognizing the positive effects of special economic zones. Through the PPSEZ, Cambodia has sufficient jobs for workers and exports have increased which is a great benefit to the country. Therefore, CDC is positive to approve the new SEZ's development. In Bavet case, all concerned parties such as government, international organizations were concerned about each SEZ's matter only. In such a relatively short period, it was impossible for all concerned parties to forecast the agglomerating effects of SEZs and factories which are located within a very short distance. The demand on infrastructure such as electric power, water supply, waste water discharge, and workers has reached its maximum limit. It is expected that the approving process needs to be changed not only by an administrative act but also from an engineering viewpoint.

#### 5-4-3 Forecasting Effects by Unforeseen Conditions in the Future

##### (1) Scenario 1: Production is continued by factories under operation and preparation

It is assumed that the following tenants will cancel to the land leasing contract due to the previously mentioned effects, specifically by the reason of shortage of electricity, shortage of labor, and strikes.

- Factory – with signed land lease already, but building not yet completed
- Expected factory (present vacant land lot)

Forecasting is carried out by setting “zero” for these factories.

**Table 5-33: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| Factory - under operation                       |  |
| Factory - under preparation, building completed |  |
| Factory – with signed land lease, no building   |  |
| Expected Factory - land is vacant               |  |

Source: Study team

**Table 5-34: Development Schedule**

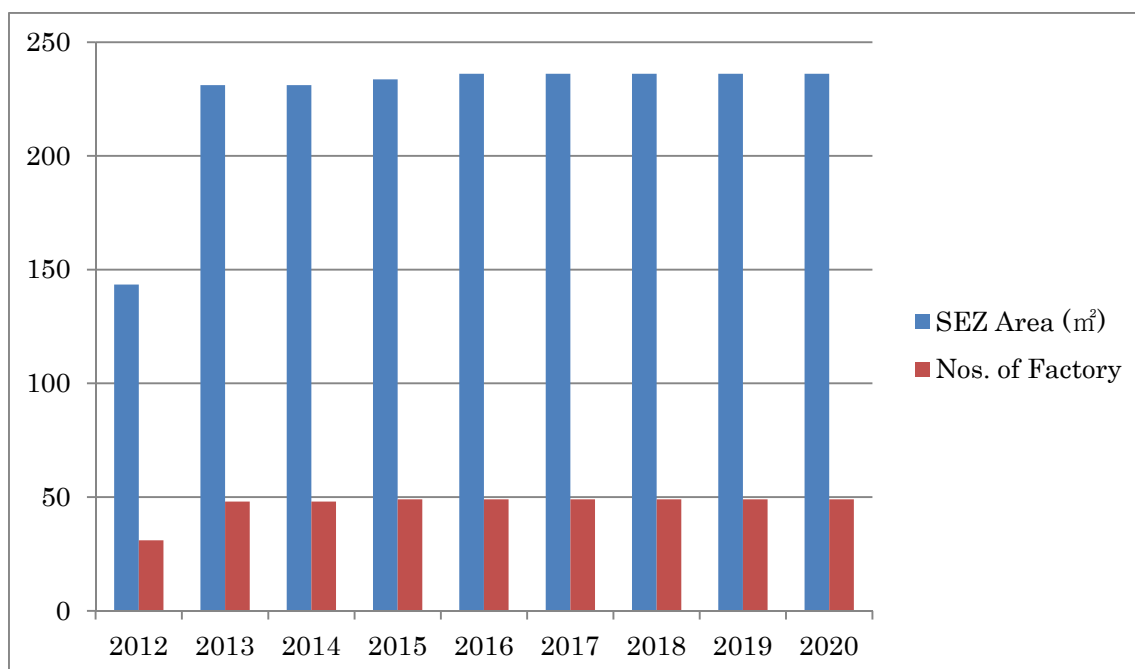
| SEZ          | Year |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|
|              | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Manhattan    |      |      |      |      |      |      |      |      |      |
|              |      |      |      |      |      |      |      |      |      |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Tai Seng     |      |      |      |      |      |      |      |      |      |
|              |      |      |      |      |      |      |      |      |      |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Tai Seng Sub |      |      |      |      |      |      |      |      |      |
|              |      |      |      |      |      |      |      |      |      |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Dragon King  |      |      |      |      |      |      |      |      |      |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Shandong     |      |      |      |      |      |      |      |      |      |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| High Park    |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Nissin       |      |      |      |      |      |      |      |      |      |
| Rocks        |      |      |      |      |      |      |      |      |      |

Source: Study team

**Table 5-35: Forecasted Infrastructure Demand**

| Year                              | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SEZ Area (ha)                     | 143.44 | 231.14 | 231.14 | 233.64 | 236.14 | 236.14 | 236.14 | 236.14 | 236.14 |
| Factory Lot Area (ha)             | 101.90 | 163.36 | 163.36 | 165.86 | 168.36 | 168.36 | 168.36 | 168.36 | 168.36 |
| Nos. of Factories                 | 31     | 48     | 48     | 49     | 49     | 49     | 49     | 49     | 49     |
| Nos. of Workers                   | 18,382 | 30,342 | 30,342 | 31,842 | 33,342 | 33,342 | 33,342 | 33,342 | 33,342 |
| Water (m <sup>3</sup> /day)       | 1,838  | 3,034  | 3,034  | 3,184  | 3,334  | 3,334  | 3,334  | 3,334  | 3,334  |
| Waste Water (m <sup>3</sup> /day) | 1,471  | 2,427  | 2,427  | 2,547  | 2,667  | 2,667  | 2,667  | 2,667  | 2,667  |
| Electric Power (MW)               | 10.53  | 16.86  | 16.86  | 17.12  | 17.38  | 17.38  | 17.38  | 17.38  | 17.38  |

Source: Study team

**Figure 5-3: Urban Growth (Scenario 1)**

Source: Study team

The infrastructure demand will be knocked down and future increase cannot be expected. Consequently, the development size will be confined to the present situation.

(2) Scenario 2: Factory under operation and preparation stop operation and leave

It is assumed that the following tenants will give up and stop operation to leave due to the previously mentioned all effects relating to electric power, labor, water, waste water, etc. Here, simple 10% of the following tenants will leave. (No data of leaving ratio, therefore 10% is simple assumed for one case.)

- Factory - under operation
- Factory - under preparation

Forecasting is carried out assuming that these factories will leave from 2014.

**Table 5-36: Color Category (Present Factory Situation)**

|   |  |
|---|--|
| <b>Factory - under operation</b>                |  |
| Factory - under preparation, building completed |  |
| Factory – with signed land lease, no building   |  |
| Expected Factory - land is vacant               |  |

Source: Study team

**Table 5-37: Development Schedule**

| SEZ          | Year |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|
|              | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Manhattan    |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Tai Seng     |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Tai Seng Sub |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Dragon King  |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
|              |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Shandong     |      |      | -10% | -10% | -10% | -10% | -10% | -10% | -10% |
|              |      |      | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| High Park    |      |      |      | 0    | 0    | 0    | 0    | 0    | 0    |
| Nissin       |      |      |      |      |      |      |      |      |      |
| Rocks        |      |      |      |      |      |      |      |      |      |

Source: Study team

**Table 5-38: Forecasted Infrastructure Demand**

| Year                        | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SEZ Area (ha)               | 143.44 | 231.14 | 207.32 | 189.59 | 173.88 | 157.49 | 142.74 | 129.47 | 117.52 |
| Factory Lot Area (ha)       | 101.90 | 163.36 | 146.62 | 134.96 | 124.72 | 113.24 | 102.92 | 93.63  | 85.26  |
| Nos. of Factories           | 31     | 48     | 42     | 39     | 36     | 32     | 29     | 26     | 24     |
| Nos. of Workers             | 18,382 | 30,342 | 27,146 | 25,939 | 25,003 | 22,818 | 20,838 | 19,062 | 17,464 |
| Water (m <sup>3</sup> /day) | 1,838  | 3,034  | 2,715  | 2,594  | 2,500  | 2,281  | 2,084  | 1,906  | 1,746  |

|                             |       |       |       |       |       |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Waste (m <sup>3</sup> /day) | Water | 1,471 | 2,427 | 2,172 | 2,075 | 2,000 | 1,825 | 1,667 | 1,525 | 1,397 |
| Electric (MW)               | Power | 10.53 | 16.86 | 15.14 | 13.93 | 12.88 | 11.70 | 10.63 | 9.67  | 8.81  |

Source: Study team

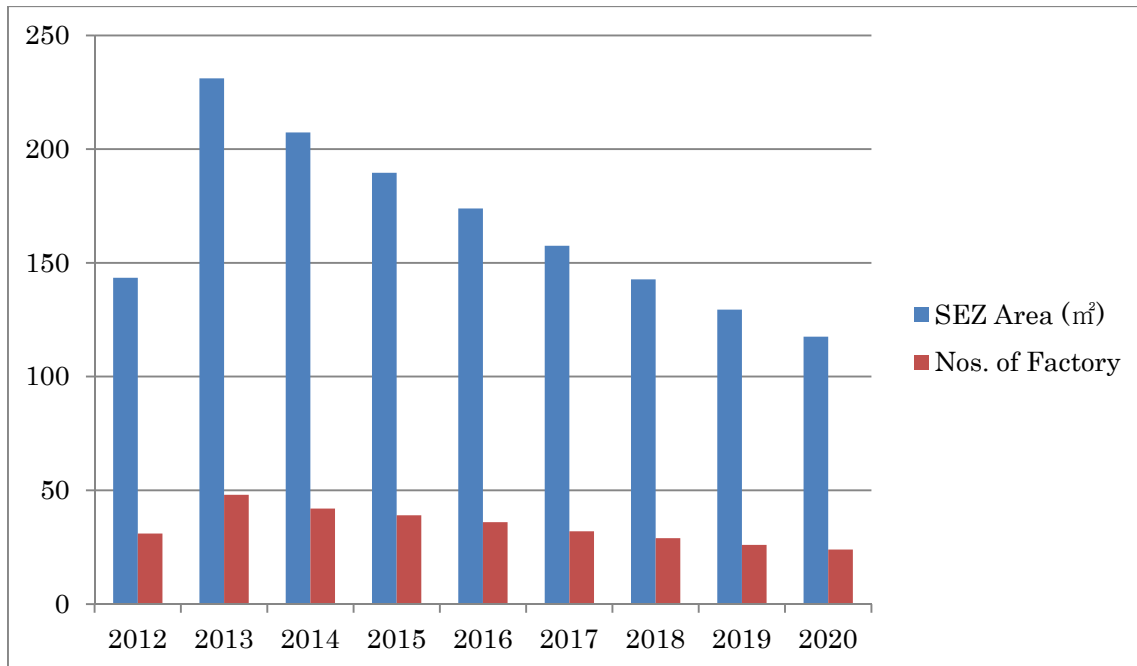


Figure 5-4: Urban Growth (Scenario 2)

Source: Study team

The infrastructure demand will decline and future increase cannot be expected. Consequently, the development size will be down sized. The city itself will be inactive.

## 6. LAWS AND INSTITUTIONS RELATED TO INVESTMENT AND BUSINESS ACTIVITIES

### 6-1 SEZ Legal System and Institution

#### ①SEZ Sub-degree

SEZ SUB-DECREE (NO. 148 ON THE ESTABLISHMENT AND MANAGEMENT OF THE SPECIAL ECONOMIC ZONE) was established in 2005 and since then seven years has passed. Originally the subdecree was meant to be reviewed after a couple of years in order to solve problem and upgrade it to a law. However the subdecree has remain as a subdecree and has not yet been improved, resulng in practical problem on the ground in SEZ development in Cambodia.

#### ②Problems of SEZ Sub decree

According to the interview result conducted in Svay Rieng province, the major problems of the subdecree are as follows:

- ( i ) Lack of Supervision: CSEZA of CDC, the authority who is in charge of supervising SEZs, does not seem to fully manage and supervise SEZ developers so that the SEZ developers comply with the SEZ subdecree.
- ( ii ) Sub-standard SEZs: Because some SEZs have been developed without proper infrastructure, which are required by the SEZ subdecree. If tenant companies invest in factories in such SEZs unknowingly, these companies may face serious problems undermining their businesses.
- (iii) Lack of Planning: SEZs have been developed without considering the long term development plan of the region. As a result, such problems as lack of infrastructure and labor have come up.
- ( iv ) There are unclear requirements from OSS.

It seems that the criteria of licensing SEZs are unclear and the licenses sometimes are arbitrarily given by CSEZA. In the Subdecree, the clause 3 of the Article 3 (Establishment of the Special Economic Zone, 3.1. Terms and Conditions for the Establishment of the Special Economic Zone) of the CHAPTER 2 (PROCEDURES FOR THE ESTABLISHMENT OF THE SPECIAL ECONOMIC ZONE) prescribes the requirements to be met by SEZ developpers. However, SEZs in Bavet hardly meet the requirements of the SEZ subdecree. For example, if a SEZ developer prepares a master plan of its SEZ which will be equipped with a waste water plant, the developer often does not really take an action to implement the plan to construct the waste water plant but still the license will become invalid. Therefore, even if there is a regulation, the regulation itself is not functioning at present.

**Table 6-1: Excerpt of SEZSubdecree (Chapter 2, Article 3)**

|     | Articles   |
|-----|--|
| (a) | It must have a land of more than 50 hectares with precise location and geographic boundaries.  |
| (b) | It must have a surrounding fence (for Export Processing Zone, the Free Trade Area and for the premises of each investor in each zone).   |
| (c) | It must have management office buildings, zone administration offices, large road network, clean water, electric power, and telecommunications networks, and a fire protection and security system. Based on each situation, the zone may have land reserved for the Residential Area for workers, employees and employers, public parks, infirmary, vocational training school, petroleum station, restaurant, car parking, shopping center or market, etc. |
| (d) | It must have a water sewerage network, waste water treatment network, location for storage and management of solid waste disposal, environment protection measures and other related infrastructure as deemed necessary.   |
| (e) | It must comply with technical requirements, regulations and basic rules on construction, environment and other obligations in the development of Special Economic Zone as defined in the instructions issued by relevant ministries or institutions taking into account the geography and specific size of each zone and pursuant to the existing laws, national and international   |

standards.

The lack of planning is attributable to organizational inability such as lack of capability and man power of CSEZA. In Thailand and Vietnam, authorities supervising SEZs/IPs SEZ employ more than 10 persons of professional experts in each area of fields. In case of CSEZA, the director and his assistant are enough to cover and supervise all the SEZs in Cambodia properly. Even in Laos, after a technical assistance project of ADB, the SEZ asuthority has now more than 30 staff members with professional skills. The SEZ authority is an organizationally separated entity, who pay as high salary to its staff members as private professional organizations do.

The organization of the OSS of Tai Seng SEZ is shown in the table below and the number of the OSS members is 24 as of 2012 Feb. According to Manhattan SEZ officem, the OSS of Manahattan is also comprised of about 20 persons, whose salaries and all other expenses are paid by Manhattan SEZ.

**Table 6-2: OSS members of Tai Seng SEZ**

|             | Staitioned in<br>SEZ(persons) | Not stationed in<br>SEZ (persons) | Total(persons) |
|-------------|-------------------------------|-----------------------------------|----------------|
| CDC         | 1                             | 2                                 | 3              |
| MOC         | 4                             | 1                                 | 5              |
| SV Province | 0                             | 1                                 | 1              |
| MOLTV       | 3                             | 0                                 | 3              |
| Camcontrol  | 1                             | 4                                 | 5              |
| Customs     | 1                             | 6                                 | 7              |
| Total       | 10                            | 14                                | 24             |

**Source: CDC**

### ③Proposal for Solutions

- 1) Capacity building should be carried put for CSEZA/CDC in order to improve the supervision ability and information provision.
- 2) An information providing system shold be created, where comprehensive, objective and accurate information will be disseminated for investors.
- 3) CSEZA/CDC should take counter measures for quickly solving problems and preventive measures in consultation with other ministries..
- 4) Legal and mindset reforms should be addressed.

## 6-2 Labor Law

Under the current labor law, it is allowed to employ persons over the age of 15 and under the age of 18 according to the excerpts of the law presented in the table below. The Article 177 of the Labor law prohibits companies from employing persons under the age of 15. Actually, most of the Japanese companies in Bavet manily employ persons over the age of 18. According to the department of labor of Svay Rieng province, if companies employ persons under the age of 18, it will be difficult to sell their products to the US and EU markets. Therefore companies exporting to the US and EU normally do not employ persons under the age of 18. Since the constitution of Cambodia stipulates compulso-ry eduction of 9 years (up to lower secondary high school) and if students complete lower secondary schools as scheduled, there would not be a problem to employ persons over 15 years. As we will see in Chapter 8 of this report, there are a number students who can not complete lower secondary schoold by the age of 15. However, the education leve in Sva Rieng has been improving year by year and especially more and more young people now complete lower secondary than before. The labor market may soon be improved for employing persons below the age of 18.

**Table 6-3: Age Related Excerpts of Labor Law**

|             | Excerpts   |
|-------------|--|
| Article 175 | Children, employees, laborers, or apprentices aged less than eighteen years cannot be employed to perform night work in any enterprise covered in Article 1 of this law.   |
| Article 177 | 1. The allowable minimum age for wage employment is set at fifteen years.<br>2. The minimum allowable age for any kind of employment or work, which, by its nature, could be hazardous to the health, the safety, or the morality of an adolescent, is eighteen years. The types of employment or work covered by this paragraph are determined by a Prakas (ministerial order) of the Ministry in Charge of Labor, in consultation with the Labor Advisory Committee. |
| Article 179 | All employers must keep a register of children aged less than eighteen years old, whom they employ, indicating their date of birth. This register must be submitted to the Labor Inspector for visa, observation and warning.  |
| Article 181 | No unemancipated child of either sex less than eighteen years old can contract to work without the consent of his guardian.  |

**Source: 1997 Labor Law (ILO English Translation)**



## 7. FUTURE DEVELOPMENT DIRECTION OF BAVET REGION

### 7-1. Scenario Analysis for Future SEZ Based Development

In chapter 5, 3 scenarios were discussed and forecasted figures were shown. The following graph shows the different development path.

Scenario (1): Infrastructure / marketing in good condition

Scenario (2): No remedy on infrastructure, only present factories continue operation

Scenario (3): No remedy on infrastructure, tenants leave year by year

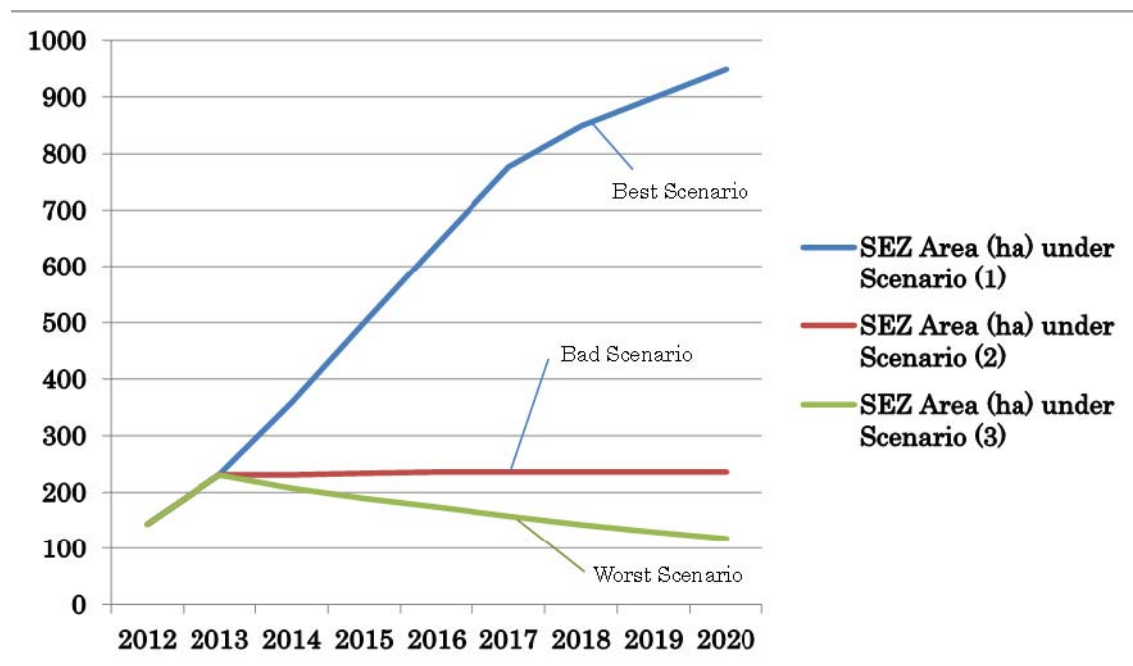


Figure 7-1: Scenario Analysis for Future SEZ Based Development

Source: Study team

Infrastructure management is necessary for the future urban development of Bavet region.

### 7-2. Scenario Analysis for Future SEZ Based Development

#### 7-2-1. Electricity

Hearing Report is shown here (EDC HQ in Phnom Penh, and Svay Rieng Office)

- Present power to the Bavet region is supplied from Vietnam through National Road No.1, and total capacity is 16MW. The contracted capacity of Manhattan is 6MW and that of Tai Seng Bavet SEZ (Main/Sub) is 4MW. There is one more line (7MW) from Vietnam running in a southerly direction through towards Svay Rieng. However, this transmission line does not reach Bavet. The demand of Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub) has already reached maximum.
- In Cambodia, in 2013, two hydro power plants in Stung Atay and one coal power plant in Si-hanoukville will start supplying power to meet load demand. The total capacity is supposed to be 466MW.
- Problem in Short Term: By the end of 2015, there is no chance of EDC transmission line from Phnom Penh. In Bavet region, about 31-48 factories will start operation within one or two years. Electric power will be in short supply soon. (by investigation team)

- Problem in Mid Term: EDC will connect transmission line between Phnom Penh and Svay Rieng and set up 50MVA step down station near west side of Bavet by the end of 2015.
- Present electrical capacity of Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub) is 10MW. On the other hand, the electric power demand will become 16MW in 2013, 26MW in 2014, and 36MW in 2015. (by investigation team).

**Table 7-1: Project List (Start supply within 2013)**

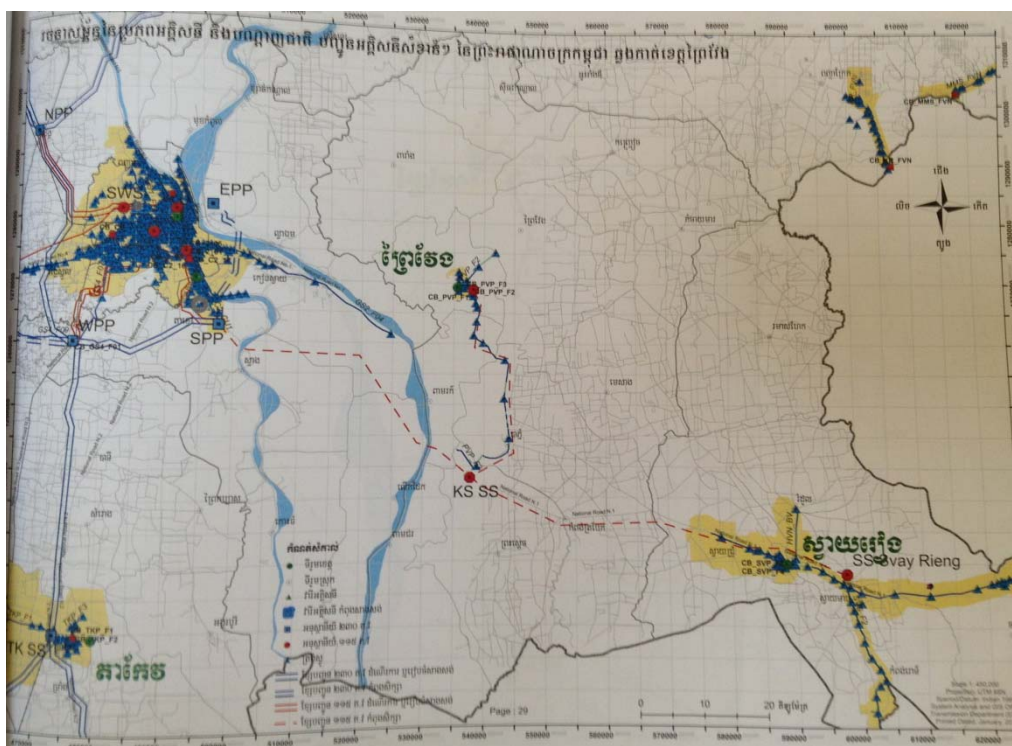
| Project   | Country of Supplier | Type  | Power (MW) | Year of Operation |
|---|---------------------|-------|------------|-------------------|
| 200MW Coal Power Plant in Sihanoukville (I) (Phase 1) | Malaysia + Cambodia | Coal  | 100        | 2013              |
| Stung Atay Hydro Power Plant                          | China               | Hydro | 120        | 2013              |
| Stung Atay Hydro Power Plant                          | China               | Hydro | 246        | 2013              |

Source: MIME



**Figure 7-2: Transmission Line Plan**

Source: EDC



**Figure 7-3: Transmission Line Plan (Phnom Penh -> Svy Reing, Vietnam -> Svy Reing)**

**Source: EDC**

From these investigations, it is clear that the present electrical capacity cannot be increased so as to catch up with the demand of factory operations in Bavet region.

**Table 7-2: Problems with Power Supply and Counter Measures**

| Problems with Electric Power Supply  |
|--|
| Electric Power will be insufficient from the present until 2015.   |
| Counter Measure (Present~2015: by Self Effort)   |
| 1) SEZ needs to stop electrical use alternatively at least one time in a week. But the frequency will increase.  |
| 2) Tenants need to set up generator set for additional electricity.  |
| 3) SEZ Developer needs to set up generator set: Manhattan SEZ decided to have 2MW scale. : Tai Seng Bavet SEZ (Main/Sub) under planning to have 2MW scale. |
| 4) Combination between 1 and 2   |
| 5) Japanese tenants can rent or borrow the generator set alternatively, each other.  |
| 6) All concerned parties have a responsibility to inform the electric power issues of all tenants.   |

**Source: Study team**

## 7-2-2. Waste Water System

Manhattan SEZ has installed waste water discharging pipe under the internal roads. They have a pond, which was formerly used as a borrow pit for SEZ construction, to collect the discharged waste water. So far it seems there are no problems with this system. However, at full factory build-out and operation, the natural pond will be insufficient to clear the waste water effluent standard of Cambodia.





**Photo 7.1 : Pond to Collect Waste Water at the South End of Manhattan SEZ**



**Photo 7.2 : Waste Water Pipe and Rain Water Pipe, Separate System (Manhattan SEZ)**



**Photo 7.3 : Rain Water U-channel has been installed (Manhattan SEZ)**

Tai Seng SEZ (Main/Sub) does not have waste water discharging pipe and the waste water from factories are flowing into the rain water collecting pipe. Both the rain water and waste water are flowing into the borrow pit which was excavated during the SEZ construction. It is clear that this waste water system does not satisfy the aforementioned standard. If this situation continues long, the waste water might cause serious damage to the surrounding rice field. Waste Water Treatment System with suitable building guide line should be prepared by the SEZ developer.



**Photo 7.4: Effluent Condition to Rice Field (Tai Seng Bavet SEZ)**



**Photo 7.5: Effluent Condition, One Pipe for Waste Water and Rain Water (Tai Seng Bavet SEZ Sub)**



**Photo 7.6 : Small Ditch to be Maintained at the North Side of Tai Seng Bavet SEZ for Constant Discharge**



**Photo 7.7 : Small Ditch to be Maintained at the North Side of Tai Seng Bavet SEZ Sub for Constant Discharge**

**Table 7-3: Problems with Waste Water System and Counter Measures**

| Problem with Waste Water System   |
|---|
| 1. Manhattan SEZ plans to have WST and WWTP. Tai Seng Bavet SEZ (Main/Sub)と Dregon King have joint pipe of rain water and waste water, and no plan of WST and WWST. |
| 2. Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub) are discharging waste water to rice field. The system does violate the Cambodia environmental standard.          |
| 3. Surrounding land is flat and discharged waste water is difficult to flow out.  |
| 4. This condition might violate the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal.                             |
| Counter Measure   |
| 1) SEZ developer has a duty of building WWST (One option is Lagoon System))(Clearly prescribed in sub-decree).  |
| 2) Effluent route shall be maintained.  |
| 3) SEZ developer shall prepare building guidelines.   |
| 4) For mid-term counter measure, Bavet city needs to prepare for WWTP.  |
| 5) Education and capacity building is necessary for SEZ developer.  |
| 6) Capacity building is necessary for CDC and Ministry of Environment to change the SEZ approval process.   |

**Source: Study team**

Operation team of Tai Seng Bavet SEZ has strong interest in learning WWTP system in PPSEZ. Temporary short lecture was done during the site meeting.



**Photo 7.8, 7.9 : Special Short Lecture for Technical Operation Team**

### 7-2-3. Water Supply System

Manhattan SEZ has installed water supply pipe underground along the internal road. Tenants are taking the water from the pipe in front. Tenants pumps up to the small reservoir inside their factory yard and use the water for industrial and living purpose.



**Photo 7.10 : Factory has small reservoir (Manhattan SEZ)**

Table Tai Seng Bavet SEZ has not installed the water supply pipe and tenants are taking the water by setting up the underground well by themselves. Specifically in the case of Tai Seng Bavet SEZ (Main/Sub), taking the underground water from a concentrated space like SEZ will cause water shortage and ground settlement.



**Table 7-4: Problems with the Water Supply System and Counter Measures**

| Problems with Water Supply System   |
|---|
| 1. Tenants set up underground well inside factory yard in Tai Seng Bavet SEZ.                               |
| 2. Manhattan SEZ has own simple supply system, other SEZs do not have plants.                               |
| 3. Lots of wells concentrated in Tai Seng Bavet SEZ. This might cause water shortage and ground settlement. |
| Counter Measures  |
| 1) Water volume content test and arsenic content test are necessary.  |
| 2) Investigate possibility of river surface water as water resource.  |
| 3) As mid or long-term measure, Bavet City needs to have WSTP.  |

Source: Study team

#### 7-2-4. Transportation System

Several SEZs are located along the National Road No.1 within a short distance each other. At present, more than 18,000 workers are crossing the entrance gate during rush hours. This situation is creating very serious traffic jam during the commuting time. A few persons have been killed in traffic accidents. If this situation continues much longer, workers might hesitate to work in this region.



**Table 7-5: Problems with the Transportation System and Counter Measures**

| Problems with Transportation System   |
|---|
| 1. Commuting requires 1.5-2.0 hrs and present truck for worker transportation is not suitable.  |
| 2. Near the entrance of Manhattan SEZ and Tai Seng Bavet SEZ along National Road No.1, traffic jam at rush hours is more than saturated by 18,000 workers. Serious accidents have occurred already. According to information from the Tai Seng Bavet SEZ operation team, a few people were already killed by accidents. |
| 3. Transportation cost for worker is going up year by year: \$ 7→ \$ 10→ \$ 13  |

|   |
|---|
| 4. Transportation needs will increase.  |
| 5. Worker tends to choose closer SEZ from home. Job change rate is more than 15% already.                                     |
| 6. Within 1–2 years, when worker demand becomes high, commutable workers will not be found.                                   |
| <b>Counter Measures</b>   |
| 1) SEZ needs to set up transportation stop station inside SEZ, and temporary commuting road may be necessary behind the zone. |
| 2) Width of National Road No.1 needs to be extended urgently.   |
| 3) Dormitory is necessary for long distance commuters.  |

Source: Study team

#### 7-2-5. Dormitory

Presently about 1,200 workers are working and about 6,000 workers at Manhattan SEZ are working at Tai Seng Bavet SEZ (Main/Sub). The total numbers of workers are approaching to the commutable numbers of workers. Within a short period, dormitory might be necessary. SEZs are already facing with worker shortage and about 15% of workers are trying to find another factory that will give little bit more high salary. If this situation continues long, strike might happen very frequently and SEZs will experience a hard time to find new workers. In this respect, some functions of dormitory are indispensable.

**Table 7-6: Problems with Dormitory and Counter Measures**

|  |
|--|
| <b>Problems with Dormitory</b>   |
| 1. SEZs have already whole commutable workers in Bavet region. SEZs will face with shortage of workers in 2014. In 2015, the shortage might be 5,000 workers (See Chapter 8 for the estimate).   |
| <b>Counter Measures</b>  |
| 1) Dormitory, restraint, commercial building might be necessary at the Casino side. <ul style="list-style-type: none"> <li>(1) Private investor builds the dormitory.</li> <li>(2) SEZ developer builds the dormitory.</li> <li>(3) Third sector such as housing authority builds the dormitory.</li> <li>(4) Private sector expands an existing building for dormitory.</li> <li>(5) Central government, state, province, or city builds the dormitory and provide long term – low rate bank loan.</li> </ul> |
| 2) Extend width of National Road No.1 and reduce the truck rate.   |
| 3) Prepare for bus system.   |

Source: Study team

#### 7-2-6. Dry Port

Manhattan SEZ and Tai Seng Bavet SEZ have own dry port inside the SEZ. Dragon King SEZ, Shandong Industrial Park has a dry port plan on their development drawing. One private dry port is located between Manhattan SEZ and country border. So far, problems with dry port availability were not found during the investigation.





Photo 7.14 : Dry Port near country border (Area is about 7ha)

#### 7-2-7. Clinics and Hospitals

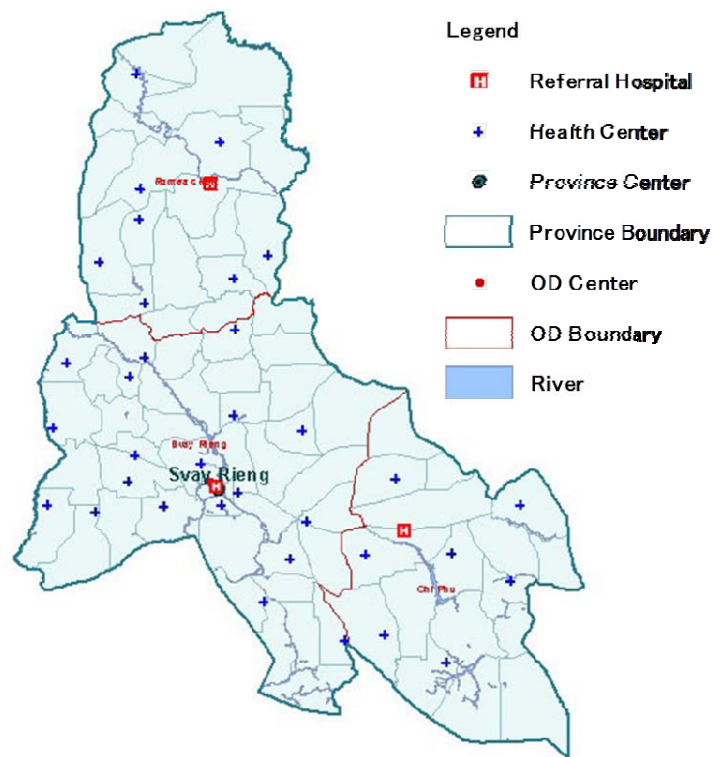
The SEZs is under regulations of the current SEZ sub-decree. The SEZs are not equipped with fire-fighting facilities.

**Table 7-7: Problems with Clinic, Hospital, Fire-fighting, and Counter Measures**

| Problems with Clinic, Hospital, Fire-fighting   |
|---|
| 1. According to present law, the presence of a medical doctor is necessary if numbers of workers are greater than 50. This is very expensive. |
| 2. Beds, clinic, and ambulance car are necessary for factories with lots of workers.  |
| 3. Cambodian law requires fire-fighting and security system but not enough at present SEZs.   |
| Counter Measures  |
| 1) SEZ can have common clinic.  |
| 2) SEZ can set up some health-care assistance agreement with existing clinics.  |
| 3) SEZs can have some alliance to use ambulance car: Car can be from Japan.   |
| 4) Second used fire-fighting car might be from Japan.   |

Source: Study team

A map and photos of existing health centers and hospitals outside the SEZs are shown below.



**Figure 7-4: Medical facilities in Svay Rieng**

Source: MEDICAM (cam-cambodia.org/)



**Photo7.15: Referral Hospital in Svay Rieng**



**Photo7.16: Health Center**



**Photo7.17: Private Clinic**

### 7-2-8. Commercial Facility

There are not sufficient commercial facilities in Bavet.

**Table 7-8: Problems with Commercial Facilities and Counter Measures**

| Problems with Commercial Facilities  |
|--|
| 1. Not enough food menu  |
| 2. No sport facilities   |
| 3. Bavet is an isolated island in Cambodia.  |
| Counter Measures   |
| 1) Build Japanese restraint.   |
| 2) Build sport tennis court, golf driving range, etc.  |
| 3) Prepare for Long distance bus to Phnom Pen and Siem Reap                                  |
| 4) Renovate existing Casino Hotel and renew the building for foreign residential occupation. |

**Source: Study team**

Casino photos are shown.



**Photo 7.18-7.21 : Casino in Bavet**

### 7-2-9. Rental Factory

At the beginning of this investigation, there was not high demand heard during hearings on the subjects. However, due to current strike conditions and bad rumor about poor infrastructure in Bavet region, tenants might need rental factory in order to reduce their investment risks.

**Table 7-9: Problems with Rental Factories and Counter Measures**

| Problems with Rental Factories  |
|---|
| 1. 4 SEZs in Bavet have rental factories. If the demand is high, developer will build.                    |
| 2. Small rental factories (300—1000—2000 m <sup>2</sup> ) are needed in Vietnam and Indonesia now.        |
| 3. There is not enough core industry in Bavet. That may be one of the reasons for the present low demand. |
| 4. Strike will create high demand.  |
| Counter Measures  |
| 1) Build rental factory with ratio of 10% of factories in SEZ.  |
| 2) Core industry is needed for small enterprise. May be 5-7 years later.                                  |
| 3) If the urgent needs happen, the combined rental factory such as PPSEZ type can be applied.             |

Source: Study team

If the rental factory is needed urgently, a dry port facility can be co-used by the rental factory. There is a time gap between completion time of dry port warehouse and a time when the dry port is under full operation. During this time gap, the dry port warehouse can be used as a rental factory by adopting special structures.

- Warehouse has unique structures.
- Internal wall can be built at any free positions so as to offer adjustable space to a tenant.
- This works very well for short term users.
- This system helps dry port management to have stable income during insufficient container period.

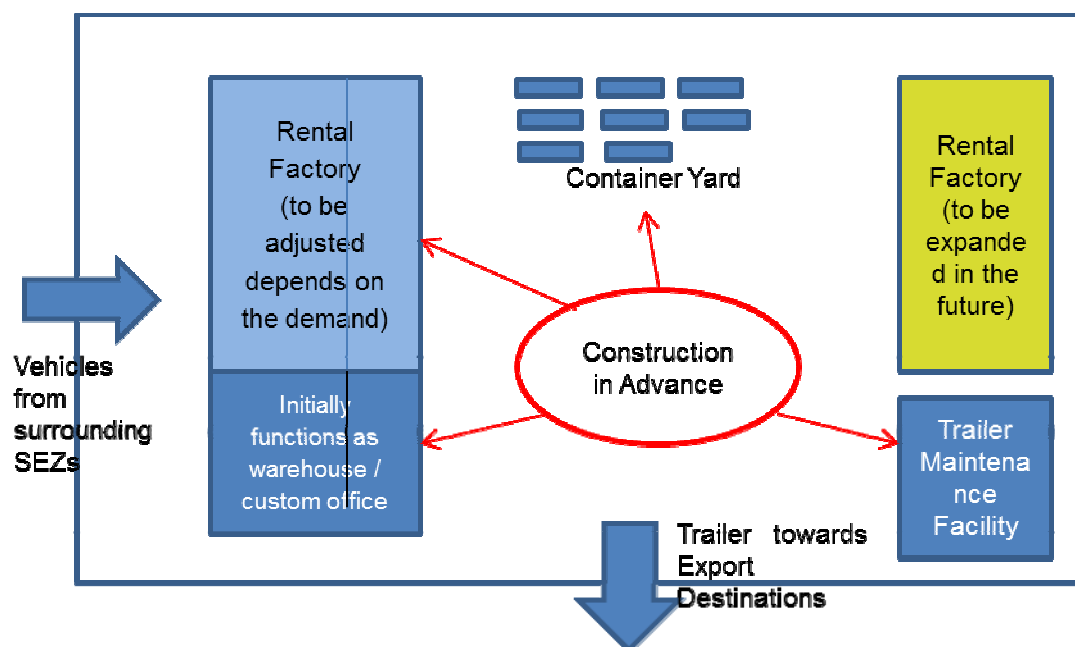


Figure 7-5: Joint Use of Dry port and Rental Factory

Source: Study team

### 7-3. A Desirable Urban Development Plan for Bavet District (Master Plan Prepared by ADB)

The ADB prepared the Master Plan for the future development of Bavet District in 2009. During this



study, the Study Team confirmed that the Bavet city also follows this Master Plan. However, the current status of the SEZs and factories in the region have developed in a different direction from the Master Plan. It is an urgent need to consider the necessary infrastructure required for the future development of the region. The appropriate infrastructure development in Bavet district enables the sustainable operation of the SEZs and factories in the area that will promote the development of Bavet to be the important industrial city.

**7-3-1. Master Plan made by ADB (Road Development)**

The Master Plan by ADB is as shown below.

Master Plan of Bavet Town (Data through meeting on Jan 24, 2013, City of Bavet)

Title: [Transportation Plan of Urban Area in Bavet City, Svay Rieng Province for 2015](#)



**Figure 7-6: Joint Use of Dry port and Rental Factory**  
**Source: Bavet City Office**

The plan includes expansion of National Road No. 1, rural roads improvements and new road developments.

Various width of roads development plan is mentioned in the Master Plan.

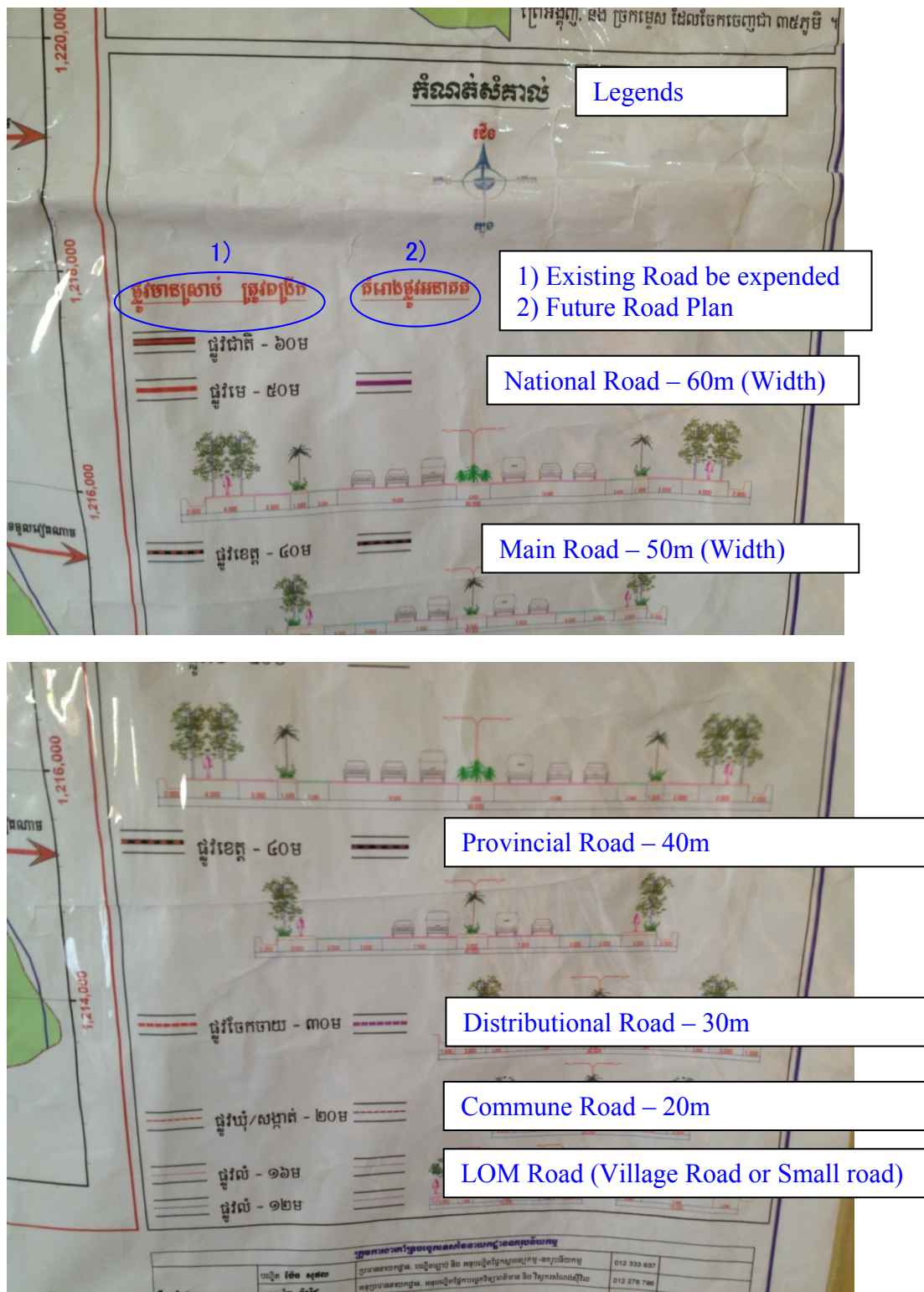
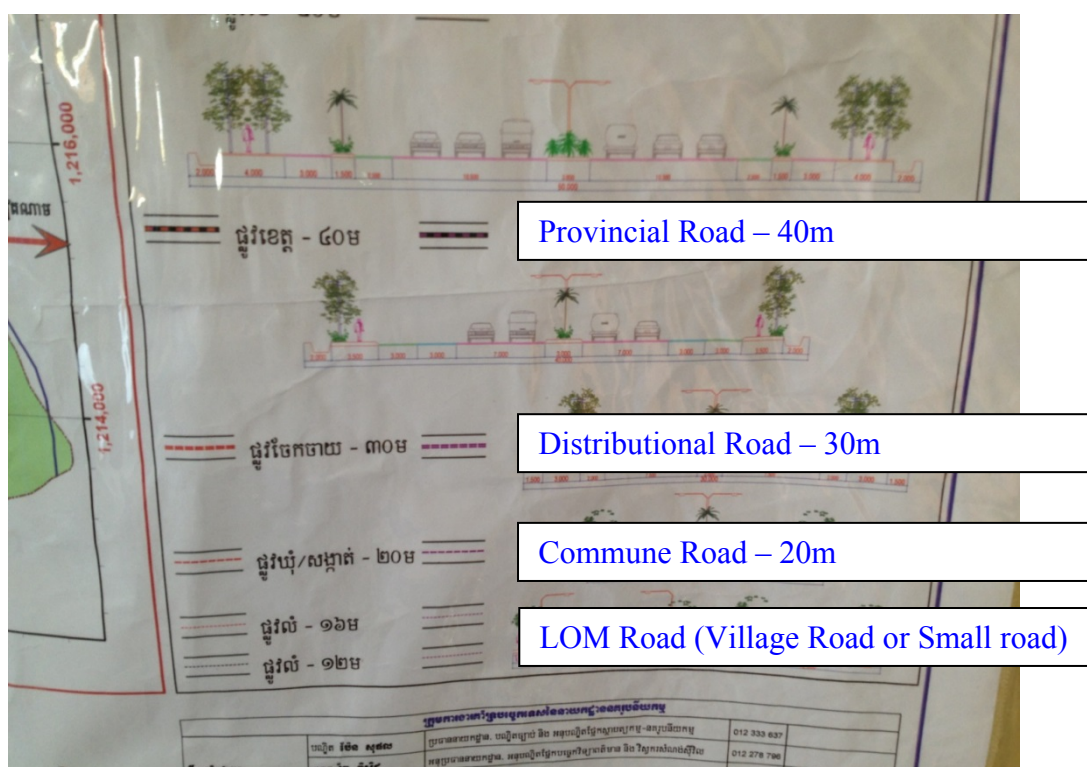


Figure 7-7: Master Plan (Road Cross Section Type)

Source : Bavet City Office



**Figure 7-8: Master Plan (Road Cross Section Type)**

Source : Bavet City Office

### 7-3-2. The Concrete Road Development Plan Prepared by ADB

ADB has further embodied the Master Plan and indicates the list of concrete road development plans in the Bavet district in 2012.

According to the ADB document, the Allocation and Withdrawal of Loan Proceeds shows following figures:

**Table 7-10: Published Documents by ADB (Bavet related Projects)**

| Allocation and Withdrawal of Loan Proceeds |                            |  |             |  |
|--|----------------------------|--|-------------|--|
| No.  | Item                       | Total Amount Allocated for ADB Financing (SDR) |             | Basis for Withdrawal from the Loan Account |
|  |                            | Category                                       | Subcategory |  |
| 1C   | Bavet Wastewater Treatment |  | 1,277,000   | 68% of total expenditure claimed*          |
| 1D   | Bavet Urban Roads          |  | 5,010,000   | 100% of total expenditure claimed*         |
| 2D   | Bavet Urban Roads          |  | 405,000     | 100% of total expenditure claimed*         |

Source: ADB

The Study Team confirmed the followings in the ADB office in Phnom Penh.

**Table 7-11: Information provided by the ADB Phnom Penh Office**

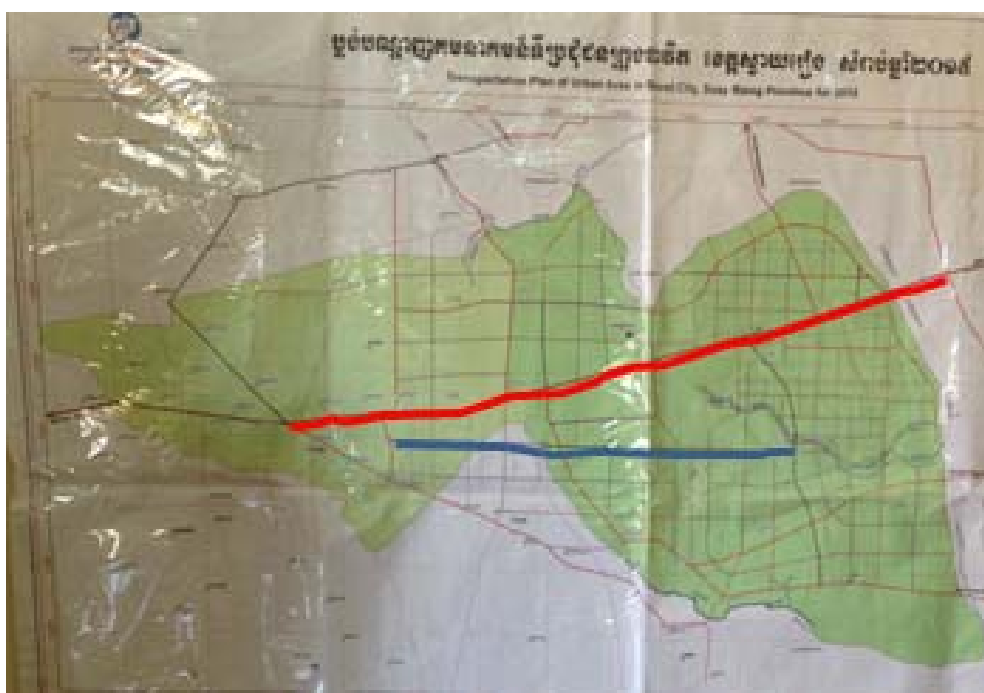
| Information obtained from the visit on the ADB Bavet Region Project  |  |
|--|--|
| 1. Bavet Main Road (NR #1, Ref. #1D), Sub Road (Ref. #2D) and Waste Water Treatment (Ref. #1C) development plan was approved by ADB at the end of last year. Now, it is the selection stage of the design consultants which will be determined in March at the latest. The specification submitted to ADB is drawn from Svay Rieng Province, thus shall be revised to be more realistic at the implementation stage. |  |
| 2. The distance of the Main Road widening part is 8km (i/o 10km). Cross Section and Total Width  |  |



|   |
|---|
| may change depending on the detail design to be conducted by the consultants (i/o 24.8mW). However, 4-lane, street light, U-shaped ditches with a lid for rainwater, sewerage pipes, bus stops at several location (the location shall function as the parking space large sized car in case of breakdown incidents) shall be designed. Parking locations are to be determined by the design consultants. |
| 3. The distance of Sub Road is unknown (Mr. Nida, ADB duty officer). However, the road will be 2-lane with the width of about 10~11m. The details of the rain water and sewage pipes depend on the design consultants.  |
| 4. The Waste Water Treatment Plant (WWT) will be constructed in the land (8ha) located at the southern end of Sub Road connected to the Main Road. WWT will apply the anaerobic treatment system (Half will be constructed in the first phase and the rest in the second phase). The sewerage pipe route is the same as Sub Road. Treatment capacity is unknown (Mr. Nida, ADB duty officer).             |
| 5. The construction contract is expected to be ①Main Road and ②Sub Road + WWT. The tender process will be prepared and the contractor will be determination to be able to start the construction from the dry season at the end of this year and expect to complete at the end of next dry season.  |

**Source: Study team**

To confirm a location with the above information on the map, the widening plan of the National Road No. 1 starts at the border (in specific, starting point of the lane) towards Chipu City in the distance of 8km (The red line indicated on the Road Master Plan: 8km from the Border). Sub Road is the new road development plan extending from east to west at the south of the national highway (The blue line indicated on the Road Master Plan).



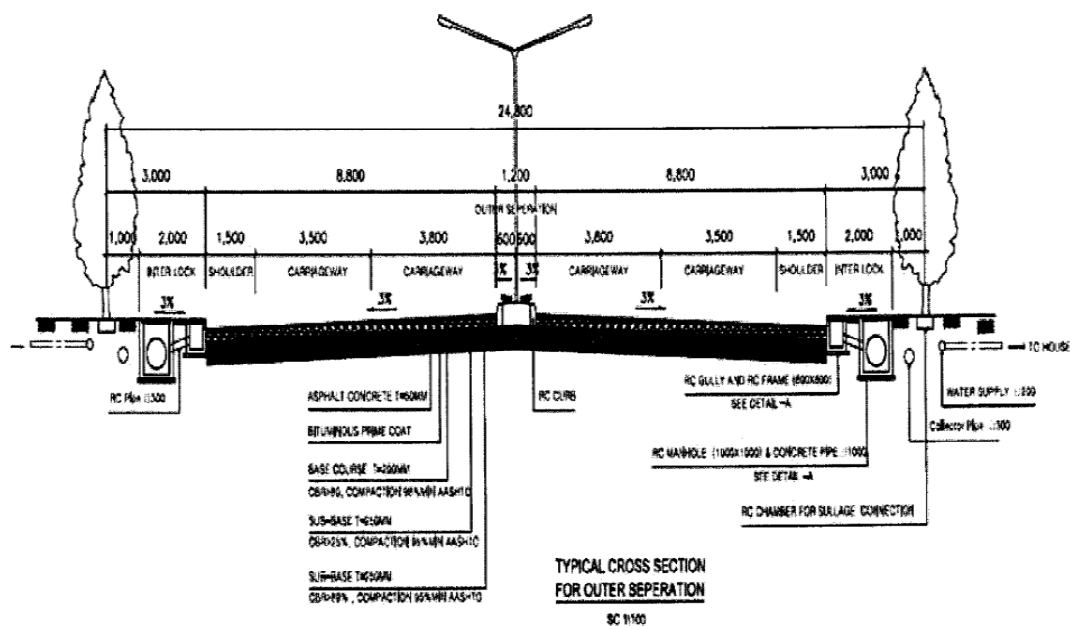
**Figure 7-9: Bavet Road Master Plan**

**Source: Bavet City Office information modified by Study team**

According to the cross section of National Road No. 1 indicated in the ADB project documents, the development plan includes the widening of the current one lane to two lanes plus a shoulder as well as the construction of a median strip and sidewalk as shown in the figure below. As for the underground piping diagram, although the figure shows that it serving only to receive rainwater, the details are to be determined by the road consultant at the detailed design stage.

According to the ABD document published in 2012, the width = 24.800m.





From Norconsult 2012.

**Figure 7-10: National Road No.1 Cross-Sectional View of Road Widening (Width 24.8m)**

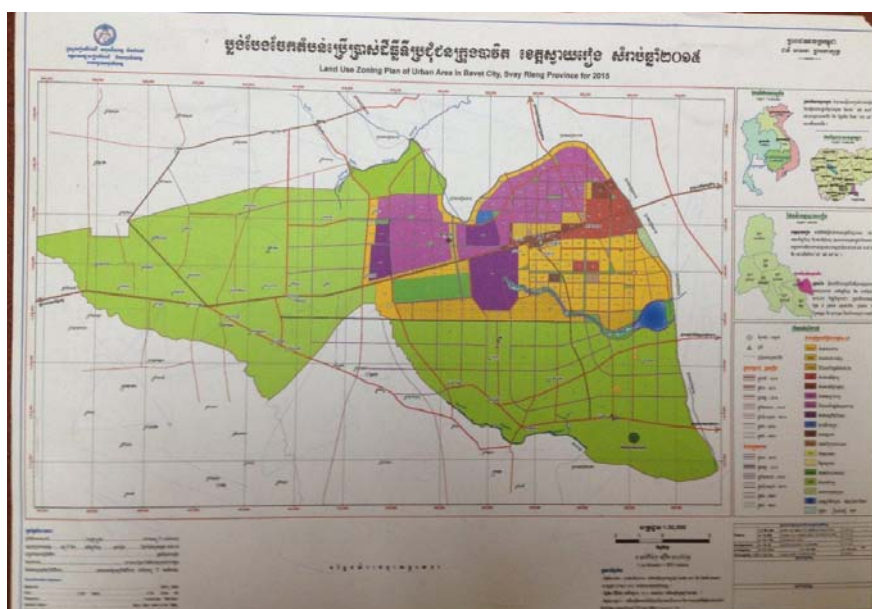
Source: ADB

### 7-3-3. The Master Plan of ADB (Land Use Plan)

ADB's Land Use Master Plan of Bavet region is shown below.

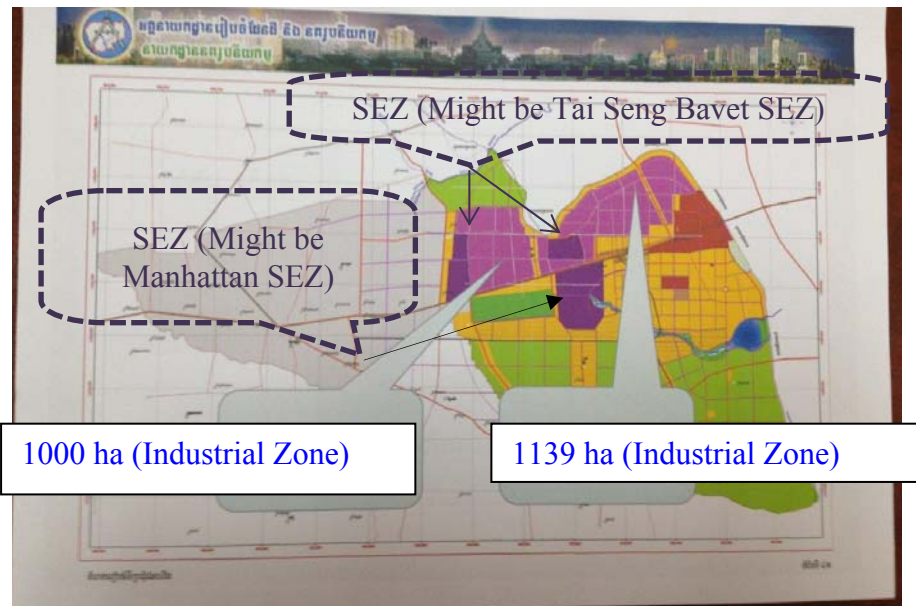
Land Use Plan of Bavet City

Title: [Land Use Zoning Plan of Urban Area in Bavet City, Svay Rieng Province for 2015](#)



**Figure 7-11: Land Use Plan of Bavet City**

Source : Bavet City Office



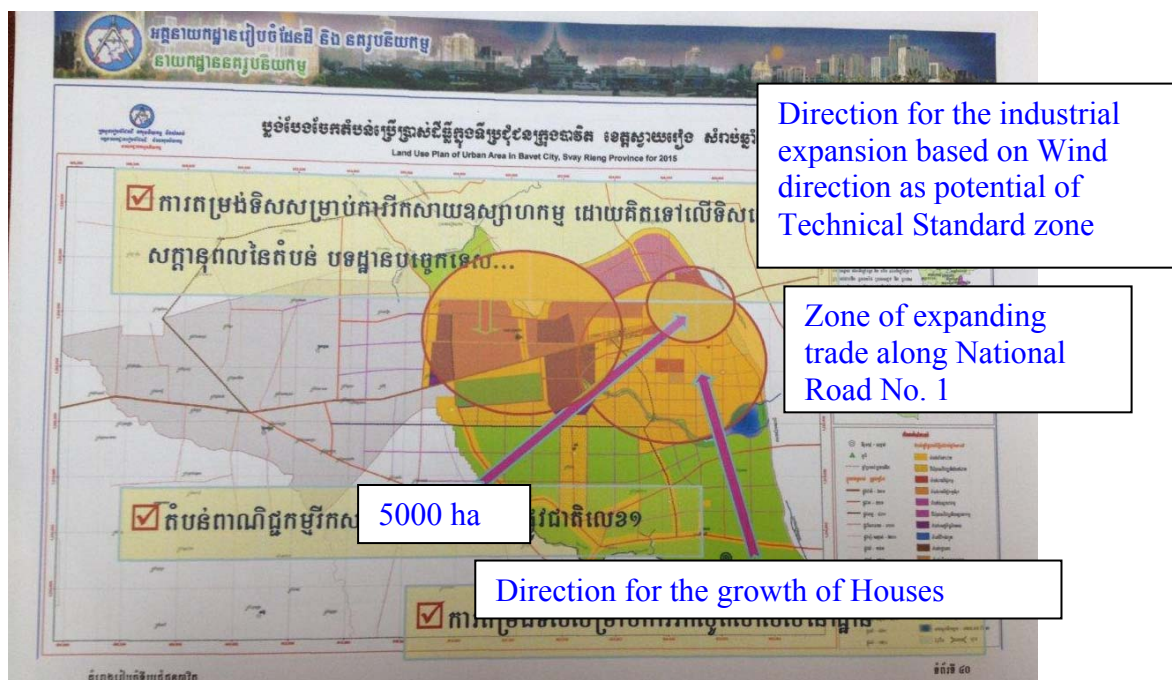
**Figure 7-12: Land Use Plan of Bavet City**

**Source: Department of Public Work & Transport, Svay Reing City, Province of Svay Reing**

As shown in the Master Plan, industrial zone in Bavet region is assumed to expand in the direction towards the Vietnam border starting from Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub). The total area of industrial zone is assumed as 2,139ha in to the Master Plan.

Master Plan of Bavet prepared by ADB (Data through Meeting with Department of Public Work & Transport, Svay Reing City, Province of Svay Reing)

Title: Land Use Plan of Urban Area in Bavet City, Svay Rieng Province for 2015



**Figure 7-13: Master Plan of Bavet prepared by ADB**

**Source: Department of Public Work & Transport, Svay Reing City, Province of Svay Reing**

In the ADB's Master Plan, an industrial zone is assumed to be developed taking into account the direction of the wind. It is planned that the zone of expanding trade is around 5,000ha near the border and the residential zone is to be located at the south of the industrial zone.

Title: Land Use Zoning Plan of Urban Area in Bavet, Svay Rieng Province for 2015

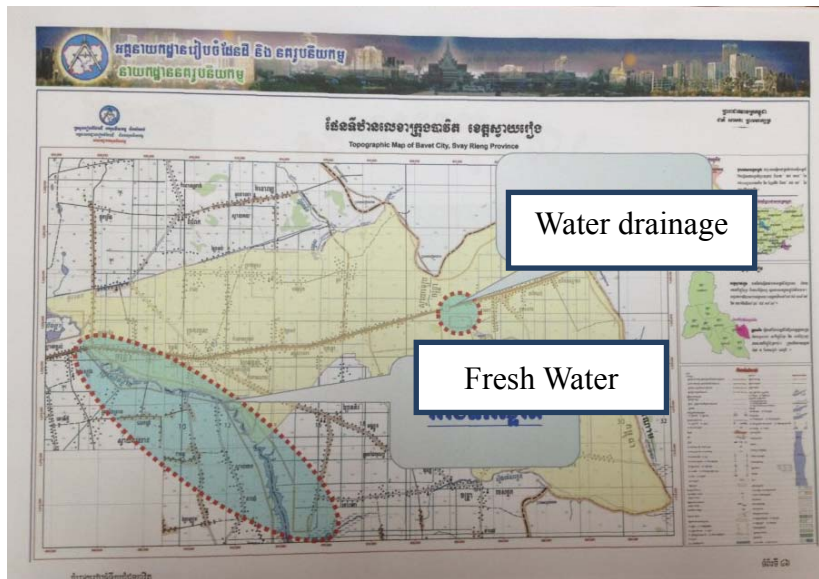


Figure 7-14: Land Use Zoning Plan

Source: Department of Public Work & Transport, Svay Reing City, Province of Svay Reing

ADB's Master Plan considers the river water at the south east as the source of water supply and plans to establish a rainwater drainage facility in the vicinity of SEZ. The Master Plan recommends installation of a waste disposal and treatment plant at the south east end of the region.

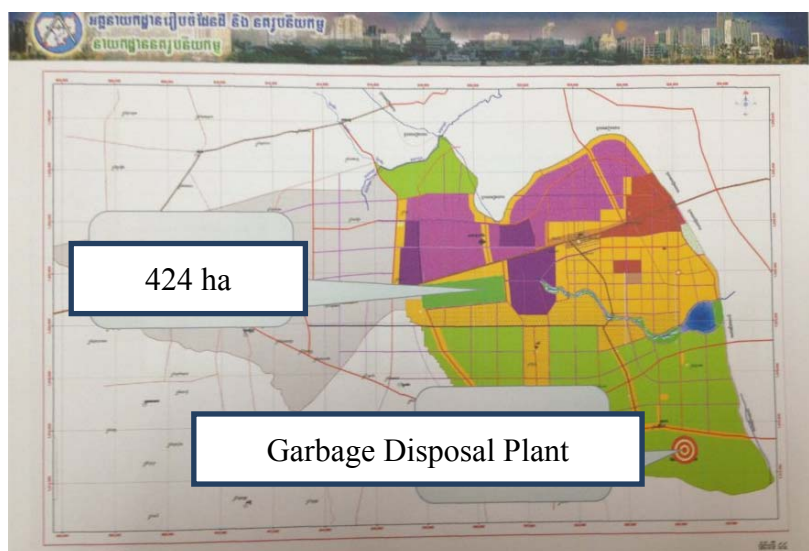


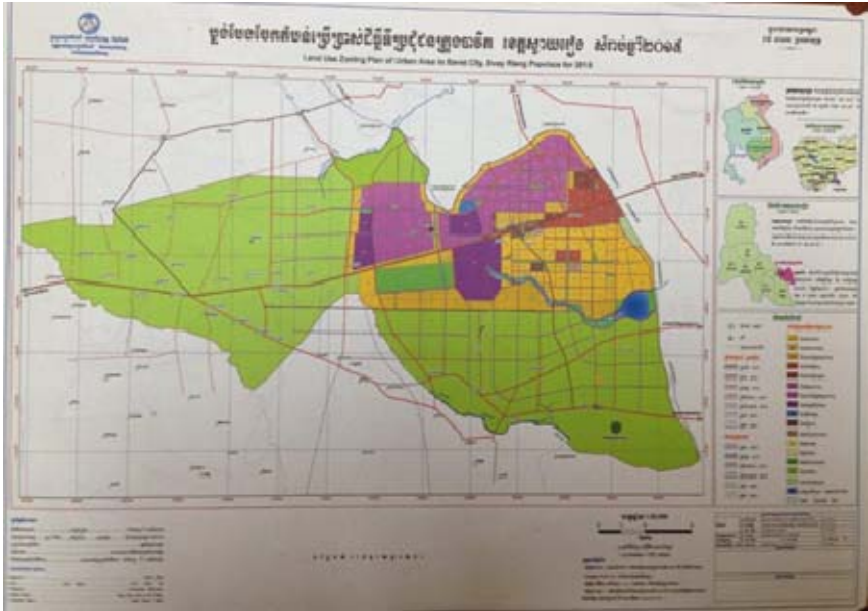
Figure 7-15: Land Use Zoning Plan

Source: Department of Public Work & Transport, Svay Reing City, Province of Svay Reing

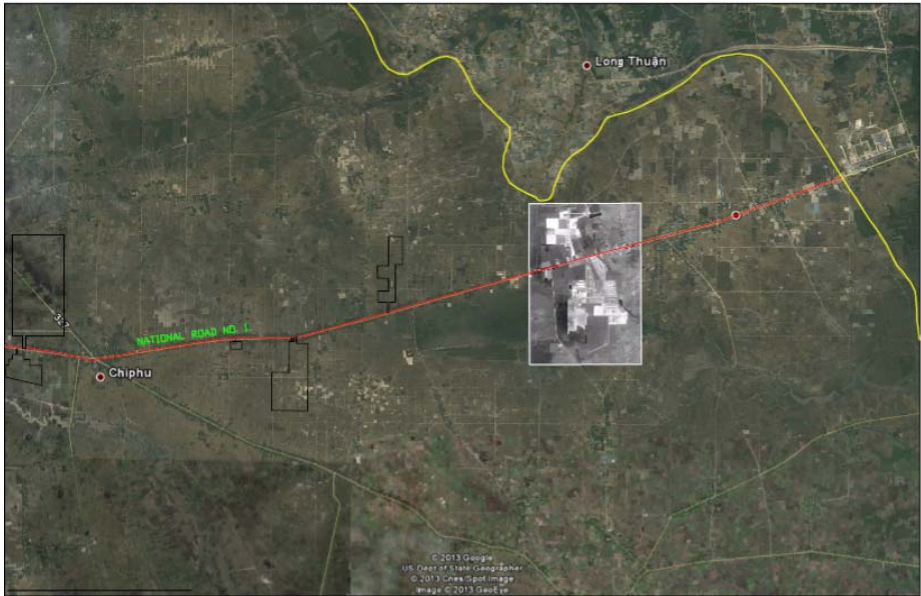


7-4. The Comparison of the Master Plan and Current Status of the Bavet Region

Title: Land Use Zoning Plan of Urban Area in Bavet City, Svay Rieng Province for 2015



**Figure 7-16: Master Plan of the Bavet Region Prepared by ADB**  
**Source: Department of Public Work & Transport, Svay Reing City, Province of Svay Reing**



**Figure 7-17: SEZ Locations According to the Original Development Plan**  
**Source: Department of Public Work & Transport, Svay Reing City, Province of Svay Reing**

The table below shows the comparison of roads and land use described in the ADB Master Plan developed in 2009 and the current status as of January, 2013.

**Table 7-12: The Comparison of ADB's Master Plan and Current Status  
(in terms of the location of the road and size of land area in the Original Development Plan)**

|   |
|---|
| <b>Land Use</b>   |
| <p><u><i>In the Master Plan</i></u></p> <p>The main SEZs are considered to be Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub). Based on these two SEZs, the large scale industrial zone is expected to be developed in the two locations in the north (1,000ha and 1,139ha) the total of 2,139ha.</p>   |
| <p><u><i>Current Condition</i></u></p> <p>1. Industrial zone is currently not connected to the National Road No. 1 and development is not in progress.</p> <p>2. Currently, the industrial zone is concentrated and expanding in the direction of Chipu along National Road No. 1.</p> <p>3. The actual development area of the SEZ and factories in the Bavet area (according to the original development plan approved by the CDC) is limited to around 950ha.</p> <p>4. As SEZ Developers continue to develop SEZ, they seem to be purchasing additional land around the area (although the accurate size of acquired land is not obtainable). Therefore, if the problems of infrastructure are to be solved and market condition permit, the industrial zone can be expanded further.</p> |
| <b>Road</b>   |
| <p><u><i>In the Master Plan</i></u></p> <p>National Road No. 1 assumes the function as the core transportation line in the industrial zone and Sub Road in the residential zone.</p>  |
| <p><u><i>Current Condition</i></u></p> <p>Since there are no transportation access in the north, SEZ is not developed in the area.</p>  |

**Source: Study team**

## **7-5. SEZ Based Urban Development in the Bavet Area**

If the Bavet area is able to solve the electric power shortage, establish dormitories, and perform road maintenance by 2015, there will be no basic infrastructure problem in Bavet area. As described in Chapter 5, based on the original development plan approved by CDC, it is estimated that all the factory lots will be fully occupied and the companies starting their operations from 2020. In addition, if the industrial accumulation is favorable, Bavet area will have a potential to further develop as an SEZ-based industrial city. Usually, SEZ will be financial viable with certain development scale and in many cases, size of the SEZ are 200ha to 500ha. This additional expansion requires around 10 years. Based on this assumption, below section discusses the necessary infrastructure development under the condition that each SEZs in the Bavet area expand their sizes to 200 to 500ha during 2020 to 2030.

### **7-5-1. Demand Forecast of Infrastructure**

In case of the SEZ Developers continue to operate and the market is stabilized due to the industrial accumulation, each SEZs will gradually expand their development area. As a result, further accumulation of SEZs and factories will be expected in the whole Bavet area. Based on this assumption, the infrastructure demand in the whole region is estimated below. For the projection, basic unit indicated in the previous chapter is used.

(1) Manhattan SEZ

(According to the interviews, the development of the zone is the same as the original)

**Table 7-13: Infrastructure Demand in Manhattan SEZ**

|                       |        |        |
|-----------------------|--------|--------|
| Year                  | 2020   | 2030   |
| Development Area (ha) | 208.84 | 208.84 |
| Factory Lot Area (ha) | 145.63 | 145.63 |
| Nos. of Factories     | 33     | 33     |
| Nos. of Workers       | 27,970 | 27,970 |

|                                   |          |          |
|-----------------------------------|----------|----------|
| Water (m <sup>3</sup> /day)       | 2,797.03 | 2,797.03 |
| Waste Water (m <sup>3</sup> /day) | 2,237.62 | 2,237.62 |
| Electric Power (MW)               | 13.54    | 13.54    |

Source: Study team

(2) Tai Seng Bavet SEZ

(SEZ Developer is possibly acquiring the surrounding land. Additional 70ha may be expandable towards the border)

**Table 7-14: Infrastructure Demand in Tai Seng Bavet SEZ**

| Year                              | 2020     | 2030     |
|-----------------------------------|----------|----------|
| Development Area (ha)             | 154.13   | 220.53   |
| Factory Lot Area (ha)             | 107.89   | 154.37   |
| Nos. of Factories                 | 38       | 48       |
| Nos. of Workers                   | 21,433   | 29,176   |
| Water (m <sup>3</sup> /day)       | 2,143.33 | 2,917.59 |
| Waste Water (m <sup>3</sup> /day) | 1,714.66 | 2,334.07 |
| Electricity (MW)                  | 12.31    | 15.90    |

Source: Study team

(3) Tai Seng Bavet SEZ Sub

(SEZ Developer is possibly acquiring the surrounding land. Additional 50ha may be expandable towards the border)

**Table 7-15: Infrastructure Demand in Tai Seng Bavet SEZ Sub**

| Year                              | 2020   | 2030   |
|-----------------------------------|--------|--------|
| Development Area (ha)             | 51.46  | 100.00 |
| Factory Lot Area (ha)             | 36.03  | 50.00  |
| Nos. of Factories                 | 14     | 16     |
| Nos. of Workers                   | 7,081  | 9,450  |
| Water (m <sup>3</sup> /day)       | 708.07 | 945.00 |
| Waste Water (m <sup>3</sup> /day) | 566.46 | 756.00 |
| Electric Power (MW)               | 4.00   | 5.15   |

Source: Study team

(4) Dragon King SEZ

(According to the interview, the SEZ Developer has the willingness to expand to a large scale SEZ. The total SEZ area of 500ha is assumed in the future)

**Table 7-16: Infrastructure Demand in Dragon King SEZ**

| Year                              | 2020     | 2030     |
|-----------------------------------|----------|----------|
| Development Area (ha)             | 108.67   | 500.00   |
| Factory Lot Area (ha)             | 80.93    | 350.00   |
| Nos. of Factories                 | 23       | 109      |
| Nos. of Workers                   | 19,339   | 66,150   |
| Water (m <sup>3</sup> /day)       | 1,933.90 | 6,615.00 |
| Waste Water (m <sup>3</sup> /day) | 1,547.12 | 5,292.00 |
| Electricity (MW)                  | 8.34     | 36.05    |

Source: Study team

(5) Shandong Industrial Park

(The same management company of Manhattan SEZ. Additional 80ha may be developed judging from the land shape)

**Table 7-17: Infrastructure Demand in Shandong Industrial Park**

| Year                              | 2020     | 2030     |
|-----------------------------------|----------|----------|
| Development Area (ha)             | 116.57   | 200.00   |
| Factory Lot Area (ha)             | 81.60    | 140.00   |
| Nos. of Factories                 | 25       | 43       |
| Nos. of Workers                   | 15,422   | 26,460   |
| Water (m <sup>3</sup> /day)       | 1,542.22 | 2,646.00 |
| Waste Water (m <sup>3</sup> /day) | 1,233.78 | 2,116.80 |
| Electric Power (MW)               | 8.40     | 14.42    |

Source: Study team

## (6) High Park SEZ (CDC)

(According to CDC, application of development land area is around 300ha. However, considering the large amount of initial investment, the Developer seems to be active in the future development. Therefore, the total SEZ area of 500ha is assumed)

**Table 7-18: Infrastructure Demand in High Park SEZ (CDC )**

| Year                              | 2020     | 2030     |
|-----------------------------------|----------|----------|
| Development Area (ha)             | 300.00   | 500.00   |
| Factory Lot Area (ha)             | 210.00   | 350.00   |
| Nos. of Factories                 | 65       | 109      |
| Nos. of Workers                   | 39,690   | 66,150   |
| Water (m <sup>3</sup> /day)       | 3,969.00 | 6,615.00 |
| Waste Water (m <sup>3</sup> /day) | 3,175.20 | 5,292.00 |
| Electric Power (MW)               | 21.63    | 36.05    |

Source: Study team

## (7) Nissin Factory

(Maintain the current status of 5ha)

**Table 7-19: Infrastructure Demand in Nissin Factory**

| Year                              | 2020 | 2030 |
|-----------------------------------|------|------|
| Development Area (ha)             | 5.00 | 5.00 |
| Factory Lot Area (ha)             | 5.00 | 5.00 |
| Nos. of Factories                 | 1    | 1    |
| Nos. of Workers                   | 80   | 80   |
| Water (m <sup>3</sup> /day)       | 8.00 | 8.00 |
| Waste Water (m <sup>3</sup> /day) | 6.40 | 6.40 |
| Electric Power (MW)               | 0.52 | 0.52 |

Source: Study team

## (8) Rocks Factory

(Maintain the current development plan of 5ha)

**Table 7-20: Infrastructure Demand in Rocks Factory**

| Year                              | 2020   | 2030   |
|-----------------------------------|--------|--------|
| Development Area (ha)             | 5.00   | 5.00   |
| Factory Lot Area (ha)             | 5.00   | 5.00   |
| Nos. of Factories                 | 1      | 1      |
| Nos. of Workers                   | 3,000  | 3,000  |
| Water (m <sup>3</sup> /day)       | 300.00 | 300.00 |
| Waste Water (m <sup>3</sup> /day) | 240.00 | 240.00 |

|                     |      |      |
|---------------------|------|------|
| Electric Power (MW) | 0.52 | 0.52 |
|---------------------|------|------|

Source: Study team

(9) Bavet

(All SEZs and Factories: Total factories of each SEZ mentioned above)

**Table 7-21: Infrastructure Demand in Bavet**

| Year                              | 2020      | 2030      |
|-----------------------------------|-----------|-----------|
| Development Area (ha)             | 948.88    | 1,738.57  |
| Factory Lot Area (ha)             | 672.08    | 1,200.00  |
| Nos. of Factories                 | 200       | 359       |
| Nos. of Workers                   | 134,015   | 228,436   |
| Water (m <sup>3</sup> /day)       | 13,401.55 | 22,843.62 |
| Waste Water (m <sup>3</sup> /day) | 10,721.24 | 18,274.89 |
| Electric Power (MW)               | 69.26     | 122.15    |

Source: Study team

#### **7-5-2 Necessary Infrastructure in Bavet Region in the Future**

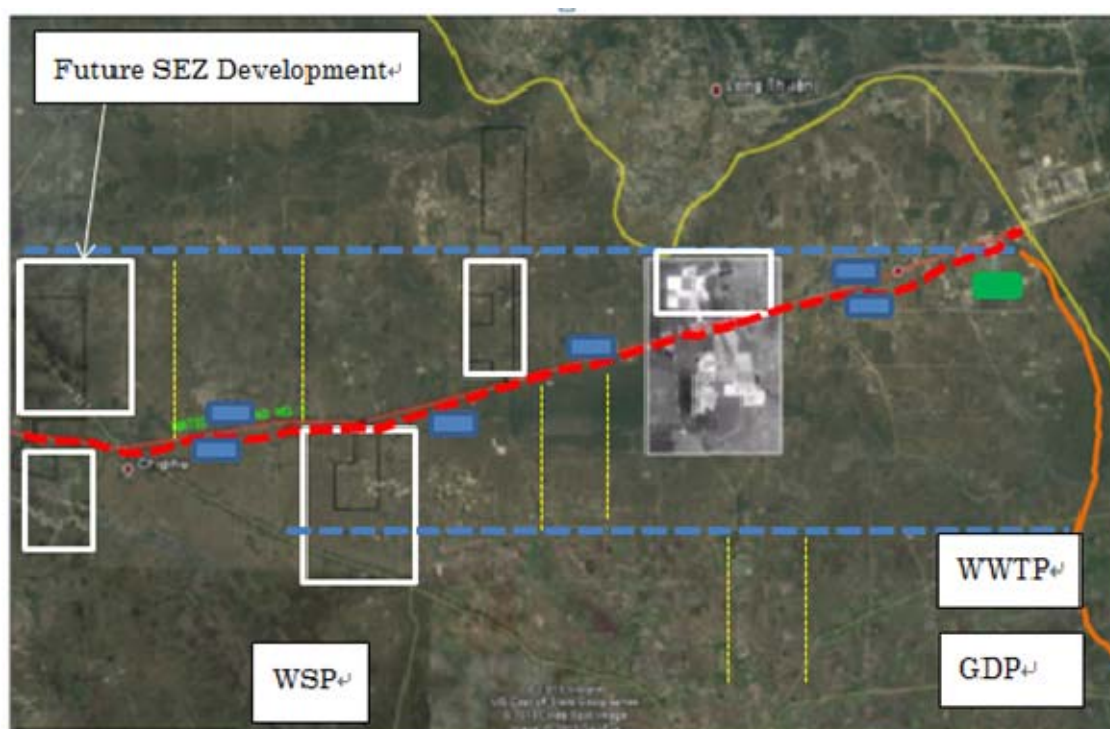
Based on the above analysis, major industrial city of the following scale is expected to be developed in 2030.

- Total development area is around 1,739ha
- No. of factories 359
- No. of workers 228,436
- Water usage 22,844 m<sup>3</sup>/day
- Wastewater generation 18,275 m<sup>3</sup>/ day
- Required electricity 122MW

Considering the initial ADB Master Plan assumes an industrial zone to be 2,139ha and the total area of 2,500ha including already developed Manhattan SEZ and Tai Seng Bavet SEZ (Main/Sub), the assumption made by the Study Team is not excessive.

The next section describes the necessary infrastructure development based on the combination of the ADB's Master Plan, and the current status and future development prospects analyzed by the Study Team.





**Figure 7-18: Necessary Infrastructure Development in the Future**

Source: Study team

| Legend      | Item   | Schedule (Term) |     |      |
|-------------|--|-----------------|-----|------|
|             |  | Short           | Mid | Long |
|             | Dormitory Zone                               | ○               |     |      |
|             | High class residential zone                  |                 | ○   |      |
| WSTP        | Water Supply Treatment Plant (Surface Water) |                 | ○   | ○    |
| WWTP        | Waste Water Treatment Plant                  |                 | ○   | ○a   |
| GDP         | Garbage Disposal Plant                       |                 | ○   | ○    |
|             | Expanded National Road No.1                  | ○               | ○   | ○    |
|             | New Road (Sub Road)                          | ○               | ○   | ○    |
|             | Village Road                                 | ○               |     |      |
| Electricity | Self (Generator set)                         | ○               |     |      |
| Electricity | New EDC Power                                |                 | ○   | ○    |

**Table 7.14: Schedule of Necessary Infrastructure Development**

Source: Study team

#### (1) Necessary Infrastructure Development in the Short Term

##### Village Road indicated in Yellow

Village roads development is in urgent need to expand the commuter belt. During the rainy season, because the drainage is poor, the route connecting village and National Road No. 1 is difficult to commute in many cases. In order to solve this problem, a self road development scheme by the villagers is recommended. Firstly, asphalt cement shall be provided to the villagers and the road development shall be done by the villagers themselves. As an incentive, once the village roads are developed, motor bike and tuk tuk shall be granted. In this case, the grassroots support of JICA may be applicable.

#### Dormitory Development

There is a limitation of commuting workers that is rapidly being reached at this moment. Therefore, a dormitory shall be developed in a timely manner. A more upscale residential facility for the manager class worker is also required, especially for the foreign tenants. In this case, the application of the currently closed casino as a residential use may be an option.

#### Electricity (Generator Set)

No additional EDC power will be available until 2015. Until that time, self power supply is necessary.

#### (2) Desirable Infrastructure Development in the Mid Term

##### Widening of National Road No. 1 and New Road Development by ADB (Red dashed line and Blue dashed line)

Local traffic condition is imminent. There is a need for the road maintenance as soon as possible. In ADB's development plan, new road development is expected to proceed in the south. However the road in the north is also important to disperse the communal traffic. It may serve as the bypass road to Vietnam.

#### (3) Desirable Infrastructure Development in the Long Term

##### Water Supply Plant

Excessive water intake by the increasing factories in SEZs may result in land settlement. Utilization of the river water as the water source is recommended with building pipes along the new road network.

##### Waste Water Treatment Plant

Wastewater treatment plant has to be developed in the SEZ by the SEZ Developer. As the urbanization progresses, naturally the population increases. Therefore, sewage plant for the urban population in the city is also required. As the same as water supply, sewage pipe shall be equipped along the new road network as the Figure shows. Only after the purification, the treated wastewater shall be discharged into the river.

##### Waste Disposal and Treatment Facilities

As the urbanization progresses by attracting investment and labors in SEZ, large amount of waste will be generated. Thus, the establishment of the waste treatment facility at the site indicated in the Figure is expected. In addition, it is desired to utilize the heat generated by the incineration of wastes.

## 8. LABOR MARKET SITUATION

### 8-1 Demand and Supply of Labor

#### (1) Labor Supply

##### ① Population Structure of Svay Rieng province

According to the 2008 population census, the population of Svay Rieng Province was 482,788 in 2008, accounting for 3.6% of the total population of Cambodia. Compared to the population of 1998, the population change was only about 1% over the 10 years.

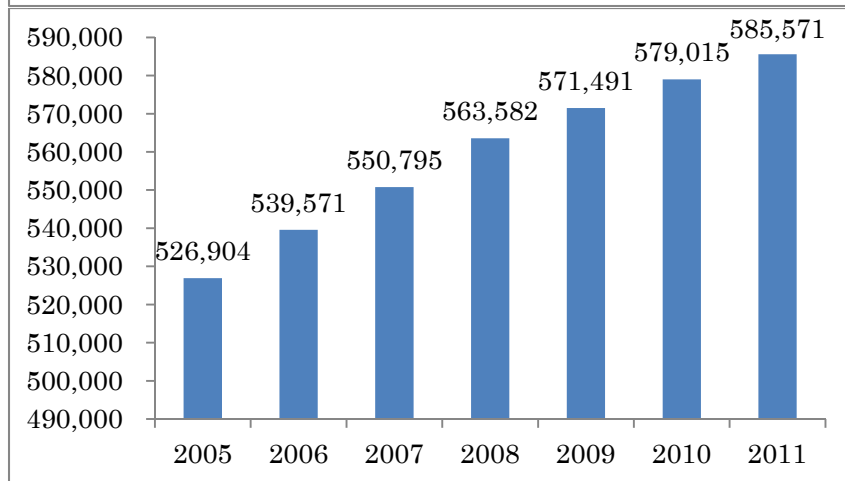
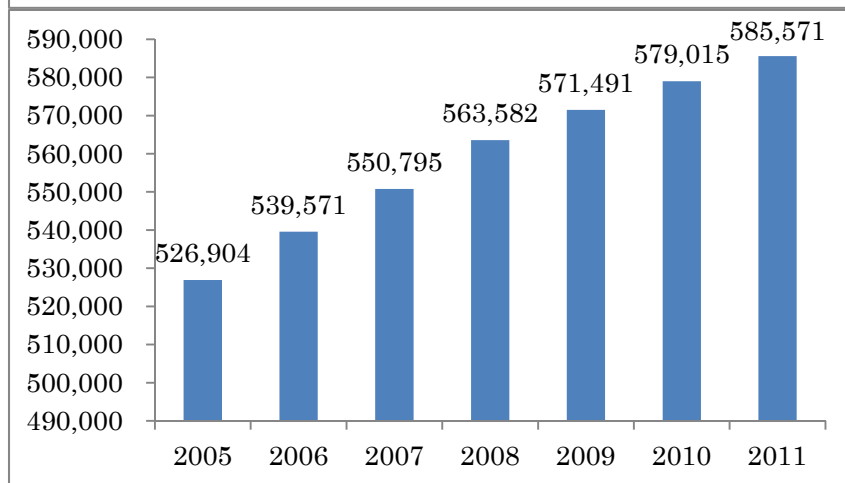
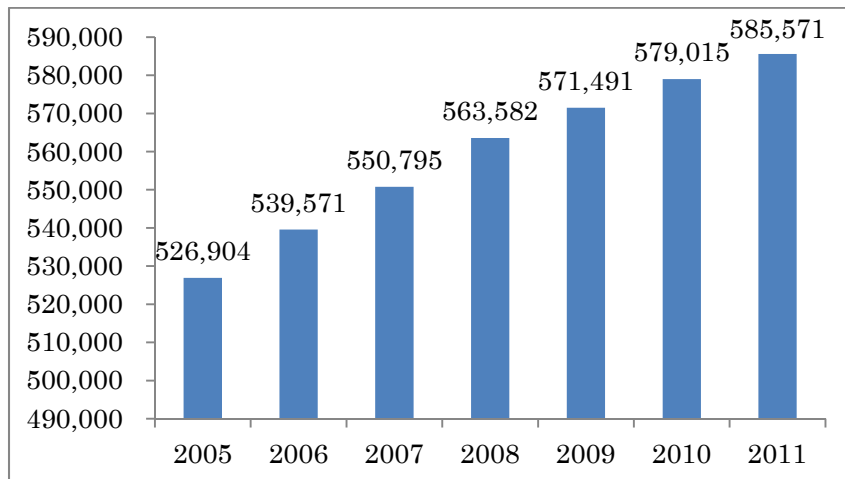
**Table 8-1: Change of Population by Province in Cambodia (1998-2008)**

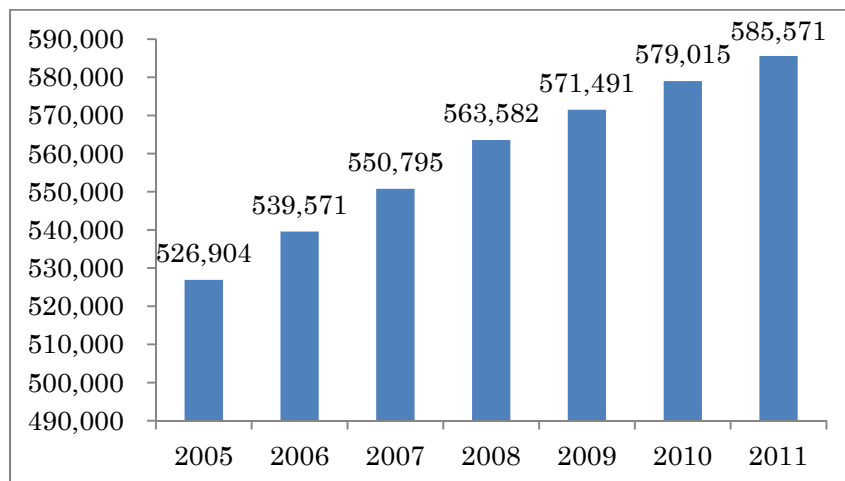
| Province                | 2008       |           | 1998       |
|-------------------------|------------|-----------|------------|
| <b>Cambodia - Total</b> | 13,395,682 | Ratio (%) | 11,437,656 |
|                         |            |           |            |
| Banteay Meanchey        | 677,872    | 5.1       | 577,772    |
| Battambang              | 1,025,174  | 7.7       | 793,129    |
| Kampong Cham            | 1,679,992  | 12.5      | 1,608,914  |
| Kampong Chhnang         | 472,341    | 3.5       | 417,693    |
| Kampong Speu            | 716,944    | 5.4       | 598,882    |
| Kampong Thom            | 631,409    | 4.7       | 569,060    |
| Kampot                  | 585,850    | 4.4       | 528,405    |
| Kandal                  | 1,265,280  | 9.4       | 1,075,125  |
| Koh Kong                | 117,481    | 0.9       | 132,106    |
| Kratie                  | 319,217    | 2.4       | 263,175    |
| Mondul Kiri             | 61,107     | 0.5       | 32,407     |
| Phnom Penh              | 1,327,615  | 9.9       | 999,804    |
| Preah Vihear            | 171,139    | 1.3       | 119,261    |
| Prey Veng               | 947,372    | 7.1       | 946,042    |
| Pursat                  | 397,161    | 3.0       | 360,445    |
| Ratanak Kiri            | 150,466    | 1.1       | 94,243     |
| Siemreap                | 896,443    | 6.7       | 696,164    |
| Sihanoukville           | 221,396    | 1.7       | 155,690    |
| Stung Treng             | 111,671    | 0.8       | 81,074     |
| Svay Rieng              | 482,788    | 3.6       | 478,252    |
| Takeo                   | 844,906    | 6.3       | 790,168    |
| Oddar Meanchey          | 185,819    | 1.4       | 68,279     |
| Kep                     | 35,753     | 0.3       | 28,660     |
| Pailin                  | 70,486     | 0.5       | 22,906     |

**Source: Population Census 2008, NIS**

On the other hand, according to the official population statistics of Svay Rieng provincial government, the population was about 563,582 in 2008 in about 585,571 in 2011. Therefore, there is a data discrepancy probably due to a difference in the acquisition methodology.

Based on this data from Svay Rieng provincial government, there was a population increase of 11% over the 6 years between 2005 and 2011. The discussion hereafter is mainly based on the data from the provincial government but the 2008 census data is also used only when it is necessary.

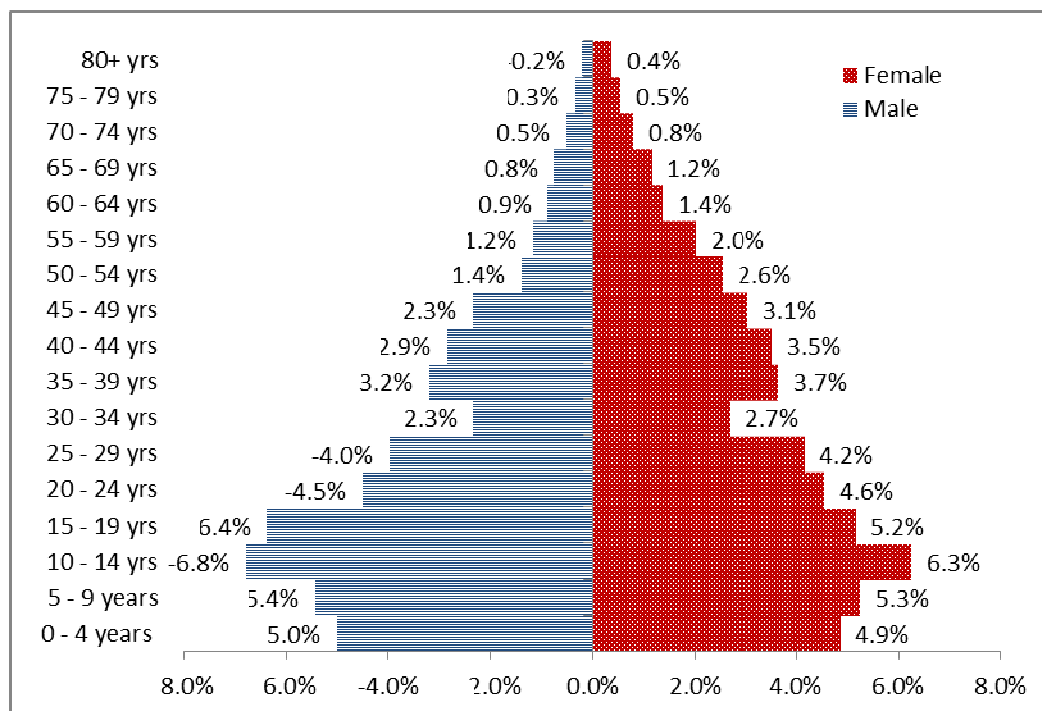




**Figure 8-1: Population Trend in Svay Rieng Province**

**Source:** Created by Study tea, based on statistical data from Svay Rieng Provincial Department of Planning and Svay Rieng Province Data book (2009)

The population pyramid of Svay Rieng Province shows that the percentage of 15-29 year old women, who are the main workforce of factories in Bavet, is 14 % of the total provincial population in 2008. The same percentage of 15-29 year old men is 15 %. In case of 18-29 year old women and men, the percentages are 11% and 11% respectively.



**Figure 8-2: Population Pyramid of Svay Rieng Province (2008)**

**Source:** Created by Study team based on data from Population Census 2008, NIS

Svay Rieng province consists of 8 districts. “Bavet” used to be a commune of Chantrea District but “Bavet District” was newly established in 2008. Bavet District, where the main current SEZs are located, accounts for 6% of the provincial population with a population density of 1.83 persons/ha, which is slightly lower than the provincial average. Svay Rieng District, being the capital city of the province, has a high population density with a relatively small population of 45,533. Svay Chrum District and Romeas Haek District are populous, accounting for 50% of the provincial pop-

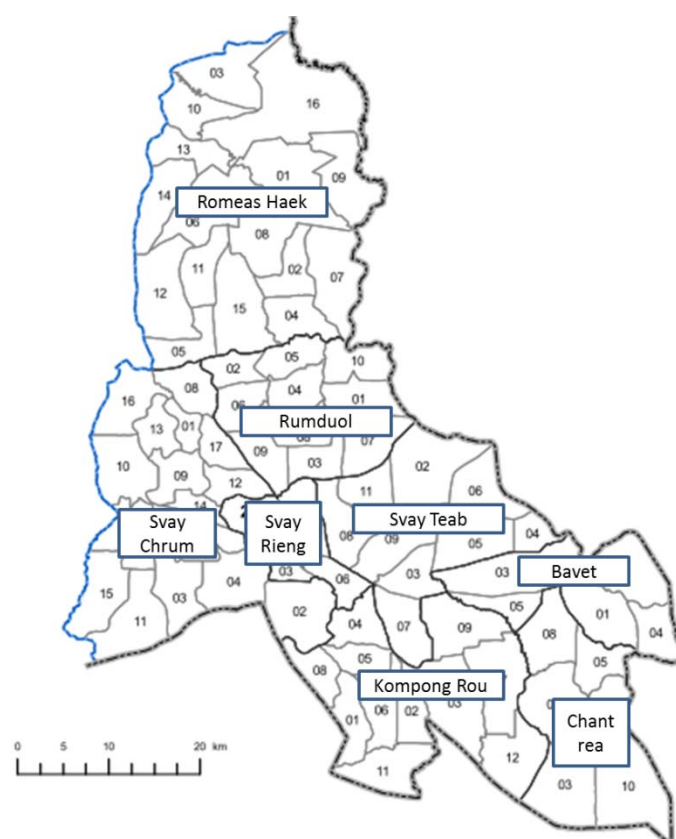
ulation. Svay Chrum Distrcit has a high population density.

**Table 8-2: Population and its Density by District in Svay Rieng Province**

| District    | Land area (ha) | Population (2011) | Population Ratio (%) | Population Density (No/ha) |
|-------------|----------------|-------------------|----------------------|----------------------------|
| Chantrea    | 27,847         | 28,195            | 5%                   | 1.01                       |
| Kampong Rou | 38,730         | 69,382            | 12%                  | 1.79                       |
| Rumduol     | 28,990         | 57,621            | 10%                  | 1.99                       |
| Romeas Haek | 78,461         | 133,616           | 23%                  | 1.70                       |
| Svay Chrum  | 39,039         | 157,323           | 27%                  | 4.03                       |
| Svay Rieng  | 8,275          | 45,533            | 8%                   | 5.50                       |
| Svay Teab   | 32,039         | 56,095            | 10%                  | 1.75                       |
| Bavet       | 20,668         | 37,806            | 6%                   | 1.83                       |
| Total       | 274,049        | 585,571           | 100%                 | 2.14                       |

Source: Created by Study tea, based on statistical data from Svay Rieng Provincial Department of Planning and Svay Rieng Province Data book (2009)

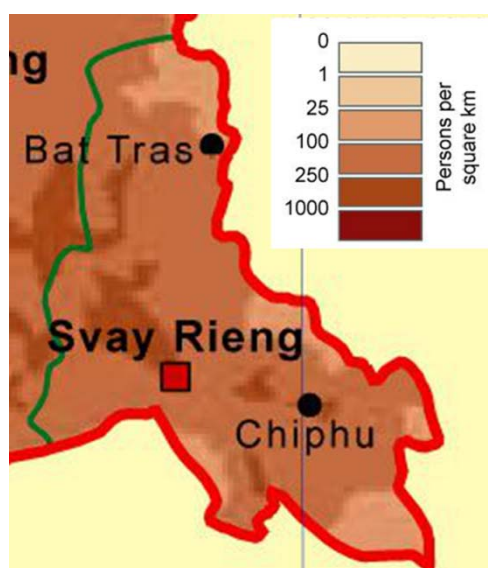
The map below shows the locations of 8 districts of Svay Rieng Province.



**Figure 8-3: Administrative Map of Svay Rieng Province**

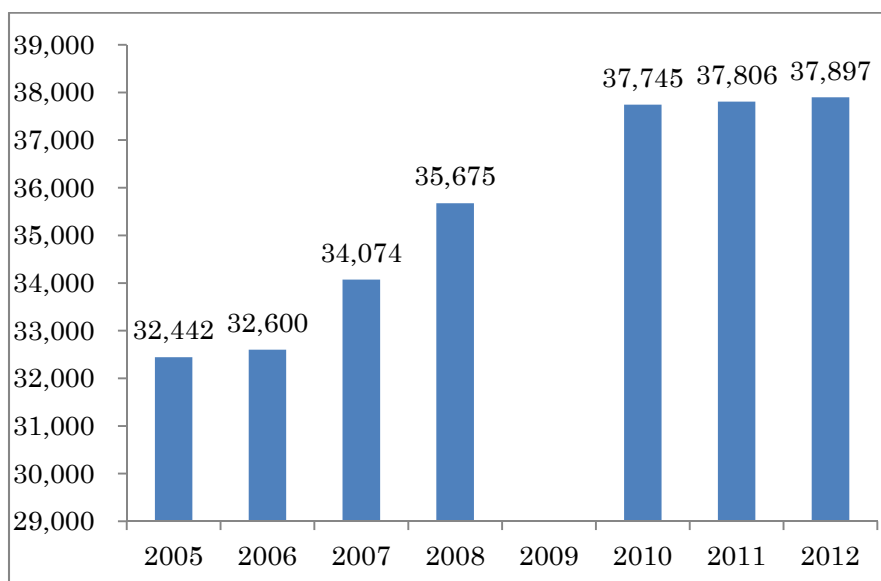
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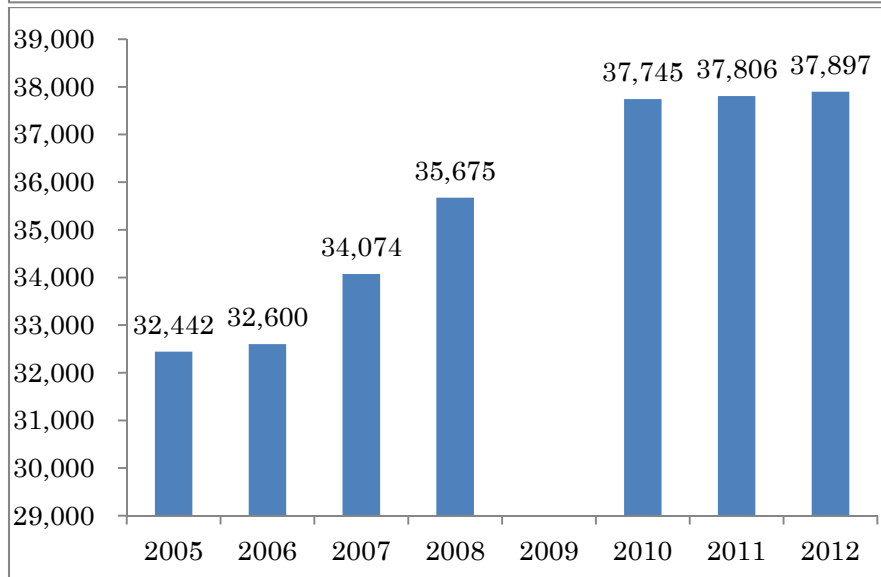
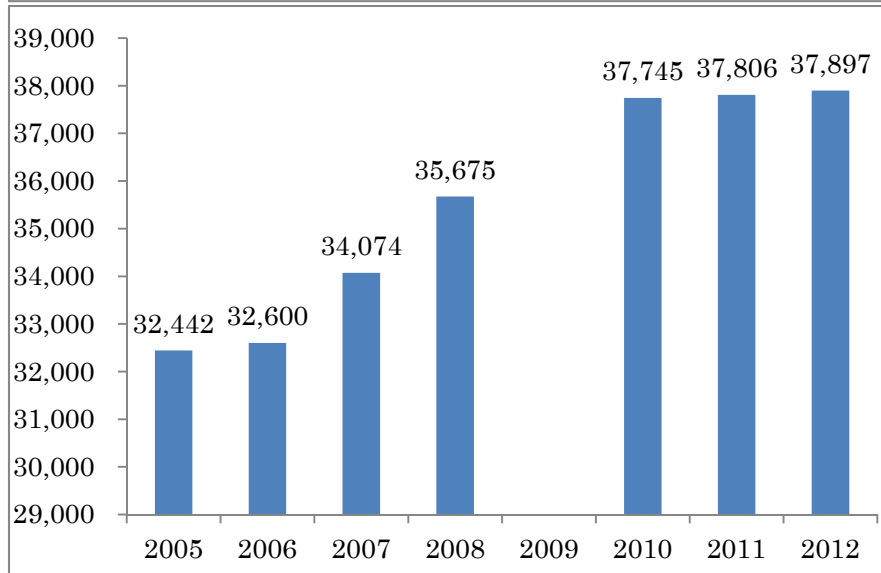
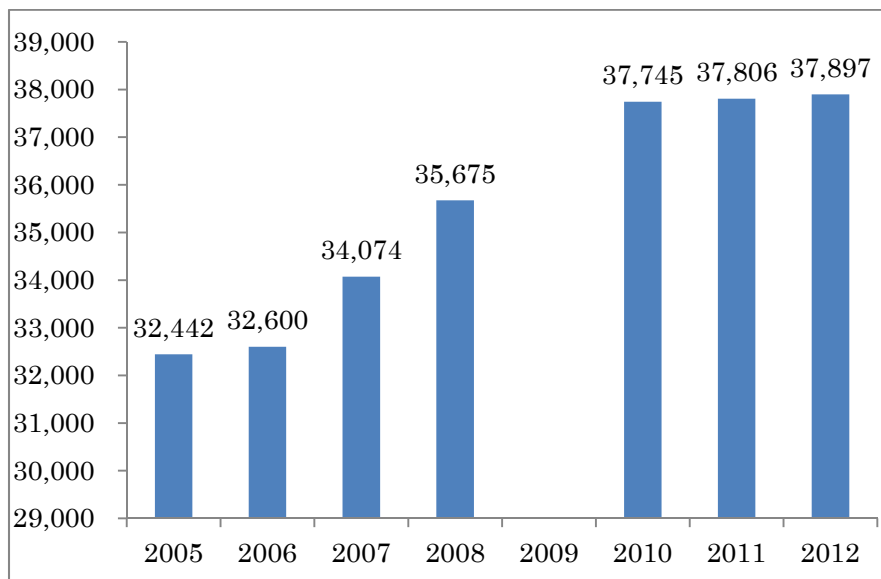
The population density of Svay Rieng province is shown below, although the data is rather old (2001).



**Figure 8-4: Population Density Map of Svay Rieng Province**  
**Source: World Trade Press (2007)**

The population of Bavet District is shown in the figure below. The population increased rapidly from 2005 to 2008 but the growth rate slows down between 2010 and 2012.





**Figure 8-5: Population of Bavet District**



Source: Created by Study tea, based on statistical data from statistical data from Bavet City office and Svay Rieng Province Data book (2009)

② Current Labor Supply of Svay Rieng Province

The working population (over 18 year old) of Svay Rieng Province in was 372,330 in 2011 - Out of which 306,316 people are employed.

**Table 8-3: Working Population of Svay Rieng Province (Over 18-year old)**

|  | 2009    | 2010    | 2011    |
|--|---------|---------|---------|
| Population of over 18-year old             | 347,256 | 359,068 | 372,330 |
| Of which male population                   | 163,035 | 168,451 | 175,186 |
| Of which female population                 | 184,221 | 190,617 | 197,144 |
| Population of over 18-year old with jobs   |         |         | 306,316 |
| Of which male population with jobs         |         |         | 150,222 |
| Of which female population with jobs       |         |         | 156,099 |
| Rate of Population of over 18 year old (%) |         |         | 82.3    |
| Of which male population (%)               |         |         | 85.8    |
| Of which female population (%)             |         |         | 79.2    |

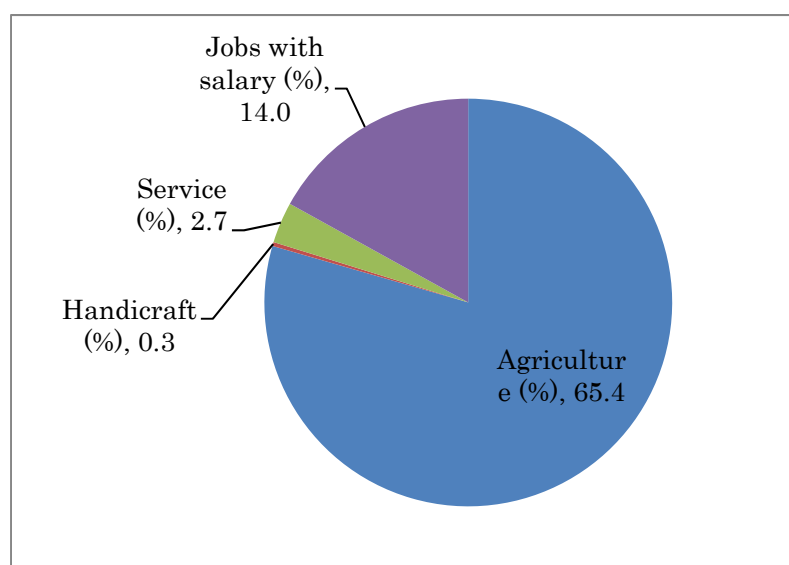
Source: statistical data from Svay Rieng Provincial Department of Planning (2012)

The employment situation of the over 18-year old population is summarized in the table below.

**Table 8-4: Employment Situation in Svay Rieng province (2011)**

|                      | No. of Persons | Percentage |
|----------------------|----------------|------------|
| Agriculture (%)      | 243,467        | 65.4       |
| Handicraft (%)       | 931            | 0.3        |
| Service (%)          | 9,978          | 2.7        |
| Jobs with salary (%) | 51,940         | 14.0       |
| Total (%)            | 306,316        | 82.3       |

Source: statistical data from Svay Rieng Provincial Department of Planning (2012)



**Figure 8-6: Employment Situation in Svay Rieng province (Total: 82.3%)**

Source: statistical data from Svay Rieng Provincial Department of Planning (2012)

The main work places with salary in Svay Rieng province is shown below.

**Table 8-5: Jobs with Salary in Svay Rieng province (Jan. 2013)**

|              | No. of Employees | Of which female employees | % of Female employees |
|--------------|------------------|---------------------------|-----------------------|
| Factories    | 19,378           | 14,602                    | 75%                   |
| Casino/Hotel | 6,451            | 3,175                     | 49%                   |
| Security     | 174              | 27                        | 16%                   |
| Finance      | 403              | 107                       | 27%                   |
| Otthers      | 123              | 20                        | 16%                   |
| Total        | 26,529           | 17,931                    | 68%                   |

**Source: Department of Labor, Svay Rieng province**

### ③ Labor Supply Potential in Svay Rieng Province

Labor Supply Potential in Svay Rieng Province is considered based on the population of 18-39 year olds.

**Table 8-6: Labor Supply Potential in Svay Rieng Province**

|                                      | No.     | Data year    |
|--------------------------------------|---------|--------------|
| Total provincial population          | 585,571 | 2011         |
| Working population: over 18 year old | 306,316 | 2011         |
| Working population: 18-29 year old   | 104,553 | 2011         |
| Of which female: 18-29 year old      | 52,161  | Rate of 2008 |
| Of which male: 18-29 year old        | 52,392  | Rate of 2008 |
| Working population: 18-39 year old   | 161,867 | Rate of 2008 |
| Of which female: 18-39 year old      | 82,810  | Rate of 2008 |
| Of which male: 18-39 year old        | 79,057  | Rate of 2008 |
| Employees at factories (current)     | 19,378  | Jan. 2013    |
| Of which female                      | 14,534  | Jan. 2013    |
| Percentage of female at factories    | 75%     | Jan. 2013    |
| No. of Households                    | 130,827 | 2011         |

**Source: Created by Study team based on data from Svay Rieng Provincial Department of Planning (2012), 2008 Population Census and Svay Rieng Provincial Department of Labor (2013)**

The labor Supply Potential of 18-29 year old women in Svay Rieng Province is 52,161, while that of 18-39 year old women is 79,057. The following points should be kept in mind:

- The ratio of 18-29 year old workers and over 30 year old workers is 7 to 3 according to Japanese companies in Bavet. If workers turn 30 year old or older than 30 year old, some workers can not get jobs at factories (mis-matching of demand and supply).
- Oldest sons are supposed to succeed their parents in taking over the family agriculture business and agricultural land. Therefore, many of them can not enter the factory labor market.
- The percentage of female employees at factories in Bavet is 75%. The demand of male workers is much lower than that of female workers.
- It is difficult to enter the labor market if people live in remote areas or if the road to a given factory is not well developed.

The current employment of 18-39 year old women is estimated to be about 14,000 while the physical existence of potential workers of this age group is about 80,000. Therefore, there are enough young females in the workforce in Svay Rieng province. However there is a problem of accessibility to factories.

There are a number of potential male workers as well. However, since about 90 % of the 130,827 households are engaged in agriculture in Svay Rieng, 120,000 households may need 120,000 male household heads. The number of male population who are over 18 year old is about 130,000 in Svay Rieng province. Even assuming some households may move away from agriculture by selling/leasing lands, a significant number of workers will be employed in agriculture in the coming years. Under these conditions, we may consider that about half of the 18-39 year old population, being about 40,000 people, could enter the labor market at most while half of the 18-29 year old population would be 26,000.

#### ④ Potential Labor Supply to Taiseng and Manhattan SEZs

In this section, we consider the potential labor supply to particular SEZs, namely Taiseng SEZ (main and sub) and Manhattan SEZ. Taiseng and Manhattan SEZs are located at a place which is near the Vietnam border and in the easternmost among the existing SEZs in Bavet area. Therefore, the labor supply from the east of the SEZs are rather limited and the majority of the labor supply have to come from the west of the SEZs. Since the majority of the population is concentrated in the western part of the province, the southwest in particular, SEZs are in more advantageous positions in terms of labor if located more close to the population concentration. This may well explain the reason why new SEZs are located to further and further to the east.

According to interviews with tenants in the SEZs, the maximum commuting distance is 40-45km for ordinary workers. If circles are drawn with the radius 10-40km around the SEZs, the provincial capital of Svay Rieng city is mostly included in the 40km circle but the area between the capital and the western border is not included, where plenty of people reside.

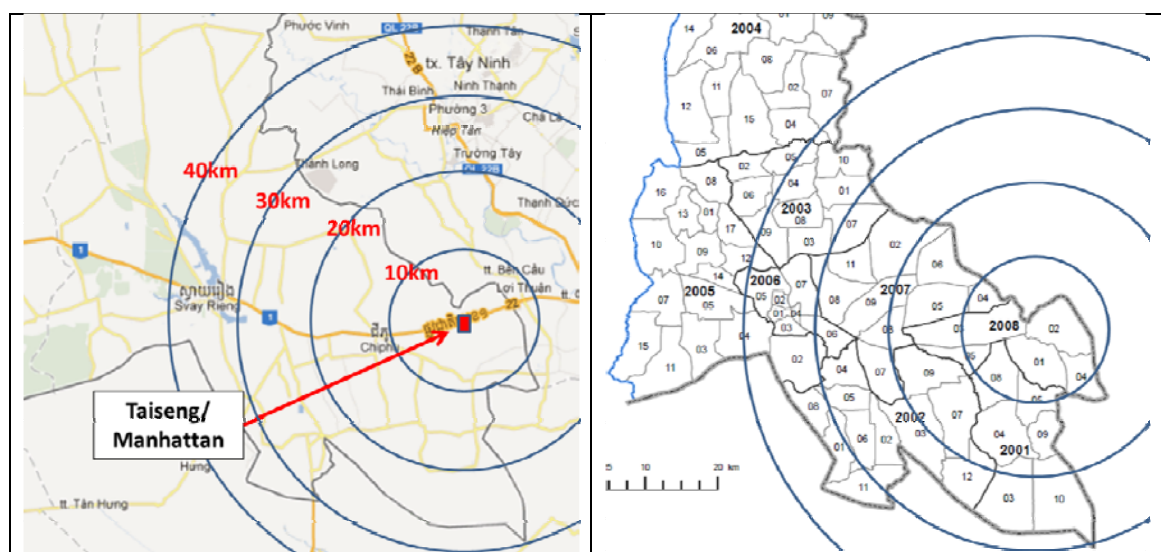


Figure 8-7: 0-40km area from Taiseng and Manhattan SEZs

Source: Study team

The population within 40km is shown in the table below. This 40km circle includes 6 districts with 270,000 people, accounting for 57% of the land area of Svay Rieng province (as of year 2005).

Table 8-7: Population within Circles around Taiseng and Manhattan SEZs

| 10km circle<br>(Commune Code) | Commune name       | Population |
|-------------------------------|--------------------|------------|
| 200105                        | Me Sa Thngak (1/2) | 2,579      |
| 200108                        | Prey Kokir (1/2)   | 2,247      |
| 200704                        | Monourom           | 1,172      |

|                               |                      |        |
|-------------------------------|----------------------|--------|
| 200801                        | Bati                 | 4,428  |
| 200802                        | Bavet                | 11,257 |
| 200803                        | Chrak Mtes (1/2)     | 4,562  |
| 200804                        | Prasat (1/2)         | 1,097  |
| 200805                        | Prey Angkunh (1/2)   | 2,937  |
| Sub-total (0-10km)            |                      | 30,278 |
| 20km circle<br>(Commune Code) |                      |        |
| 200105                        | Me Sa Thngak (1/2)   | 2,579  |
| 200108                        | Prey Kokir (1/2)     | 2,247  |
| 200104                        | Chres                | 6,339  |
| 200109                        | Samraong             | 2,707  |
| 200103                        | Chantrea (1/5)       | 685    |
| 200110                        | Tuol Sdei (1/5)      | 457    |
| 200203                        | Ksetru (1/4)         | 2,703  |
| 200207                        | Samlei               | 7,419  |
| 200209                        | Svay Ta Yean         | 8,888  |
| 200212                        | Tnaot (1/4)          | 1,811  |
| 200307                        | Pong Tuek            | 6,443  |
| 200702                        | Kokir Saom(1/3)      | 2,235  |
| 200703                        | Kandieng Reay(1/2)   | 4,224  |
| 200705                        | Popeack              | 5,155  |
| 200709                        | Sambuor (1/3)        | 2,510  |
| 200803                        | Chrak Mtes(1/2)      | 4,562  |
| 200804                        | Prasat (1/2)         | 1,097  |
| 200805                        | Prey Angkunh (1/2)   | 2,937  |
| Sub-total (0-20km)            |                      | 95,273 |
| 30km circle<br>(Commune Code) |                      |        |
| 200103                        | Chantrea (1/5)       | 2,741  |
| 200110                        | Tuol Sdei (1/5)      | 1,829  |
| 200201                        | Banteay Krang (1/4)  | 539    |
| 200202                        | Nhor                 | 6,852  |
| 200203                        | Ksetru (3/4)         | 8,109  |
| 200204                        | Preah Ponlea         | 4,853  |
| 200205                        | Prey Thum            | 3,102  |
| 200206                        | Reach Montir         | 3,309  |
| 200211                        | Thmei (1/3)          | 1,710  |
| 200212                        | Tnaot (3/4)          | 5,432  |
| 200307                        | Pong Tuek (2/3)      | 4,295  |
| 200506                        | Chek (3/4)           | 6,872  |
| 200702                        | Kokir Saom (1/3)     | 4,469  |
| 200703                        | Kandieng Reay (1/2)  | 4,224  |
| 200706                        | Prey Ta Ei (3/4)     | 2,441  |
| 200707                        | Prasout              | 7,675  |
| 200708                        | Romeang Thkaol (3/4) | 4,279  |
| 200709                        | Sambuor (1/3)        | 5,019  |
| 200711                        | Svay Rumpea          | 3,904  |

|                               |                      |         |
|-------------------------------|----------------------|---------|
| Sub-total (0-30km)            |                      | 176,927 |
| 40km circle<br>(Commune Code) |                      |         |
| 200201                        | Banteay Krang (1/4)  | 539     |
| 200203                        | Ksetru (1/4)         | 2,703   |
| 200208                        | Samyaong             | 1,962   |
| 200210                        | Svay Toea            | 4,762   |
| 200211                        | Thmei (2/3)          | 3,419   |
| 200212                        | Tnaot (1/4)          | 1,811   |
| 200301                        | Bos Mon              | 4,909   |
| 200303                        | Chak                 | 4,815   |
| 200304                        | Chrung Popel (1/4)   | 1,328   |
| 200305                        | Kampong Ampil (1/5)  | 748     |
| 200307                        | Pong Tuek (1/3)      | 2,148   |
| 200308                        | Sangkae              | 4,675   |
| 200309                        | Svay Chek (2/3)      | 4,002   |
| 200310                        | Than Thnong          | 6,507   |
| 200502                        | Basak                | 7,901   |
| 200504                        | Chamlang (1/2)       | 5,328   |
| 200506                        | Chek (1/4)           | 2,291   |
| 200601                        | Svay Rieng           | 14,716  |
| 200602                        | Prey Chhlak          | 3,153   |
| 200603                        | Koy Trabaek          | 2,735   |
| 200604                        | Pou Ta Hao           | 1,961   |
| 200706                        | Prey Ta Ei (1/4)     | 814     |
| 200708                        | Romeang Thkaol (1/4) | 1,426   |
| 200710                        | Sangkhoar            | 7,102   |
| Total (0-40km)                |                      | 268,680 |

**\*Figures in parentheses are the share in area of a particular commune in the circle area**

**Source : Seila Program Annual Work Plan and Budget 2005**

**Table 8-8: Population by Age Group within Circles around Taiseng and Manhattan SEZs**

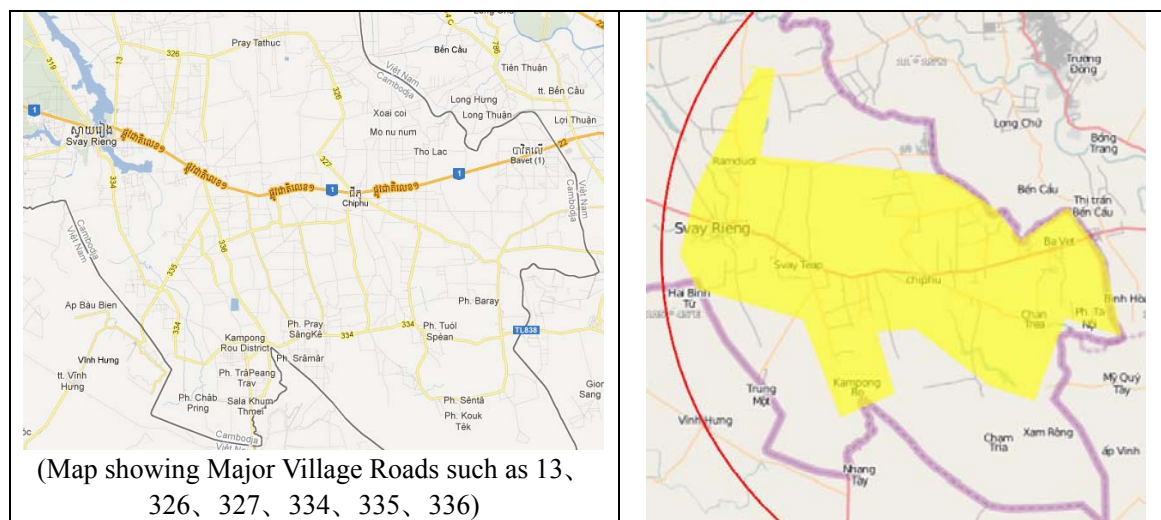
|                   | Poputation<br>in circle | 18-29 year old |        |        | 18-39 year old |        |        |
|-------------------|-------------------------|----------------|--------|--------|----------------|--------|--------|
|                   |                         | Total No.      | Male   | Female | Total No.      | Male   | Female |
| 10 km cir-<br>cle | 34,093                  | 7,367          | 3,683  | 3,683  | 11,431         | 5,583  | 5,848  |
| 20 km cir-<br>cle | 107,277                 | 23,181         | 11,590 | 11,590 | 35,967         | 17,567 | 18,401 |
| 30 km cir-<br>cle | 199,220                 | 43,048         | 21,524 | 21,524 | 66,794         | 32,622 | 34,171 |
| 40 km cir-<br>cle | 302,534                 | 65,372         | 32,686 | 32,686 | 101,432        | 49,540 | 51,892 |

**\* Men-women ratios and age layers ratios are from 2008 Population Census.**

**Source : Created by Study team based on 2008 Population Census and Seila Program Annual Work Plan and Budget 2005**

However, it is not that all the young working population can actually commute to the SEZs. The national road No.1 is a paved asphalt road in good condition, while most of village roads running toward north and south from the national road No.1 are not paved, where commuting trucks can only

run at 10-20 km/hr in the dry season. The situation of village roads is even worse in the rainy season. In order to understand the actual commuting area for workers of the SEZs, we plot almost all the home villages of workers, based on the detailed information provided by a Japanese company operating in Bavet. It is shown that workers normally come from villages 5-10km away from the national road No.1 and some people come from an area even 15km away from the national road No. 1 if the condition of the village road is good. This current commutable area accounts for roughly 2/3 of the area covered by the 40km circle drawn above. Assuming the geographical uniformity of population density in the province, we may consider that 2/3 of the working population covered by the 40km circle could commute to Taiseng and Manhattan SEZs.



**Figure 8-8: Map of Current Commutable Area (Yellow area: about 85,000ha)**

Source: Google map modified by Study team

Besides, we also assume that 80% of the commuting young women and 50 % of the commuting young men may enter the labor market for factories in Bavet. Under these assumptions, an estimate of potential labor supply to Taiseng and Manhattan SEZs is presented below.

**Table 8-9: Estimate of Potential Labor Supply for Taiseng and Manhattan SEZs**

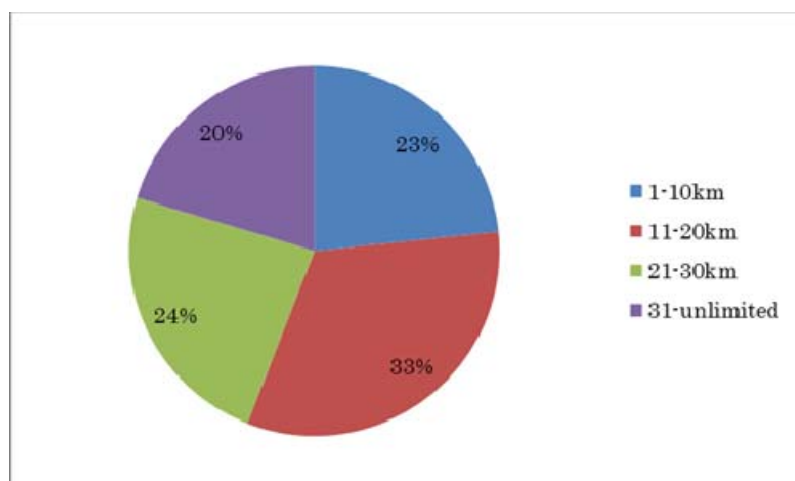
|              | No. of Commuting People | 18-29 year old |        |        | 18-39 year old |        |        |
|--------------|-------------------------|----------------|--------|--------|----------------|--------|--------|
|              |                         | Total No.      | Male   | Female | Total No.      | Male   | Female |
| 10 km circle | 22,729                  | 3,192          | 1,228  | 1,965  | 4,980          | 1,861  | 3,119  |
| 20 km circle | 71,518                  | 10,045         | 3,863  | 6,182  | 15,669         | 5,856  | 9,814  |
| 30 km circle | 132,813                 | 18,654         | 7,175  | 11,479 | 29,099         | 10,874 | 18,225 |
| 40 km circle | 201,689                 | 28,328         | 10,895 | 17,433 | 44,189         | 16,513 | 27,676 |

**\* The population was adjusted to 2/3 due to the actual commuting area is less than the total area in the 40 km circle drawn mechanically. 80% of the commuting young women and 50 % of the commuting young men assumed to enter the labor market**

**Source : Created by Study team based on 2008 Population Census and Seila Program Annual Work Plan and Budget 2005**

The participation of women and men into factory labor market, which were set respectively at 80% and 50%, may well theoretically decrease with the commuting distance from the SEZs. The follow-

ing graph shows one example of commuting distances of factory workers at a Japanese company operating in a Bavet SEZ. Out of the total The percentage of workers commuting from the 11-20km area, 21-30km and 31km area are 33%, 24%, 20% respectively.



**Figure 8-9: Map of Current Commutable Area**

Source: Data from a Japanese company located in a Bavet SEZ

## (2) Labor Demand

The number of operating factories has increased rapidly since 2011, resulting in competition for workers among factories. The current and future labor demand for Taiseng and Manhattan SEZs, which was considered in Chapter 2-4, is summarized in the table below.

**Table 8-10: Current (2012) and Future Labor Demand in Taiseng and Manahattan SEZs**

|                       | 2012   | 2013   | 2014   | 2015   | 2020   |
|-----------------------|--------|--------|--------|--------|--------|
| Manhattan             | 12,525 | 18,176 | 27,753 | 27,970 | 27,970 |
| Taiseng Main          | 4,596  | 5,850  | 9,150  | 13,245 | 21,433 |
| Taiseng Sub           | 1,181  | 2,088  | 2,301  | 3,894  | 7,081  |
| TOTAL                 | 18,302 | 26,114 | 39,204 | 45,109 | 56,484 |
| Of which female (75%) | 13,727 | 19,586 | 29,403 | 33,832 | 42,363 |
| Of which male (25%)   | 4,576  | 6,529  | 9,801  | 11,277 | 14,121 |

Source: Data from Chapter 5

## (3) Demand and Supply Balance of Labor

An estimate of demand and supply balance of labor for Taiseng and Manhattan is presented in the table below. Women, 18-29 year old women in particular, will be in serious shortage in 2014 relative to men. The labor balance in 2013 is still positive but is quite tight, being near the limit.

**Table 8-11: Labor Demand and Supply Balance for Taiseng and Manhattan SEZs**

|                                  | 2013   | 2014   | 2015   | 2020   |
|----------------------------------|--------|--------|--------|--------|
| Supply (annual growth: 1.8%)     |        |        |        |        |
| Female (18-29 year old)          | 17,433 | 17,816 | 18,200 | 20,117 |
| Female (18-39 year old)          | 10,243 | 10,635 | 11,026 | 12,983 |
| Sub-total (Female:18-39year old) | 27,676 | 28,451 | 29,226 | 33,100 |
| Male (18-29 year old)            | 10,895 | 11,255 | 11,614 | 13,412 |
| Male (18-39 year old))           | 5,618  | 5,952  | 6,286  | 7,956  |
| Sub-total(Male:18-39 year old)   | 16,513 | 17,207 | 17,901 | 21,368 |

|                                  |        |        |        |        |
|----------------------------------|--------|--------|--------|--------|
| Supply total (18-29 year old)    | 28,328 | 29,071 | 29,814 | 33,529 |
| Supply total(18-39 year old)     | 44,189 | 45,658 | 47,126 | 54,468 |
| Demand                           |        |        |        |        |
| Female (18-29 year old)          | 13,710 | 20,582 | 23,682 | 29,654 |
| Female (18-39 year old)          | 5,876  | 8,821  | 10,150 | 12,709 |
| Sub-total (Female:18-39year old) | 19,586 | 29,403 | 33,832 | 42,363 |
| Male (18-29 year old)            | 4,570  | 6,861  | 7,894  | 9,885  |
| Male (18-39 year old))           | 1,959  | 2,940  | 3,383  | 4,236  |
| Sub-total(Male:18-39 year old)   | 6,529  | 9,801  | 11,277 | 14,121 |
| Demand total (18-29 year old)    | 18,280 | 27,443 | 31,576 | 39,539 |
| Demand total(18-39 year old)     | 26,114 | 39,204 | 45,109 | 56,484 |
| Balance                          |        |        |        |        |
| Female (18-29 year old)          | 3,723  | -2,766 | -5,483 | -9,537 |
| Female (18-39 year old)          | 4,367  | 1,814  | 876    | 274    |
| Sub-total (Female:18-39year old) | 8,090  | -952   | -4,606 | -9,263 |
| Male (18-29 year old)            | 6,325  | 4,394  | 3,720  | 3,527  |
| Male (18-39 year old))           | 3,659  | 3,012  | 2,903  | 3,720  |
| Sub-total(Male:18-39 year old)   | 9,985  | 7,406  | 6,623  | 7,247  |
| Balance total (18-29 year old)   | 10,048 | 1,628  | -1,762 | -6,009 |
| Balance total(18-39 year old)    | 18,075 | 6,454  | 2,017  | -2,016 |

**\*The growth rates for 2013-2020 of 18-39 and 18-29 year old women were calculated to be 3.3% and 2.2% respectively based on 2008 Population Census. The same rates for men were 4.2% and 2.8%.**

**Source : Created by Study team based on 2008 Population Census and Seila Program Annual Work Plan and Budget 2005**

Svay Rieng Province is a populous province with a 560,000 population and it was easy to collect workers within 10-20 km distance. Also with Svay Rieng University, it was not difficult to employ English-speaking workers at low cost. However, with the rapid increase in the number of operating factories, it is evident that there will soon be a shortage of unskilled workers as well as skilled workers. We anticipate that there will be a need to promote the immigration of workers from outside of the current commuting zone by constructing dormitories for workers, providing food, entertainments, and facilities for education and training. In PPSEZ, dormitories for 3,000 workers are already constructed.

#### 8-2 Present Situation of Employees of Japanese Companies

Based on the interviews conducted with Japanese companies, basic information of employees is summarized in the table below. The maximum commuting distance is 40- 45km and the commuting time is 1-2 hours including walking time. As the labor shortage becomes more serious and the labor turnover rate is 10-15% in some companies, which may be increased in near future. The increase rate of the total salary (basic salary and other fringe benefits) is 5-10% /year. The background of all these problems may well be the general shortage of labor and commuting problem.

**Table 8-12::Present Situation of Employees of Japanese Companies in Bavet**

|   | Commuting distance | Means of Commuting | Commuting time | Wage increase (%/年) | Turn over rate (%/month) | Age limit     | Average age    | Productivity (%compared to China) |
|---|--------------------|--------------------|----------------|---------------------|--------------------------|---------------|----------------|-----------------------------------|
| A | Max SVcity (40 km) | Truck: 90%         | 1—2hr          | N/A                 | 3-4%                     | < 50 year old | 26-28 year old | 50%                               |



|   |                         |                                      |                   |                                     |        |                                     |                   |     |
|---|-------------------------|--------------------------------------|-------------------|-------------------------------------|--------|-------------------------------------|-------------------|-----|
| B | 25-30 km                | Truck: 70%                           | 1hr +<br>, Max2hr | 7—10%                               | 10%    | No<br>limit<br>(>18<br>year<br>old) | N/A               | N/A |
| C | Max40 km                | N/A                                  | N/A               | 20%                                 | 14-15% | <30<br>year<br>old                  | N/A               | 70% |
| D | Max45 km<br>(Ave 25 km) | Truck:115,<br>Motorcycle:<br>5person | Max2.5hr          | 5%                                  | 10%    | <30<br>year<br>old                  | 22-23<br>year old | N/A |
| E | N/A(150 in<br>Dorm)     | N/A                                  | N/A               | 4—<br>5%(25%<br>up over<br>4 years) | 5%     | <25<br>year<br>old                  | N/A               | N/A |
| F | N/A                     | Truck:8,<br>Bicycle:<br>142          | N/A               | N/A                                 | N/A    | N/A                                 | N/A               | N/A |

**Source: Created by Study team based on interviews**

The Commuting problem of factory workers is now an important issue for the management of factories. The labor procurement by transporting workers by trucks seems to be close to the limit now. The commuting allowance has been raised two times recently from USD7 to USD10 to USD13. The second raise was caused by a new regulation given by the police. The new regulation to make the truck passengers safe by setting wooden benches on the trucks, reduces the number of passengers per truck by 50%, resulting in the request of raising the commuting allowance up to USD15. Big Taiwanese companies finally decided to agree with the raise in workers commuting allowance to USD13. The actual monthly fee for truck commuting is negotiated directly between truck companies and passengers (workers). The fee is based on the distance to travel.

The entrances/exits of Taiseng and Manahttan SEZs are all facing the national road No.1 and now nearly 20,000 workers are commuting on the national roads. Therefore, the traffic jams may be already beyond the limit in the rush hours. According to Taiseng SEZ management staff, some people were killed in traffic accidents. During a rush hour, each SEZ should properly coordinate the gathering points of workers to disperse the traffic jams. However, if this does not help, it will be necessary to construct commuting roads on the back side of the SEZs.

### 8-3 Labor Disputes

Recently labor disputes occur more often than before. According to the interviews, the following characteristics of labor disputes can be pointed out in Bavet.

- ① Labor strikes occur at least several times a month in 2013.
- ② Labor strikes tend to become violent, such as throwing stones.
- ③ There are agitators of labor strikes.
- ④ Labor Department only leads to a wage increase for easy resolution, when a labor dispute occurs. As a result, there may be a wage increase every time a labor dispute comes up.

Due to a large scale labor strike, all the factories in Taiseng and Manahttan SEZs were shut down from Feb. 13rd to 17<sup>th</sup>. The basic back ground of the frequent strikes may well be shortage of labor due to rapid increase of labor demand of new factories. Possible solutions to this problem are as follows:

- MOLVT and Provincial Department of Labor should intermediate the labor dispute based on economic rationale towards industrial development.

- Tenant companies should make good relationship with workers from day to day.
- Information exchange should be promoted among tenant companies (Japan, Taiwan, Chinese, Korean) on workers' conditions and employment management.
- Prevention of labor dispute by discussing or excluding problematic agitators

#### 8-4 Institutions of Labor Market in Svay Rieng

Svay Rieng province has a Job Center, which is under the National Employment Agency (NEA). The Center started operation from November 2011. The main activity of the center is to introduce workers to companies. The Job center is located in the same place of the Provincial Training Center. The number of the staff member is currently 4 persons only.

As an example of activity of the Job Center, the Job center introduced 10 skilled workers and 200 unskilled workers to Taiseng SEZ in 2012. In all of 2012, the center introduced 100 skilled workers and 300 unskilled workers. In the past, the center organized interview sessions in villages in five communes for Manhattan SEZ and about 100 people were interviewed one day. The fee of introducing workers is not collected by the Job Center but actually USD 5/person was collected for the village heads. There is no need to pay this fee in case the worker quit the job within one month.

The human resource registration system started from September 2012. Currently 400 skilled workers and 1,000 unskilled workers have been registered. The registered workers are to be introduced upon requests by companies who wish to employ workers. The Job center cooperates with PTC in a manner where the trainees from PTC will be registered after the completion of training courses.



**Photo8.1: Job Center in Svay Rieng Province**



**Photo8.2: Job Center Office**

## 9. SITUATION OF FACILITIES FOR HUMAN RESOURCE DEVELOPMENT AND BUSINESS INCUBATION

### 9-1. Human Resource Development in Svay Rieng province

① Situation of Education in Svay Rieng Province

There are two private and 264 primary schools in Svay Rieng province with 82,030 students in 2011.

**Table 9-1: Primary Schools in Svay Rieng province**

|         |                   | 2009  | 2010  | 2011   |
|---------|-------------------|-------|-------|--------|
| Private | No. of Schools    |       |       | 2      |
|         | No. of Rooms      |       |       | 18     |
|         | No. of Classes    |       |       | 18     |
|         | No of Students    |       |       | 344    |
|         | Student/class     |       |       | 19.11  |
|         | No of Teachers    |       |       | 60     |
|         | Students/teachers |       |       | 5.73   |
| Public  | No. of Schools    | 297   | 257   | 264    |
|         | No. of Rooms      | 2,092 | 2,071 | 2,466  |
|         | No. of Classes    | 2,382 | 2,352 | 2,308  |
|         | No of Students    |       |       | 82,030 |
|         | Student/class     |       |       | 35.54  |
|         | No of Teachers    |       |       | 2,377  |
|         | Students/teachers |       |       | 34.51  |

Source: statistical data from Svay Rieng Provincial Department of Planning (2012)

There only are public lower secondary schools in Svay Rieng province. The number of lower secondary schools is 66 schools in 2011 with 20,910 students.

**Table 9-2: Lower Secondary Schools in Svay Rieng province**

|        |                   | 2009 | 2010 | 2011   |
|--------|-------------------|------|------|--------|
| Public | No. of Schools    | 71   | 54   | 66     |
|        | No. of Rooms      | 522  | 344  | 510    |
|        | No. of Classes    | 560  | 367  | 454    |
|        | No of Students    |      |      | 20,910 |
|        | Students/class    |      |      | 46.06  |
|        | No of Teachers    |      |      | 1,042  |
|        | Students/teachers |      |      | 20.07  |

Source: statistical data from Svay Rieng Provincial Department of Planning (2012)

There only are public secondary schools in Svay Rieng province. The number of secondary schools is 19 schools in 2011 with 19,324 students.

**Table 9-3: Secondary Schools in Svay Rieng province**

|        |                | 2009 | 2010 | 2011   |
|--------|----------------|------|------|--------|
| Public | No. of Schools | 17   | 18   | 19     |
|        | No. of Rooms   | 352  | 399  | 532    |
|        | No. of Classes | 393  | 413  | 427    |
|        | No of Students |      |      | 19,324 |

|  |                   |  |  |       |
|--|-------------------|--|--|-------|
|  | Students/class    |  |  | 45.26 |
|  | No of Teachers    |  |  | 868   |
|  | Students/teachers |  |  | 34.51 |

**Source: statistical data from Svay Rieng Provincial Department of Planning (2012)**

The enrollments in primary, lower secondary and secondary schools are 95%, 92%, 70% respectively, shown in the table below.

**Table 9-4: Enrollment in Primary, Lower Secondary and Secondary Schools in Svay Rieng**

|                                       | 2009   | 2010   | 2011   |
|---------------------------------------|--------|--------|--------|
| 6-11 year old population in province  | 71,429 | 67,260 | 64,765 |
| Of which enrolled (Primary)           |        |        | 61,373 |
| Enrollment (%)                        |        |        | 95%    |
| 12-14 year old population in province | 41,103 | 39,754 | 39,454 |
| Of which enrolled (Lower secondary)   |        |        | 36,106 |
| Enrollment (%)                        |        |        | 92%    |
| 15-17 year old population in province | 43,708 | 43,006 | 41,221 |
| Of which enrolled (Secondary)         |        |        | 28,993 |
| Enrollment (%)                        |        |        | 70%    |

**Source: statistical data from Svay Rieng Provincial Department of Planning (2012)**

There are one public university and one private university in Svay Rieng province. The number of university students is shown below.

**Table 9-5: No. of University and Students in Svay Rieng Province**

|                   | Public | Private |
|-------------------|--------|---------|
| No. of University | 1      | 1       |
| No of Students    | 2,072  | 92      |

**Source: statistical data from Svay Rieng Provincial Department of Planning (2012)**

Svay Rieng University is a national university established in 2006 with five faculties listed below.

- Faculty of Art Humanity and Foreign Language (Major: English literature)
- Faculty of Science and Technology (Major: Computer Science, and Mathematics)
- Faculty of Agriculture (Major: Agronomy and Rural Development)
- Faculty of Social Science (Major: Public Administration)
- Faculty of Business Administration (Major: Management, Accounting and Marketing).

The enrollment rates we have seen above are relatively high but their graduation rates are rather low. According to 2008 Population Census, 1.7%, 19 % and 47 % of the male population of over 5-years old completed primary, lower secondary and secondary schools in Svay Rieng province. And 0.6 %, 8.5% and 28.5% of the female population of over 5-years old completed primary, lower secondary and secondary schools, which are lower than those of the male population.

**Table 9-6: Education Attainment in Svay Rieng Province (2008 Population census)**

|                       | Male | Female | Total |
|-----------------------|------|--------|-------|
| No education          | 14%  | 29%    | 22%   |
| Primary Not Completed | 39%  | 43%    | 41%   |
| Primary school        | 28%  | 20%    | 24%   |
| Lower secondary       | 17%  | 8%     | 12%   |
| Secondary             | 0.6% | 0.2%   | 0.4%  |

|                  |      |      |      |
|------------------|------|------|------|
| Beyond secondary | 1.1% | 0.3% | 0.7% |
| Other education  | 0.0% | 0.0% | 0.0% |
| Total            | 100% | 100% | 100% |

Source: 2008 Population Census

According to the sample data of 2010 Demographic and Health Survey, the 15-49 year old male population had 5% and 50 % of primary and secondary school graduation rates respectively. 3% and 38% of the 15-49 year old female population completed primary and secondary schools respectively.

**Table 9-7: Education Attainment in Svay Rieng Province (2010 Demographic and Health Survey)**

|                       | Male | Female |
|-----------------------|------|--------|
| No education          | 7%   | 21%    |
| Primary Not Completed | 43%  | 43%    |
| Primary school        | 3%   | 7%     |
| Some secondary        | 42%  | 28%    |
| Secondary             | 2%   | 2%     |
| More than secondary   | 3%   | 1%     |
| Total                 | 100% | 100%   |

Source: 2010 Demographic and Health Survey

According to 2008 Population Census, where we can see the education attainment by age group, it is obvious that younger generations have better graduation rates at primary and lower secondary schools. The table below shows the education attainment of the male population by age group in Svay Rieng province. The graduation rates of 15-19 year old male population in primary and secondary schools were 73% and 27% respectively.

**Table 9-8: Education Attainment of Men in Svay Rieng Province (2008)**

|             | No education | Primary not completed | Primary completed | Lower secondary completed | Secondary completed | Beyond Secondary | Others |
|-------------|--------------|-----------------------|-------------------|---------------------------|---------------------|------------------|--------|
| 5 - 9 years | 43           | 57                    | 0                 | 0                         | 0                   | 0                | 0      |
| 10 - 14 yrs | 4            | 71                    | 25                | 1                         | 0                   | 0                | 0      |
| 15 - 19 yrs | 5            | 22                    | 46                | 27                        | 0                   | 0                | 0      |
| 20 - 24 yrs | 8            | 22                    | 32                | 34                        | 2                   | 3                | 0      |
| 25 - 29 yrs | 10           | 28                    | 31                | 26                        | 1                   | 3                | 0      |
| 30 - 34 yrs | 11           | 28                    | 35                | 22                        | 1                   | 2                | 0      |
| 35 - 39 yrs | 10           | 26                    | 39                | 22                        | 1                   | 2                | 0      |
| 40 - 44 yrs | 12           | 37                    | 33                | 16                        | 1                   | 2                | 0      |
| 45 - 49 yrs | 14           | 47                    | 24                | 14                        | 0                   | 1                | 0      |
| 50 - 54 yrs | 12           | 41                    | 27                | 18                        | 0                   | 2                | 0      |
| 55 - 59 yrs | 11           | 37                    | 31                | 19                        | 1                   | 1                | 0      |
| 60 - 64 yrs | 13           | 38                    | 32                | 16                        | 0                   | 1                | 0      |
| 65 - 69 yrs | 17           | 38                    | 29                | 15                        | 0                   | 1                | 0      |
| 70 - 74 yrs | 23           | 39                    | 21                | 15                        | 0                   | 0                | 0      |
| 75 - 79 yrs | 31           | 38                    | 18                | 12                        | 0                   | 1                | 0      |
| 80+ yrs     | 38           | 34                    | 15                | 13                        | 0                   | 0                | 0      |
| Total       | 100          | 100                   | 100               | 100                       | 100                 | 100              | 100    |

Source: 2008 Population Census

The table below shows the education attainment of the female population by age group in Svay

Rieng province. Younger generations of women too have better education attainment but it is worse than that of the male population. The graduation rates of 15-19 year old male population in primary and secondary schools were 69% and 23% respectively.

**Table 9-9: Education Attainment of Women in Svay Rieng Province**

|             | No educa-<br>tion | Primary not<br>completed | Primary<br>completed | Lower<br>secondary<br>completed | Secondary<br>completed | Beyond<br>Secondary | Others |
|-------------|-------------------|--------------------------|----------------------|---------------------------------|------------------------|---------------------|--------|
| 5 - 9 years | 43                | 57                       | 0                    | 0                               | 0                      | 0                   | 0      |
| 10 - 14 yrs | 4                 | 68                       | 27                   | 1                               | 0                      | 0                   | 0      |
| 15 - 19 yrs | 8                 | 23                       | 46                   | 23                              | 0                      | 0                   | 0      |
| 20 - 24 yrs | 17                | 33                       | 30                   | 17                              | 1                      | 1                   | 0      |
| 25 - 29 yrs | 23                | 42                       | 24                   | 10                              | 0                      | 1                   | 0      |
| 30 - 34 yrs | 26                | 41                       | 25                   | 8                               | 0                      | 0                   | 0      |
| 35 - 39 yrs | 26                | 43                       | 23                   | 7                               | 0                      | 1                   | 0      |
| 40 - 44 yrs | 35                | 47                       | 12                   | 5                               | 0                      | 0                   | 0      |
| 45 - 49 yrs | 39                | 46                       | 9                    | 6                               | 0                      | 0                   | 0      |
| 50 - 54 yrs | 38                | 42                       | 11                   | 9                               | 0                      | 0                   | 0      |
| 55 - 59 yrs | 46                | 37                       | 9                    | 7                               | 0                      | 0                   | 0      |
| 60 - 64 yrs | 58                | 29                       | 7                    | 5                               | 0                      | 0                   | 0      |
| 65 - 69 yrs | 70                | 21                       | 5                    | 4                               | 0                      | 0                   | 0      |
| 70 - 74 yrs | 77                | 17                       | 3                    | 3                               | 0                      | 0                   | 0      |
| 75 - 79 yrs | 83                | 13                       | 2                    | 2                               | 0                      | 0                   | 0      |
| 80+ yrs     | 83                | 13                       | 2                    | 2                               | 0                      | 0                   | 0      |
| Total       | 100               | 100                      | 100                  | 100                             | 100                    | 100                 | 100    |

**Source: 2008 Population Census**

The illiteracy of 15-45 year old population in Svay Rieng was 5.9% in 2011. The younger generation generally has better literacy.

**Table 9-10: Literacy in Svay Rieng Province**

|                                      | 2009    | 2010    | 2011    |
|--------------------------------------|---------|---------|---------|
| 15-45 year old population            | 287,910 | 295,284 | 299,633 |
| Of which female                      | 147,930 | 152,144 | 154,268 |
| 15-45 year old illiterate population | 7.55    | 6.69    | 5.93    |
| Of which illiterate female           | 4.18    | 3.7     | 3.31    |
| 15-17 year old illiterate population | 3.49    | 3.22    | 2.53    |
| Of which illiterate female           | 3.64    | 2.96    | 2.87    |
| 18-24 year old illiterate population | 4.62    | 3.96    | 3.39    |
| Of which illiterate female           | 4.96    | 4.28    | 3.53    |
| 25-35 year old illiterate population | 8.19    | 6.98    | 5.67    |
| Of which illiterate female           | 8.88    | 7.48    | 6.16    |
| 36-45 year old illiterate population | 12.78   | 11.62   | 11.01   |
| Of which illiterate female           | 13.46   | 12.46   | 11.74   |

**Source: 2008 Population Census**

## ② Situation of Training in Svay Rieng Province

The general situation of 18-35 year old Population in Svay Ring Province is summarized in the table

below.

**Table 9-11: Training Situation of 18-35 year old Population in Svay Ring Province**

|   | 2011   |        |
|---|--------|--------|
|   | Total  | Female |
| 18-24 year old population in province                     | 85,155 | 43,118 |
| Of which go to secondary school                           | 14,298 | 6,935  |
| Rate of which going to secondary school (%)               | 16.8   | 8.1    |
| Of which go to university and training center             | 5,205  | 2,226  |
| Rate of which going to university and training center (%) | 6.1    | 2.6    |
| Of which going to university (%)                          | 4.2    | 1.6    |
| Of which going to training center (%)                     | 1.9    | 1.0    |
| 25-35 year old population in province                     | 98,015 | 51,163 |
| Of which go to university and training center             | 3,689  | 1,760  |
| Rate of which going to university and training center (%) | 3.8    | 1.8    |
| Of which going to university (%)                          | 1.7    | 0.8    |
| Of which going to training center (%)                     | 2.1    | 1.0    |

Source: statistical data from Svay Rieng Provincial Department of Planning (2012)

Svay Rieng province has a Provincial Training Center, which was established in 2001 under the department of labor. It has 47 staff members with one director and two vice directors and 16 administration staff and about 28 trainers and teacher. The budget of the center is provided by MOLVT. It received technical and financial support from ADB between 2007 and 2012 under the “Voucher skill training program”. The provincial training center provides the training of the following subjects.

- Electricity
- Electronics repair
- Sewing
- Welding
- Air con
- Basic Computer skill
- Motor repair
- Small engine repair
- House wiring
- Make up
- Veterinary
- Animal husbandry (such as pig raising)

Training is provided in short term course and long term course. A typical example of a short term course training is a training of agricultural techniques in villages for 1-4 weeks. A typical example of a long-term course training is a training of sewing for 4 months. According to the interview with the center staff, the students who complete the sewing course often start their own sewing businesses in home villages, instead of going to garment factories.



**Provincial Training Center of Svay Rieng**



**Training of Sewing Skills at Center**

The Center started longer courses of 2 years and 4 years from December 2012. The subjects of the new longer courses include English, veterinary medicine, electronics, automobile etc. For the English course, specific training is provided for 2 years. The first 17 students of the English course will graduate after about 2 years. There are 4 English teachers.

Current problems the Center face is the difficulty in collecting new students even though the training fee is free. This is because potential students prefer to work immediately and receive cash quickly, rather than taking time for training. Currently the Center provides training to about 400 students for one year according to the interview. However the official statistics of the province, shown below, shows that the number of trainees was 1,303 persons in 2011.

**Table 9-12: Trainees by course at Provincial Training Center**

|               | 2011            |                 |
|---------------|-----------------|-----------------|
|               | No. of trainees | Female rate (%) |
| Agriculture   | 1,303           | 41.6            |
| Handicraft    | 54              | 22.22           |
| Tourism       | 0               |                 |
| Administraion | 1               |                 |
| Repair        | 87              | 18.39           |

**Source: Statistical data from Svay Rieng Provincial Department of Planning (2012)**

Recently the Center have been upgraded to a Regional Training Center with the support from ADB and a new building for training is being constructed in the compound of the Center and will be completed by the end of 2013.



**Photo9.1:Current building of Trainign Center**



**Photo9.2:New Building under construction**



According to the interview with the Center, it has a collaborative project with CJBS (Cambodia Japan Business School). The project started in August 2012 and had 130 candidates for training. Out of the 130 candidates, 90 persons actually participated in the training course. 46 trainees completed the course by January 2013 and 22 trainees have been employed by factories in Bavet SEZs. The project is said to start again in short time.

CJBB is a Cambodian organization of Cambodia International Education Foundation (CIESF), which was a public interest incorporated foundation established in 2008 in Japan. It provides the following services in Cambodia.

- "Teachers Without Borders" Education advisers
- Establishment of Graduate School of Education
- Establishment of Faculty of Education
- Agriculture university support
- Entrepreneurship Program

According to the interview with Forval, which provides a support to CIESF, CJBB/CIESF provides training to 300-500 persons per year in Cambodia. The main school of CJBB is located in Phnom Penh.

Other than the PTC in Svay Rieng city, there is a private training institute in Svay Rieng. It is the Business Institute of Cambodia, located in Bavet district. It provides a bachelors course, an associates course, and short course of the following subjects on fee basis:

- ① Accounting
- ② Banking and Finance
- ③ Tourism
- ④ Marketing
- ⑤ Business Management
- ⑥ Foreign Languages



**Photo 9-3: Business Institute of Cambodia in Bavet**

## **9-2 Training Needs of Japanese Companies in Bavet**

According to the interviews with Japanese companies in Bavet, the basic problem of factory workers are the lack of basic knowledge about how to work at modern factories since most of the workers in

Svay Rieng province used to engage in agriculture and did not have any experience of working in factories. Another problem is the lack of basic education such as counting, calculation, writing and reading due to a lack of exposure to public education.

The lack of skilled worker is all mentioned by some companies but is less serious at this moment than the shortage of unskilled workers.

## 10. CASE STUDY OF NEIGHBORING COUNTRIES

This chapter looks into successful experiences of SEZs and related infrastructure development in neighboring countries such as Thailand, Vietnam and Indonesia, that have developed SEZ/industrial parks for about 25 years. Their experiences provide insights into the future projection of SEZs and infrastructure in Svay Rieng province. It is also expected to provide suggestions on how to solve problems and roles of public and private sectors, in particular the role of donor agencies.

### 10-1 Outline of SEZ and Urban Development in Neighboring Countries

Thailand, Vietnam and Indonesia have successfully developed industrial parks (IPs) and SEZs since late 1980's.

**Table 10-1: Successful Cases of IPs/SEZ and Surrounding City Development in Asia**

| Country      | SEZs and surrounding cities   |
|--------------|---|
| 1. Thailand  | ①Bang Pakong IP (Amata City Estate)<br>②Lat Krabang IP<br>③Eastern seaboard<br>④Rojana IPs  |
| 2. Vietnam   | ①IPs in Bien Hoa city (Dong Nai province)<br>②Tan Thuan Area (Southern HCM city)<br>③IPs in outskirt of Hanoi city<br>④Hai Phong IP |
| 3. Indonesia | ①IPs in Bekasi (East of Jakarta)<br>②IPs in Tangerang (West of Jakarta)<br>③SEZs in Batam Island                                    |

Source: Study team

**Table 10-2: SEZs/IPs and City Development in Neighboring Countries**

| Country/IP&SEZ        | Year of Start/<br>Initial city population | SEZ Area<br>(ha) | Current<br>No.<br>workers | Current<br>City population |
|-----------------------|---|------------------|---------------------------|----------------------------|
| Thailand/Bang Pakong  | 1986/<br>50,000                           | 700              | 70,000                    | 500,000                    |
| Thailand/Amata City   | 1993/<br>10,000                           | 4,000            | 250,000                   | 700,000                    |
| Indonesia/Bekasi      | 1990/<br>50,000                           | 3,000            | 400,000                   | 2,000,000                  |
| Indonesia/Batamisland | 1989/<br>200,000                          | 1,500            | 300,000                   | 800,000                    |
| Vietnam/VSIP1         | 1995/<br>50,000                           | 600              | 30,000                    | 300,000                    |
| Vietnam/Amata         | 1994/<br>20,000                           | 500              | 30,000                    | 500,000                    |

Source: Study team

Lessons derived from the experiences of these neighboring countries are as follows.

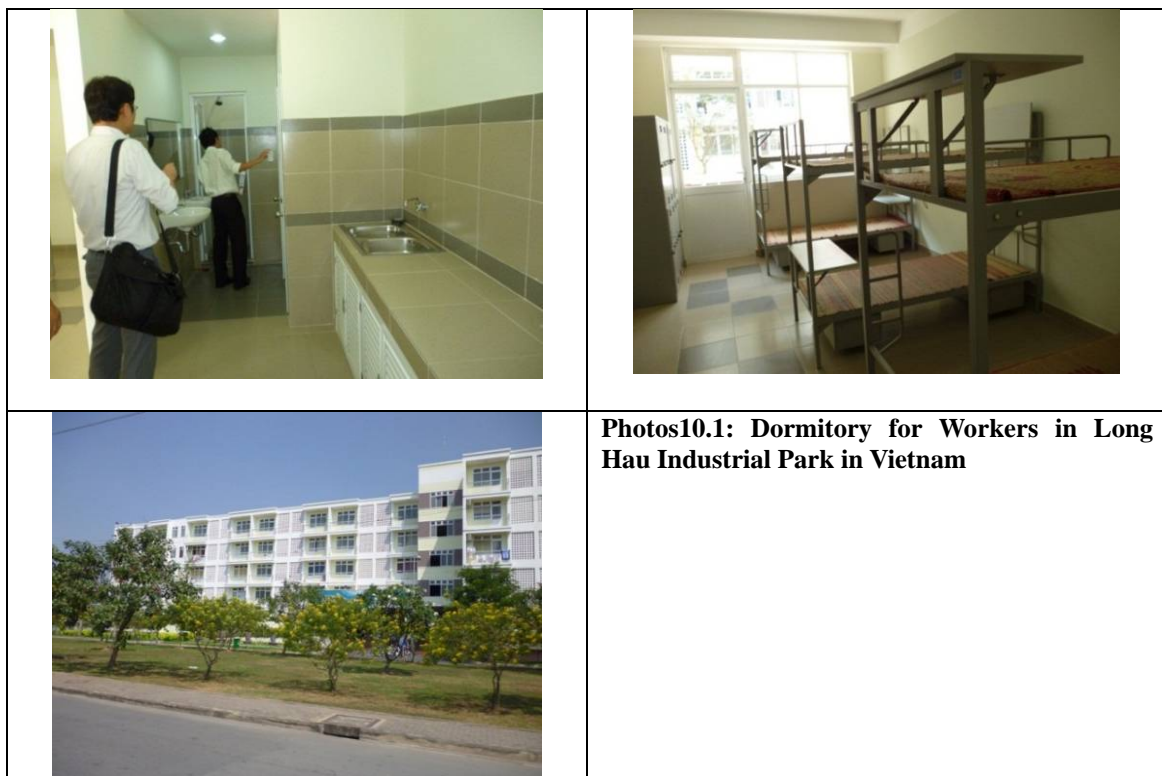
- (5) SEZs/IPs is an effective means of promoting FDI, creating employment for young populations and industrial clustering and population dispersion.

- (6) Governments need to support the legal system and organizations, infrastructure surrounding SEZs, housing and public facilities, labor recruitment and training.
- (7) Especially when SEZs are developed in remote areas, the first thing to do is to prepare housing, commercial, and public facilities prior to establishing factories.
- (8) If the partnership between private and public organizations goes smoothly, there is a possibility for a city hosting the SEZs to develop rapidly into a modern industrial city with a 500,000 to 1,000,000 population.

## 10-2. Securing of Labor Force in Neighboring Countries

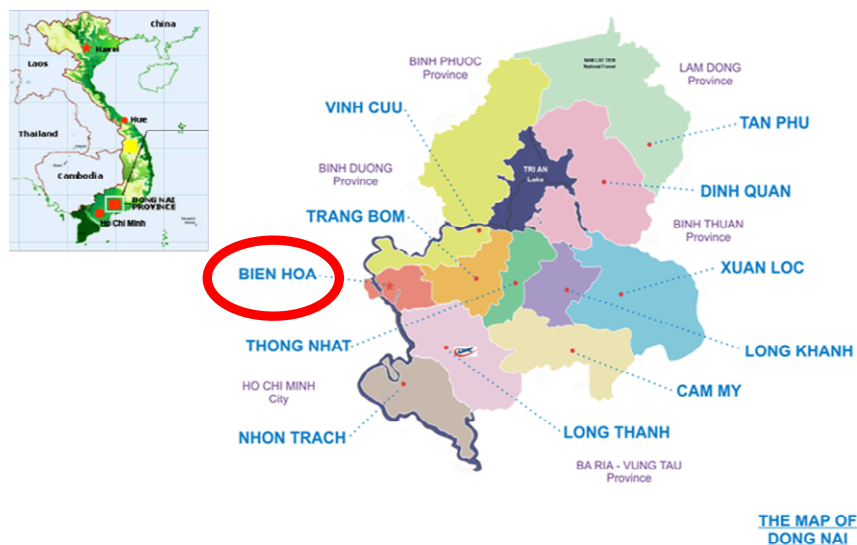
To secure a sufficient labor force, neighboring countries have resorted to the following measures:

- (1) Thailand: Government's housing corporation, together with IP developers, supplied housings for workers. Private housing developers also supplied depending on locations of IPs.
- (2) Vietnam: IP developers, who are often JVs of provincial governments and private developers, prepared dormitories and housing for workers from the beginning of the development of IPs. Private housing developers also voluntarily started supplying housing for workers.
- (3) Indonesia: Government's housing corporation, together with IP developers, supplied housing for workers. Private housing developers arranged low interest loans for workers from government and supplied housing to workers.



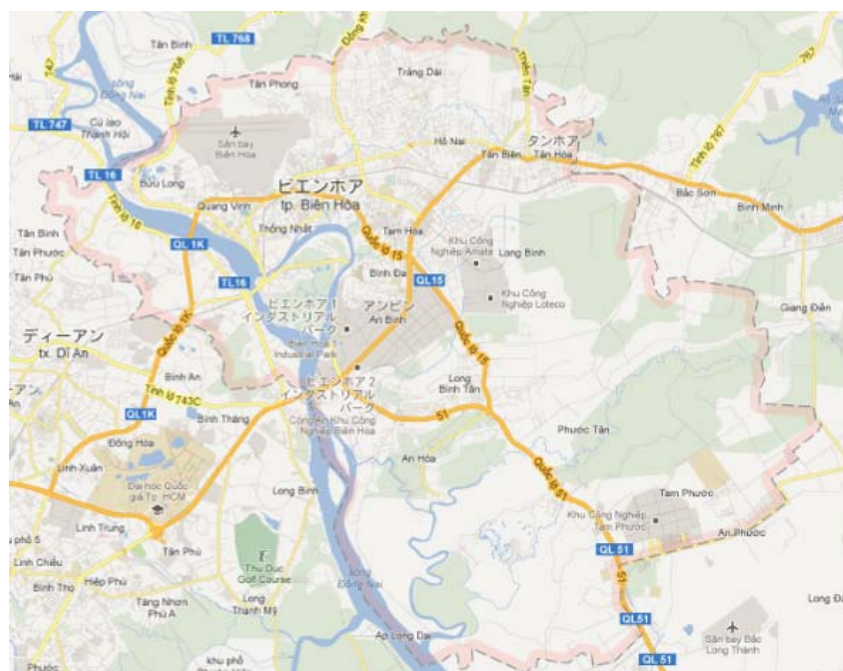
## 10-3. Case Study: Bien Hoa City, Dong Nai Province, Vietnam

This section looks into a case of Bien Hoa city in Dong Nai province of Vietnam, adjacent to HCM city. Below is a map of DongNai province and Bien Hoa city is circled in red.



**Source: Amata Vietnam HP**

During the Vietnam War, the city of Bien Hoa was a military city with an air base and military base. However, after the war, the city changed dramatically into a modern industrial city, with a current population of 800,000. In this process, the previous military base was changed into IPs. The map of Bien Hoa city is presented below.



**Source: Google Map**

The tables below presents the basic data on demography and 8 IPs located in Bien Hoa city, including no. of tenants, no. of Vietnamese employees in IPs, no. of foreign expatriates, no. of Japanese tenants in IPs, and Japanese expatriates.

**Table 10-3: No. of Companies and Labor in Bien Hoa City**

| POPULATION            | BIEN HOA     | DONG NAI      |
|-----------------------|--------------|---------------|
| Total (person)        | 800,000      | 2,559,673     |
| Density (person/ km2) | 2,970        | 386.51        |
| Growth Rate (%)       | 1.05         | 1.12          |
| Urban / Rural (%)     | 93.35 / 6.64 | 31.43 / 68.57 |

Source: dongnai.gov.vn & vi.wikipedia.org (Aug 2011)

| INDUSTRIAL PARKS | No. of companies | VN LABOR       | EXPATS       | JP companies | JP expat   |
|------------------|------------------|----------------|--------------|--------------|------------|
| Amata            | 128              | 27,010         | 436          | 55           | 151        |
| Loteco           | 56               | 18,970         | 234          | 18           | 50         |
| Bien Hoa I       | 99               | 25,459         | 78           | 5            | 21         |
| Bien Hoa II      | 133              | 76,045         | 793          | 14           | 85         |
| Ho Nai           | 98               | 14,631         | 361          | 2            |            |
| Song May         | 56               | 36,670         | 238          | 0            |            |
| Long Thanh       | 77               | 9,309          | 400          | 3            |            |
| Tam Phuoc        | 85               | 17,254         | 448          | 0            |            |
| <b>Total</b>     | <b>732</b>       | <b>225,348</b> | <b>2,988</b> | <b>97</b>    | <b>307</b> |

Source: DIZA- Labor updated 14 Nov 2011



Source: Amata Vietnam IP HP

The following table shows the change of the population and IPs in Bien Hoa city over the past 24 years since year 1989, when the Doi Moi policy started to proceed fully.

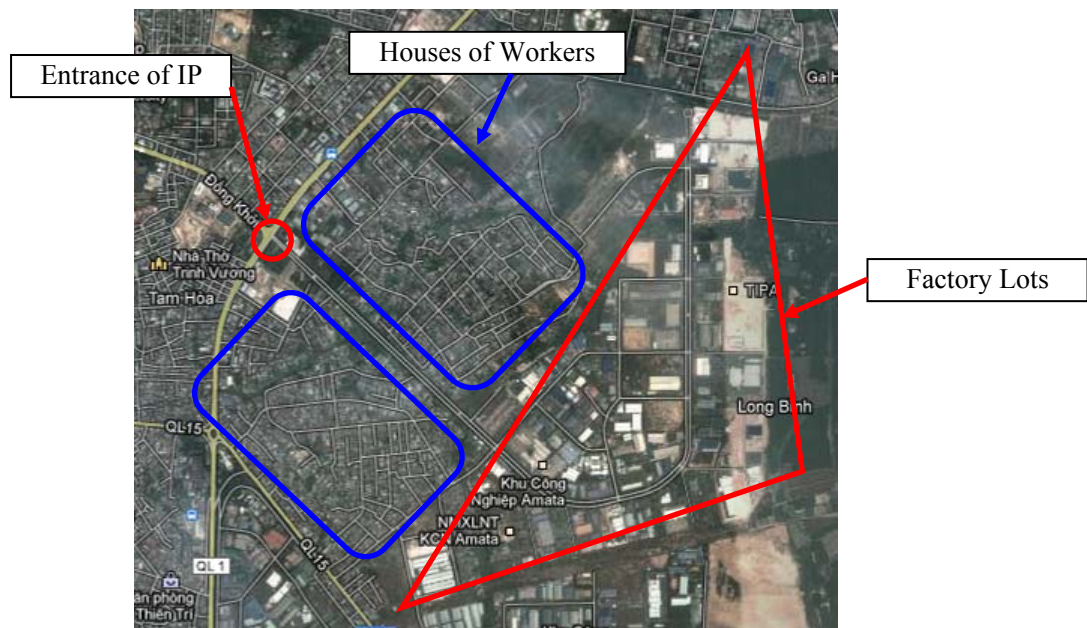
**Table 10-4: Population and Industrial Development in Bien Hoa city**

|                           | 1989    | 1999    | 2009    | 2013    |
|---------------------------|---------|---------|---------|---------|
| Population                | 270,000 | 430,000 | 700,000 | 800,000 |
| No. of IPs                | 0       | 5       | 8       | 8       |
| No. of Tenants in IPs     | 0       | —       | —       | 732     |
| Of which Japanese tenants | 0       | —       | —       | 97      |
| Employees inside of IPs   | 0       | —       | —       | 230,000 |

Source: MPI, Vietnam

Amata industrial park is an example of IPs where it is easy to secure a large number of workers from its neighborhood. Amata industrial park is close to a low-income residential area, where employees of factories in the IP is densely populated. This residential area lies just between the main entrance of the IP and factory lot area. Therefore, most of the laborers of factories in the IP commute just 1-2 km every day.





**Figure 10-3: Amata Vietnam IP and Surrounding Area**

Source: Study team

The following picture is a example of a hosue for low-income workers.



**Photo 10-1: Houses for Workers**

## 11. SWOT ANALYSIS

Bavet has become the second popular industrial area after Phnom Penh during this past 2-3 years. With 5 SEZ under development and one more SEZ approved by CDC in January 2013, Bavet will have 6 SEZ in total. If the development of all 6 SEZs goes smoothly, by 2030, Bavet will have 1500ha of SEZs with 250,000 employees. The population of this area may increase to more than 300,000 people. However, big problems have occurred during this time due to the lack of basic infrastructure, including electric power needed to fuel the rapid increase in the number of companies. Shortage of electricity and labor have caused serious problems including: ①frequent labor disputes, ②high turnover, ③exodus of skilled labor, ④rising wages. For the last 30 years, in ASEAN, many rural areas like Bavet have developed into industrial cities with populations increasing by 5 or even 10 times after 10 – 20 years' of development. In Cambodia, with such SEZ development, Bavet has the potential to become an industrial city of 300,000 – 400,000 people. If the serious problems are not solved quickly, Bavet runs the risk of turning into a ghost town. In order to analyze the potential and risks facing Bavet, we use a SWOT matrix to analyze the ①Strengths, ②Weaknesses, ③Opportunities, and ④Threats/Challenges/Risks.

**Table 11-1: SWOT analysis**

|                      |  |
|----------------------|--|
| <b>1. Strengths</b>  |  |
| ①                    | With a strategic location of facing East-West corridor connecting HMC and BKK, Bavet has good access of about 80km to HMC and Saigon Port, and about 130km to Cai Mep – Thi Vai port of Vietnam.   |
| ②                    | There is land reserved for 5 SEZ (including existing No. 2 and No. 3) being developed, and one more SEZ (300ha) approved by CDC in January, making a total of 6 SEZ (1500ha). Besides Taiwanese companies, the number of Japanese companies started from 2008 is 22 (total is 51 companies).   |
| ③                    | With lowest land rent of 22~25\$/m <sup>2</sup> compared with other SEZ, there is sufficient land for future development of residential and commercial area (according to ADB's Master Plan in 2009).  |
| ④                    | Svay Rieng Province has a relatively large population of 550,000 people approximately, and relatively low labor wages. By now it has been easy to attract labor, but recently labor shortage due to rapid increase of number of companies has become the biggest problem.  |
| ⑤                    | Svay Rieng province has a National University; therefore it is easy to hire labor with high level skills like manager and engineer.  |
| ⑥                    | One Stop Service (OSS) has been set up in 2 SEZs, making it possible to precede with administrative procedures including custom clearance at the site of SEZ.  |
| ⑦                    | Thanks to the improvement of customs clearance system assisted by ADB, trucks may cross the border between Vietnam and Cambodia without transshipment, saving time and cost.   |
| ⑧                    | ADB is interested in Bavet development and already made Master Plan for Bavet, ADB may carry out projects of road improvement and city development.  |
| ⑨                    | Construction of Neak Loeung bridge along Route 1 highway by Japan's ODA will be completed in 2015, making it more convenient to travel from Phnom Penh to Bavet with a shortened travel time from 3.5 hours down to 2.5 hours.   |
| ⑩                    | EDC has a plan to lay a 115kV transmission line between Phnom Penh and Bavet which is scheduled to be completed by 2015. Coal-fired power plants and hydroelectric power plants currently being promoted in the PPP which will be completed before the year 2015, may supply 500MW for this national power grid. Therefore, in 2015, power transmission from Phnom Penh to Bavet may be more stable and cheaper compared with present power supplied by Vietnam. |
| ⑪                    | With AFTA scheduled to be effective from 2015, tariffs among ASEAN will become zero, Bavet with East West corridor connecting Myanmar, Thailand, with Cambodia passing by has the potential to attract more companies in the future.   |
| <b>2. Weaknesses</b> |  |



- ① 6 SEZ are already approved in Bavet, 5 SEZ have started construction, 3 SEZ have started operation. In 2010, the number of companies drastically increased, resulting in a shortage of labor, electric power, water and sewage. There is no accommodation, commercial facilities, public facilities, service facilities for workers in the region, making it difficult to ensure labor, and this has become the biggest problem.
- ② SEZ, a part of the CDC Office, is supposed to give license, management, guidance of operation for SEZ, reviewing plan of infrastructure and town development but it is not working. Due to the chaotic and unplanned development of the SEZ, more than 50 companies have come over the past two years, causing the problems of housing shortages, power shortages, the lack of water and sanitation and labor shortages.
- ③ There is a shortage of infrastructure including power and water and sewerage. Power failures happen everyday, companies need to use their own generator to keep operations going because voltage is not stable.
- ④ There are almost no condo housing for expatriates, no restaurants, commercial facilities, recreational facilities, social infrastructure including medical and education services in the area. Therefore, it can not meet the needs of expatriates that are increasing rapidly.
- ⑤ Administrative staff in charge of OSS are criticized for their inappropriate response.
  - The construction machinery and materials for licensed plant construction are exempt from import tariffs under the SEZ Law, however, there are increasing number of cases that the customs officers have not approved and charged them, which caused construction delays in ten projects in the Bavet SEZ.
  - The OSS office imposes various requirements on companies in the SEZ so that they have to pay the costs of desks, PCs, salaries, food allowances, etc.
- ⑦ For lack of training institutions, most of the workers are unskilled and turnover rates are as high as 10 -15% per month.

### 3. Opportunities

- ① Located at the crOSSroad of East-West Corridors that connect four countries of the Mekong Region, Bavet has good access to HMC and Cai Mep/ Thi Vai Ports. The 50MVA electric power is planned to be supplied in 2015, and the land for future development is allocated for SEZs of 1,500ha and for a township which will be designed by a new Master Plan.?? If the labor shortage is resolved, Bavet will be an industrial center like other industrial cities in ASEAN countries that grew up from 300,000 to one million of population during the past 25 years.
- ② There are already three SEZs, and about 50 companies with 20,000 workers are operating, mainly Taiwanese and Japanese. Now the roles of public and private sectors should be defined clearly to tackle and solve the existing problems as soon as pOSSible. By the year 2015 new operations should be put off because of the lack of electricity and manpower. After 2015, however, industrialization will be accelerated again, and it will be an industrial city of 300,000 to 400,000 residents in 2030.
- ③ Developers of SEZs are expanding their SEZs. Since the land of 1,500ha is available for further development, the area of SEZs will increase from existing 200ha to 1,200ha – 1,500ha in 2030. SEZ
- ④ The wages are ‘sky-rocketing’ in the foregoing industrialized countries such as in China, Vietnam and Thailand, therefore, labor-intensive industries of these countries are thinking to move in to Cambodia. The Japanese, Korean and Taiwanese MSMEs are also considering transferring their manufacturing bases to the countries where the production costs are cheaper than in China and Vietnam. In this sense, Myanmar and Bangladesh are the rivals of Cambodia. However, the business environment in Myanmar is not good to invite foreign companies at present, and for Bangladesh there are few companies that decided to move there. Cambodia, especially Bavet, where various attractive conditions are available, will be able to invite manufacturing companies which fill 1,500ha SEZs, if the city could solve the problems it faces urgently.
- ⑤ A Japanese developer which has developed an SEZ in a neighbouring country, has started a

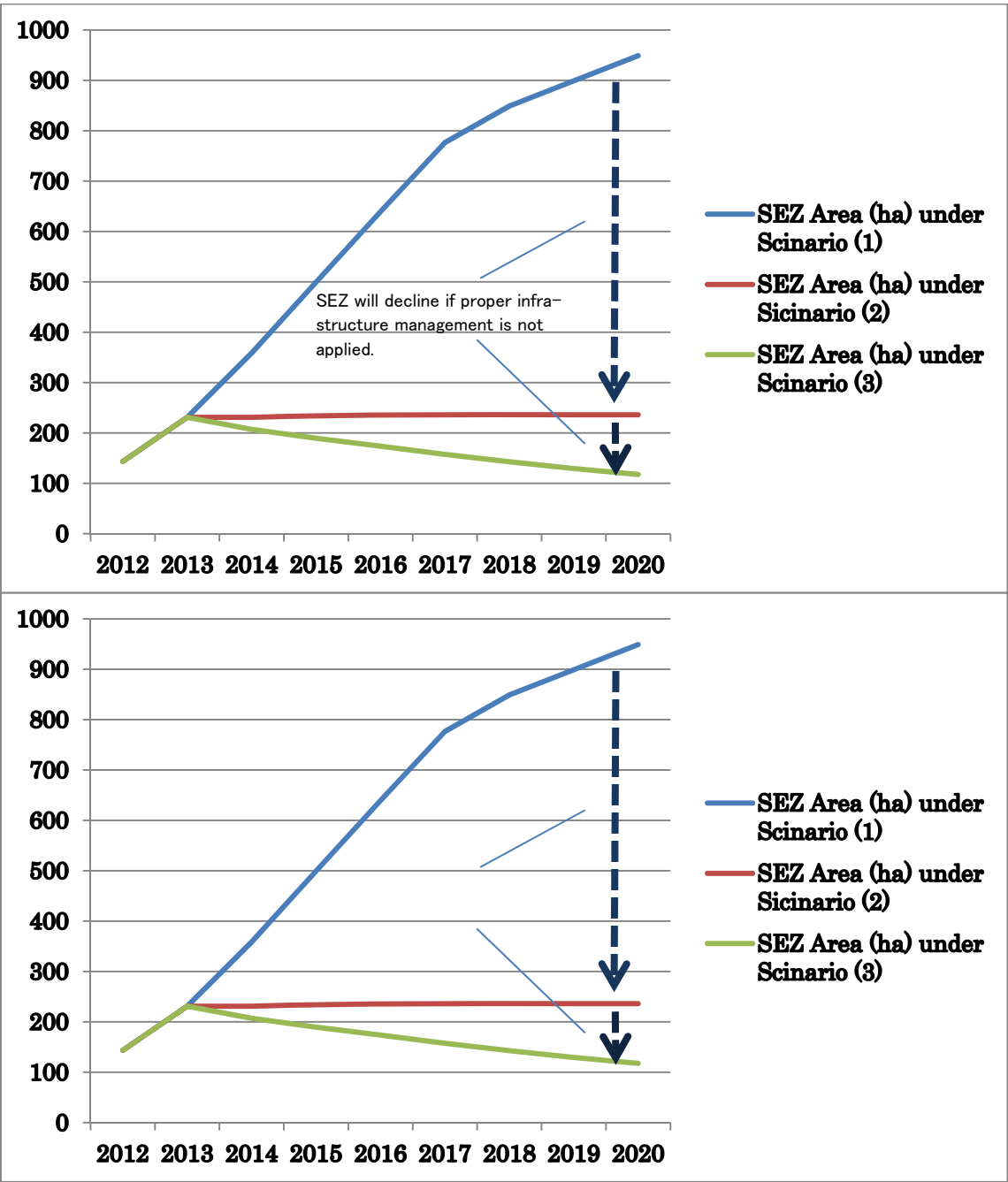
|   |
|---|
| <p>feasibility study in Svay Rieng Province, and it is expected to develop an SEZ with hard and soft infrastructure of higher performance.</p> <p>⑥ Three affiliated companies of major Japanese precision machine makers are on the verge of deciding to invest there. If the existing problems could be solved in Bavet, it is possible to attract not only labor intensive and low added-value manufacturer like the garment industry but more value-added industries such as electric appliance, machinery, and auto-parts makers.</p> <p>⑦ It will be possible for a JV of Cambodian firm with a Japanese company that assists Japanese SMEs to invest in Cambodia, to rent factories and workers' residence for SME as a supporting business in Svay Rieng Province.</p>  |
| <p>4. Threats, Challenges, &amp; Risks</p> <p>① If the existing problems are not solved in the near future, especially those of labor shortage and electric power, the manufacturers that have already invested in Bavet SEZs will be forced to withdraw and it will become difficult to attract new investment. In this case, the development of Bavet area will stagnate.</p> <p>② The development will grind to a halt if the infrastructure, especially the electric power and the sewerage system, housing inventory, and the health services systems are not improved. In this case, new investments will not come in, some of the now operating industries will retreat, and the direct foreign investment will disappear.</p> <p>③ In the case that the number of companies increases without improvement of sewage and solid waste management, the environmental condition of an entire city deteriorates, and does not meet the conditions of the Barsel Treaty, so that the products made in Bavet cannot be sold in Europe and the USA, and hence, the FDI in Bavet will decrease.</p> <p>④ If the shortage of manpower remains and the labor market is not improved, the competitiveness becomes weak compared to Myanmar and Bangladesh due to labor disputes and wage hikes, which pinches the industrialization of the Bavet area.</p> <p>⑤ SEZ Office of the CDC has only three staff members, and it does not function well. It is required to increase the number of staff members as well as to upgrade the quality of services on offer. If the SEZ Office is not improved, then the problems of Bavet will remain unsolved. As a result, companies who felt discouraged would transfer their attention to other countries, causing a regression of the city.</p> <p>⑥ The amendment of the SEZ Law was drafted by the support of IFC in 2008, however, no action has been taken in the CDC. If the reform of the CDC does not advance, and opaque institutional decisions and operations remain the status quo, investors will find other possibilities. The Bavet area has good opportunities but it cannot enjoy them for its development</p> |

Source: Study team

# 12. SCENARIOS AND DEMAND FORECASTS

## 12.1. Future Forecasting

Chapter 3 of this report summarized the present situation of SEZs and factories in Bavet. Chapter 4 examined the type and number of companies which may invest in Bavet in gfuure. Chapter 5 pointed out problems related to the exsiting SEZs in Bavet and provided estimations of the number of operation factories based on three scenarios: Scenario1 is the case without any infrastruc- ture and labor problem, Scenario 2 is the case with no more new investment, and Scenario 3 is the case where existing factories are gradually withdrawing.



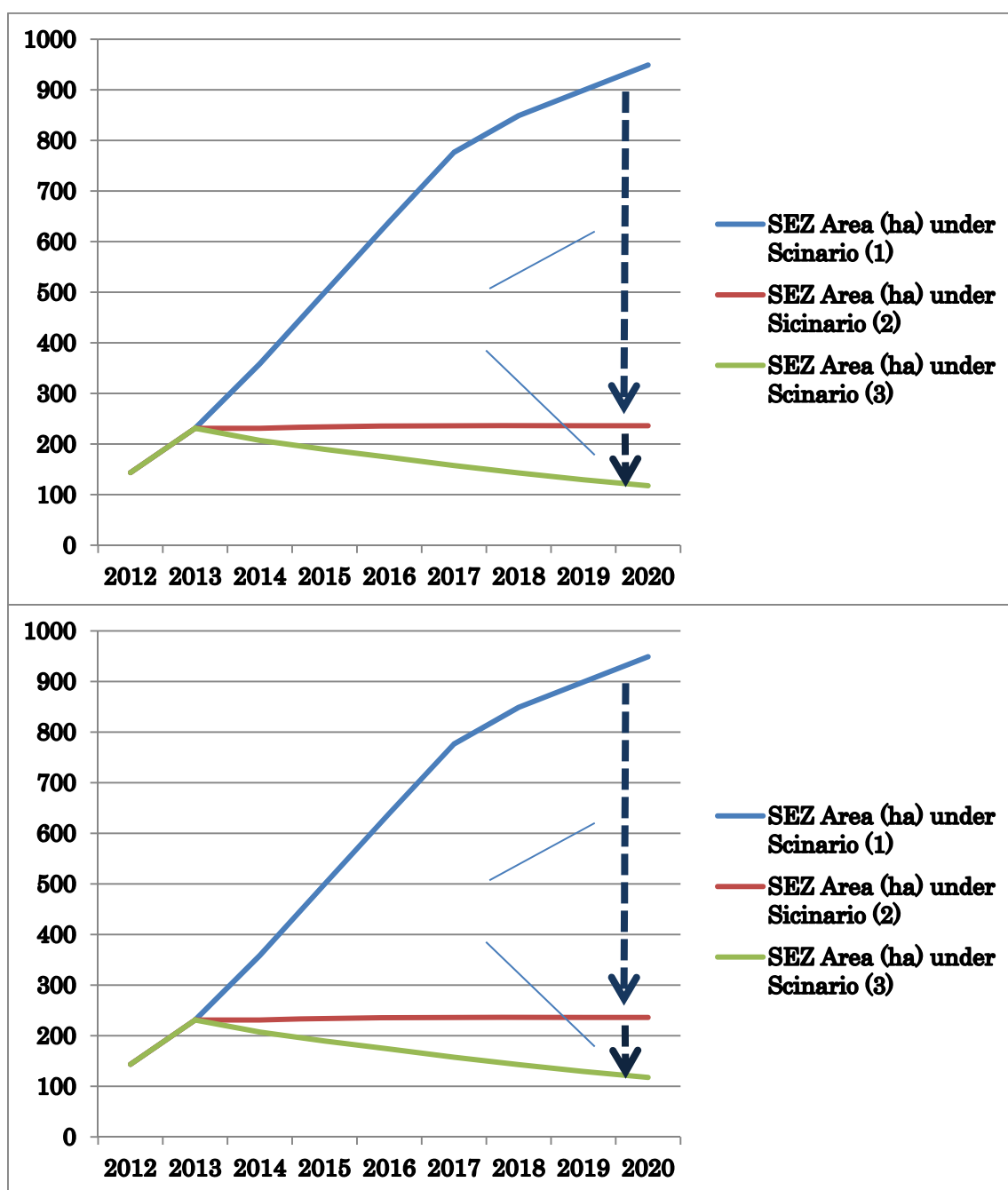
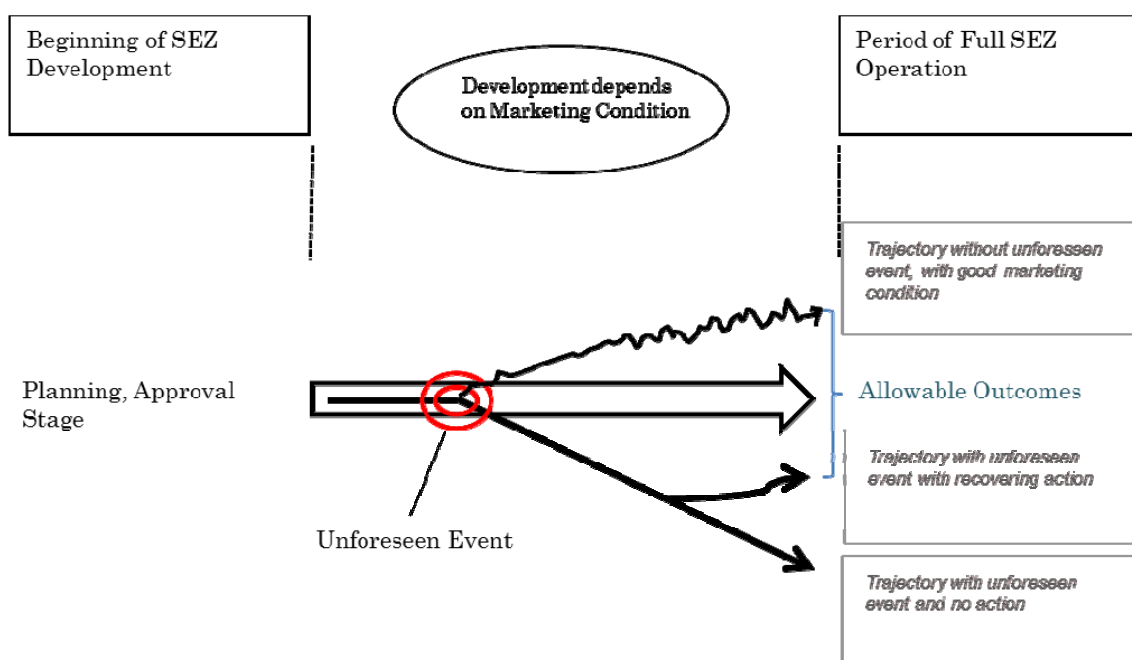


Figure 12-1: SEZs Development Scenarios

(Cited from Chapter7, figure 7.1)

Chapter 7 explained necessary infrastructure developments which can mitigate a possible stagnation of investments and SEZs development in Bavet.

This Chapter assumes the implementation of the necessary infrastructure development and then examines how the gap between the SEZ developpers' expectation and the worst case can be narrowed in different scenarios.



**Figure 12-2: Development Scenarios due to Occurrence of Agglomerating Effect**  
(Quoted from Chapter 5, Figure 5.1)

The figure above shows that the number of existing factories (31 factories at present) may increase 5 times upto 103 factories in 2015 if there are no problem in infrastructure and labor supply. However infrastructure and labor problems has started coming out such as shortage of electricity, improper waste water system, poor transportation system for workers, insufficient dormitory and strikes, and there is a good possibility that the best scenario (Scenario 1) will be delayed. It is difficult to solve all the problems in short time. In this case, if counter measures are delayed, the scenarios will worsen. Therefore, the future development of Bavet city may well depend largely on short term counter measures. These counter measures should all depends on efforts of CSEZA and international donors such as JICA and ADB, etc. as well as those of SEZ developers and tenant companies. This Chapter examinie more realistic future forecast of industrial accumulation in Bavet region.

## 12.2. Short Term Scenario

Three future scenarios until 2015 are shown as follows;

**Table 12-1: Projection of 2013-2015 Operational Factory Lot Areas**

|  | 2012 | Factory lot area of newly established factories (ha) | 2013 | Factory lot area of newly established factories (ha) | 2014 | Factory lot area of newly established factories (ha) | 2015 |
|--|------|--|------|--|------|--|------|
| Basic Scenario   |      |  |      |  |      |  |      |
| All factory lots are operational (ha)                  | 102  | +61  | 163  | +90  | 253  | +101   | 354  |
| Upper Scenario   |      | +61x80%  |      | +90x60%  |      | +101x50%   |      |
| 72% of Basic Scenario (compared to 2015 on area basis) | 102  | +49  | 151  | +54  | 205  | +51  | 256  |

|  |     |         |     |         |     |          |     |
|--|-----|---------|-----|---------|-----|----------|-----|
| Medium Scenario  |     | +61x70% |     | +90x50% |     | +101x30% |     |
| 62% of Basic Scenario (compared to 2015 on area basis) | 102 | +43     | 145 | +45     | 190 | +30      | 220 |
| Lower Scenario   |     | +61x50% |     | +90x30% |     | +101x10% |     |
| 48% of Basic Scenario (compared to 2015 on area basis) | 102 | +31     | 133 | +27     | 160 | +10      | 170 |

Source: Study team

The conditions of the Scenarios are discussed below.

#### 12.2.1. All the factory lots are put into operation

If all the booked factory lots are put into operation, the operational SEZ area will reach 354ha. This is the line drawn on top of the Figure 12.1.

**Table 12-2: All the factory lots are put into operation**

|                                   | 2012   | 2013   | 2014   | 2015   |
|-----------------------------------|--------|--------|--------|--------|
| No. of factories                  | 31     | 48     | 70     | 103    |
| Operational factory lot area (ha) | 102    | 163    | 253    | 354    |
| No. of workers                    | 18,382 | 30,342 | 52,798 | 72,846 |

Source: Study team

#### 12.2.2. Upper Scenario

The start of factory operation will be delayed but this delay will be minimized

- ① CDC properly will recognize the problems in Bavet, reform CSEZ, and take immediate actions to solve the problems;
- ② As a result of the reform of CDC/CSEZA, OSS will be functional as a facilitator for investors;
- ③ SEZ developers will improve their infrastructure and services by 2015;
- ④ Housing and city development will proceed under the public and private partnership model and workers will migrate into Bavet area;
- ⑤ The planned transmission lines and substations in Svay Rieng will be decided officially in the middle of 2013 and 50MVA power will be supplied to SEZs;
- ⑥ Aid agencies such as JICA, ADB will support the development of roads, Bavet city development based on a city master plan and the skill development of workers; and,
- ⑦ The operational percentage of the factory lot area will be 80 % in 2013, 60% in 2014 and 50% in 2015. The progress level of this scenario is 72% of the basic scenario 2015.

**Table 12-3: Upper Scenario**

|                                   | 2012   | 2013   | 2014   | 2015   |
|-----------------------------------|--------|--------|--------|--------|
| No. of factories                  | 31     | 47     | 64     | 80     |
| Operational factory lot area (ha) | 102    | 151    | 205    | 256    |
| No. of workers                    | 18,382 | 28,539 | 38,745 | 48,384 |

Source: Study team

#### 12.2.3. Medium Scenario

Efforts by public and private will not be enough and the factory operation will not reach the upper scenario level.

- ① CDC will begin to reform CSEZA but take a long time to solve the problem, delaying the creation of housing and urban development for employees;
- ② A result of the reforms of CDC, the service of OSS will be improved to some extent but not to the extent in which OSS functions as a facilitator for investors;
- ③ SEZ developer will improve infrastructure and services, begin to solve the problem. In 2015, most of the problems will be solved under the guidance of CDC and external experts;
- ④ Delayed in housing and urban development in public-private partnerships, new housing can accommodate only 5,000 workers. The acceptance of a greater number of workers will be delayed after 2015;
- ⑤ The planned transmission lines and substations in Svay Rieng will be decided officially in the middle of 2013 and 50MVA power will be supplied to SEZs;
- ⑥ Recognized the potential and importance of aid agencies such as JICA and Babette also ⑥ Aid agencies such as JICA, ADB will support the development of roads, Bavet city development based on a city master plan and the skill development of workers.
- ⑦ Power shortage will be eased by generators installed by tenants and an SEZ developer. 70% of the planned factory lots will be operation in 2013, 50% in 2014 and 30% in 2015. The progress level of this scenario is 62% of the basic scenario 2015.

**Table 12-4: Medium Scenario**

|                                   | 2012   | 2013   | 2014   | 2015   |
|-----------------------------------|--------|--------|--------|--------|
| No. of factories                  | 31     | 45     | 59     | 68     |
| Operational factory lot area (ha) | 102    | 145    | 190    | 220    |
| No. of workers                    | 18,382 | 27,405 | 35,910 | 41,580 |

**Source: Study team**

#### **12.2.4. Lower Scenario**

Problem-solving is not enough while operational level in 2015 remain low.

- ① CDC properly will recognize the problems in Bavet, but will not be able to reform CSEZA, and some of the problems will remain unsolved. The improvement of SEZ and the development of housings for workers will be delayed and the shortage of labor will become increasingly serious;
- ② As a result of the reform of CDC/CSEZA, OSS will improve to some extent but still not be fully effective as a facilitator;
- ③ SEZ developers will not improve their infrastructure and services by 2015 and the tenants will start to move out of SEZs;
- ④ Delayed in housing and urban development in public-private partnerships, new housing can accommodate only 1,000 workers. The acceptance of a greater number of worker will be delayed after 2015;
- ⑤ The planned transmission lines and substations in Svay Rieng will be decided officially in the middle of 2013 and 50MVA power will be supplied to SEZs;
- ⑥ FDI will stagnate due to the unsolved problems and the support delayed by Aid agencies such as JICA, ADB for the development of roads, Bavet city development based on a city master plan and the skill development of workers will also be delayed.
- ⑦ Power shortage will be eased by generators installed by tenants and an SEZ developer. 50% of the planned factory lots will be operation in 2013, 30% in 2014 and 10% in 2015. The progress level of this scenario is 48% of the basic scenario 2015.

**Table 12-5: Lower Scenario**

| 年                                 | 2012   | 2013   | 2014   | 2015   |
|-----------------------------------|--------|--------|--------|--------|
| No. of factories                  | 31     | 41     | 50     | 53     |
| Operational factory lot area (ha) | 102    | 133    | 160    | 170    |
| No. of workers                    | 18,382 | 25,137 | 30,240 | 32,130 |

**Source: Study team****12.2.5. Most Realistic Short Term Forecast**

Figure 12.1 showed the maximum development estimate from the viewpoints of SEZ developers and the minimum estimates based on unforeseeable problems. These scenarios are extreme scenarios and more realistic scenarios can be drawn in between these extreme scenarios. In this context, three more realistic scenarios were presented in the previous section. Based on the present situation of SEZs and tenants, the medium scenario should be the most realistic. Six scenarios given so far are summarized in the table below.

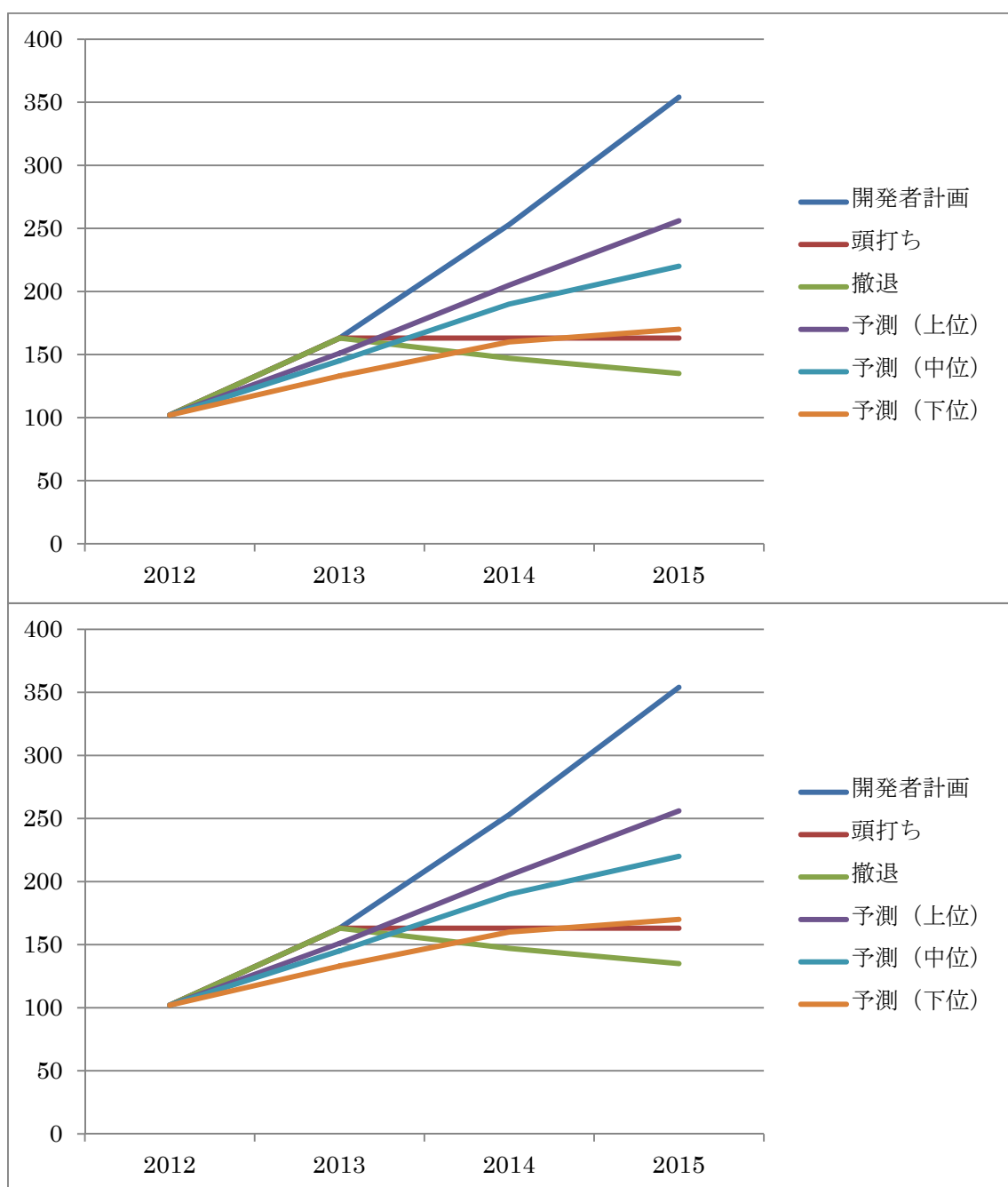
**Table 12-6: 2013-2015 Operational Factory Lot Area (Unit : ha)**

|                        | Graphs            | 2012 | 2013 | 2014 | 2015 |
|------------------------|-------------------|------|------|------|------|
| Chapter 5              |                   |      |      |      |      |
| Case 1 (Original plan) | Developers' plans | 102  | 163  | 253  | 354  |
| Case 2 (Stagnating)    | Stagnating        | 102  | 163  | 163  | 163  |
| Case 3 (Withdrawing)   | Withdrawing       | 102  | 163  | 147  | 135  |
|                        |                   |      |      |      |      |
| Chapter 12             |                   |      |      |      |      |
| Upper Scenario         | Upper forecast    | 102  | 151  | 205  | 256  |
| Medium Scenario        | Medium forecast   | 102  | 145  | 190  | 220  |
| Lower Scenario         | Lower forecast    | 102  | 133  | 160  | 170  |

**Source: Study team**

Graphical representation of the table above is shown below.





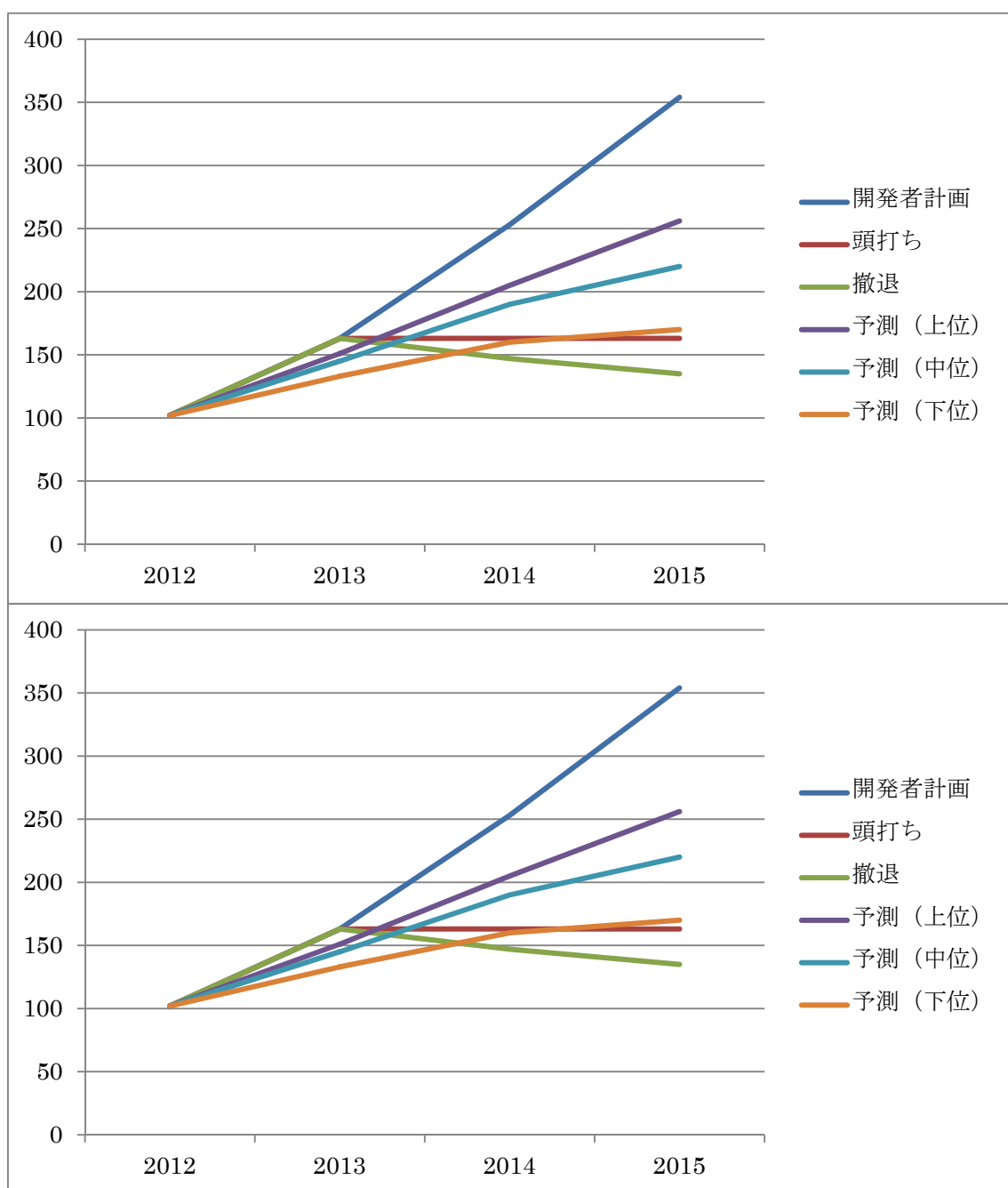


Figure 12-3: 2013-2015 Operational Factory Lot Area (Unit : ha)

Source: Study team

### 12.3. Long Term Future Forecast

#### 12.3.1 Three Scenarios of Long Term Future Forecast

Based on the long term forecast presented in Chapter 7, A forecast with three scenarios is presented below for the period of 2012-2030.

Table 12-7: Forecast of SEZ Area and Population in Bavet (2012–2030)

| 年               |                         | 2012 | 2015 | 2020 | 2030  |
|-----------------|-------------------------|------|------|------|-------|
| Robust scenario | Operation lot area (ha) | 102  | 256  | 672  | 1,200 |

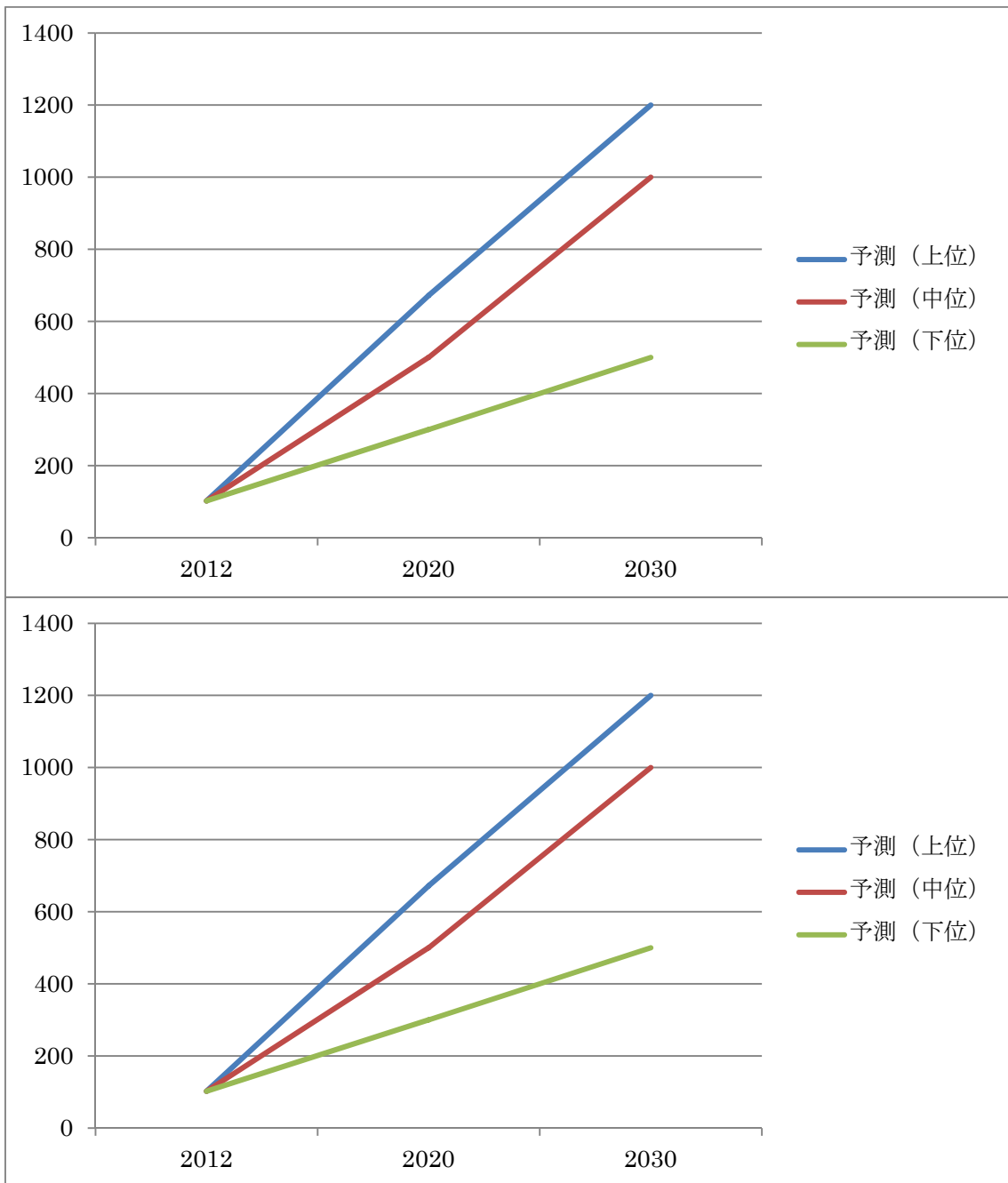
|                   |                         |        |        |         |         |
|-------------------|-------------------------|--------|--------|---------|---------|
|                   | No. of Workers          | 18,382 | 48,384 | 134,000 | 228,000 |
|                   | Population              | 37,000 | 58,060 | 174,000 | 342,000 |
| Moderate scenario | Operation lot area (ha) | 102    | 220    | 500     | 1,000   |
|                   | No. of Workers          | 18,382 | 47,580 | 94,500  | 189,000 |
|                   | Population              | 37,000 | 57,096 | 123,000 | 284,000 |
| Weak scenario     | Operation lot area (ha) | 102    | 170    | 300     | 500     |
|                   | No. of Workers          | 18,382 | 32,130 | 57,000  | 100,000 |
|                   | Population              | 37,000 | 38,556 | 74,000  | 150,000 |

**Source: Study team**

Assumptions:

- 1) The operational SEZ area in 2015 is 256, 220 and 170 ha for the Upper, Medium, and Lower scenarios respectively.
- 2) For the forecast of 2020-2030, the Upper scenario is based on the Figure 7.13, which is SEZ developers' wishful figures.
- 3) In the Medium scenario, it is assumed that 80% of the Upper level will be reached, while only 50% of the upper scenario will be reached in the Lower scenario.
- 4) The city population is assumed to be calculated by multiplying the no. of workers by 1.2 in 2015. The multiplier is set at 1.3 in 2020 and 1.5 in 2030 because the city population increased as the city development proceeded in other ASEAN countries.

The three long term scenarios are illustrated in the figure below.



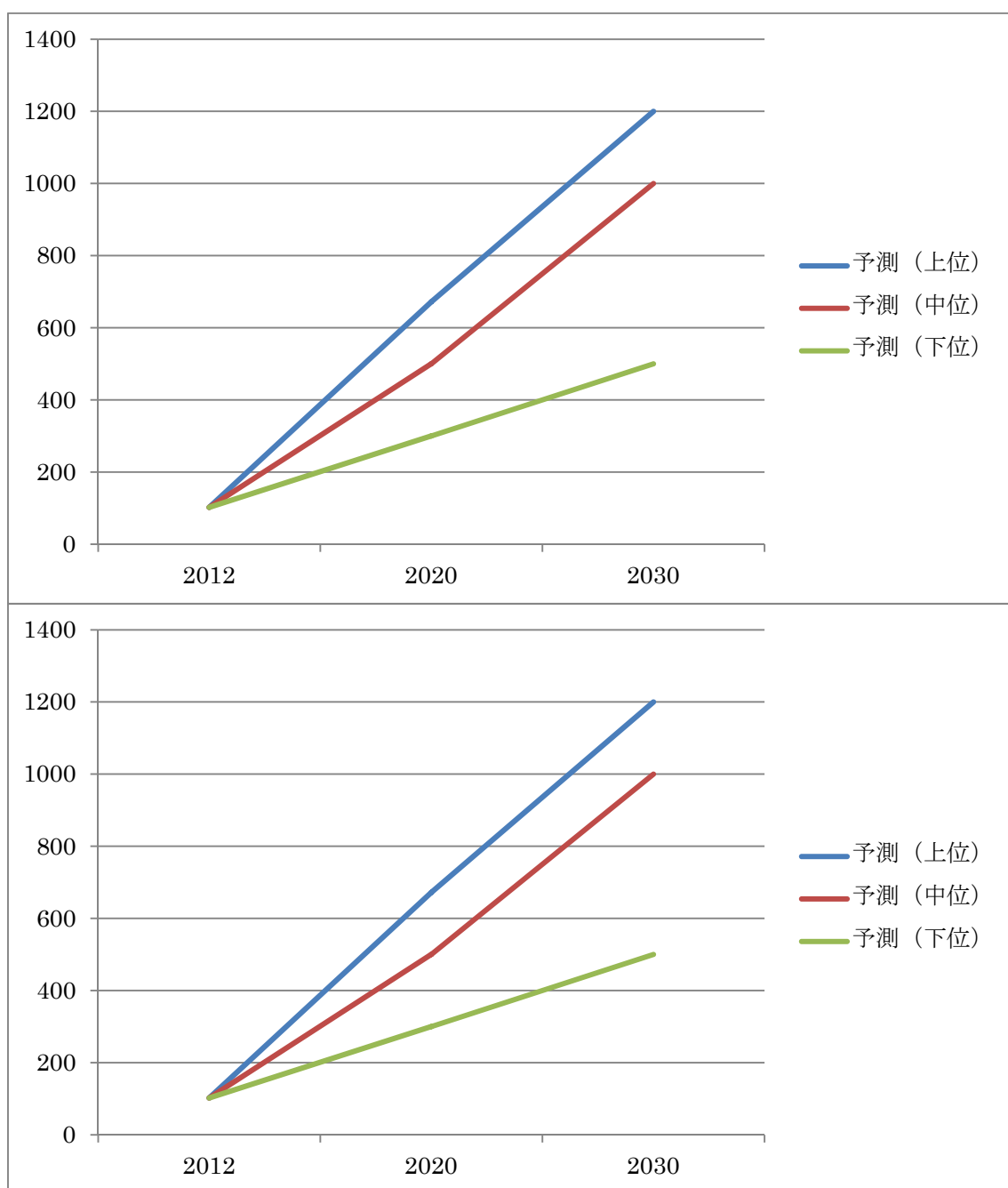


Figure 12-4: Long term Forecast of SEZ Area in Bavet (2012–2030) (Unit:ha)

Source: Study tea

### 12.3.2. Medium Scenario of Long Term Forecast

The most realistic scenario is the Medium scenario in the long term foracing too. The Cambodia Government, SEZ developers, the foreign companies being operational in Cambodia and the 3<sup>rd</sup> party companies set about solving these problems collaboratively. Thereafter the Public and the Private cooperatively continued to develop the towns around the SEZ, and they succeeded in smooth industry accumulation. It is anticipated that they will sell 220 ha in total by 2015, 500 ha in 2020, and 1,000 ha in 2030.

Table 12-8: Forecast based on Medium scenario for Bavet (2012–2030)

|  | Assumptions | 2012 | 2015 | 2020 | 2030 |
|--|-------------|------|------|------|------|
|--|-------------|------|------|------|------|

|  |  |        |        |         |         |
|--|--|--------|--------|---------|---------|
| Operational SEZ area (ha)                    |  | 102    | 220    | 500     | 1,000   |
| Demand for rental factories (ha)             | 10% of SEZ area                                    | 5      | 22     | 50      | 100     |
| No. of tenants                               | 0.31 company/ha/                                   | 31     | 76     | 155     | 310     |
| Of which Japanese tenants                    | 40% after 2015                                     | 7      | 30     | 62      | 124     |
| No. of foreign expatriates<br>No. of workers | 3 persons/company<br>5 persons/company after 2016) | 93     | 228    | 775     | 1,550   |
| City population                              |  | 18,382 | 47,580 | 94,500  | 189,000 |
| Operational SEZ area (ha)                    |  | 37,000 | 57,096 | 123,000 | 284,000 |

Source: Study team

It is forecast that the numbers in companies, laborers, Japanese companies, foreigners, and town dwellers in Bavet will rapidly increase especially after 2015. It is expected that the number in companies in SEZs will soar from 31 (currently) to 310, and also that the number of laborers in the Bavet SEZs will be expanded from 18,000 (presently) to 189,000. It is anticipated that the number in the city population will explode proportionately from 37,000 (currently) to 280,000, and also that Bavet will be ranked as one of the largest 10 cities in Cambodia, accordingly. However, to realise this scenario, it is required that the following parties should unanimously boost the development of Bavet and its SEZ:

- (i) CDC (Council for the Development of Cambodia), SEZ Agency and OSS office;
- (ii) Central Government Ministries and Local government authorities (provinces and towns);
- (iii) Aid agencies (JICA, ADB, IFC, etc.); and
- (iv) The Private Sector (SEZ developers and the 3rd party real-estate agencies)

If the Cambodian Government continues to be reluctant to do anything actively, as has often been the case in the past, Bavet will turn into a ghost town, realizing the worst scenario or even being below this level, with such pessimistic possibilities that the plight of Bavet will be dying, and also that Bavet will remain unsold and empty. To avoid the realization of this unpleasant scenario, it is required that the government, in cooperation with aid agencies, should make its utmost efforts to maximize the potential of Bavet.

## 13. EXPECTED PROJECTS BY PUBLIC AND PRIVATE

Bavet is a place where there is a potential to grow as an industrial city in a strategic location. Six SEZs have been approved already in this area while development is proceeding in five SEZs. Twenty-three companies have started factory operations already in three SEZs and nearly 20,000 workers are commuting from rural areas around the SEZs. Unfortunately, CSEZA, the agency in charge of SEZs supervision and planning, is not aware of its responsibility and the lack of human resources. The development of SEZs in Bavet has been carried out by private developers without planning. The problem is serious and therefore short term solutions are rather limited.

### 1) Problems and solutions for 2013-2015 and Division of Roles

**Figure 13-1: Project List**  
(\*\*\*: Short term, \*\*:Medium term, \*Long term)

| Problems  | Division of Roles  | Solutions  |
|---|--|--|
| 1 . Labor Shortage                                  | Private organizations & Aid Agencies<br>Cambodia government & Aid Agencies<br>Cambodia government, private organizations, SEZ developers<br><br>CDC & Cambodia Gov.<br><br>Private organizations & CDC | ① Improvement of Village road : ***<br>② Widening of NR : ***<br>③ Construction of dormitories and housing for workers : ***<br>④ Arrangement for 15-17 year old workers to work : ***<br>⑤ Construction of residences for laborers and accommodation of those living beyond a reasonable commuting distance : ***   |
| 2 . Power Shortage                                  | Private organizations<br>SEZ Developers<br>Private organizations<br>Private organizations<br>Cambodia Gov.& EDC<br><br>EDC & Aid agencies<br><br>EDC & Aid agencies                                    | ① Each company's installation of generator :***<br>② SEZ's installation of generator: ***<br>③ Group purchase ***<br>④ Sharing the use of the same generator : ***<br>⑤ Electric Transmission from Vietnam : ***<br>⑥ EDC's construction of electric lines and transforming station : Scheduled for 2015-(7) end : **<br>⑦ EDC's continuous increase in their electric-generating capacity |
| 3. Narrow NR1 and bad village roads ( rainy season) | Cambodia Gov. & ADB<br><br>Private organizations & Aid agencies<br>Cambodia Gov. & Aid agencies  | ① Early implementation of the ADB-proposed broadening of 8Km rail track, and its extension to 30km zones : ***<br>② Pavement of rural roads (by in-kind contribution of cement to villagers : ***<br>③ broadening/improvement of provincial roads : ***  |
| 3 SEZ's shortage of water supply and sewerage sys-  | SEZ developers&CDC<br><br>Cambodia Gov. & Aid agencies   | ① persuasion of SEZ developers into improving<br>② SEZ's improvement of water supply and sewerage systems in accordance with Law   |

|   |   |   |
|---|---|---|
| tems  |   | on SEZ***<br>③ Future plan of full equipment of water supply and sewerage systems :*  |
| 4. Solid Waste disposal problem             | Cambodia Gov. & Aid agencies  | ① Short-term plan of instruction of proper use of solid waste disposal station in township : ***<br>② Mid-term plan of development of disposal of garbage and industrial waste : *  |
| 4 . Lack of Rental factories                | SEZ Developers & CDC<br>Private organizations                               | ① Instruction to SEZ developers on how to develop lease factories : **<br>② Development and management of lease factories (250—2000sqm) for small scale enterprises on a JV basis (Japanese companies and local SEZ developers) : **  |
| 5 . Lack of Medical, Fire, Security service | SEZ Developers&CDC  | ① Forcing of SEZ developers to improve existing facilities in accordance with Law on SEZ<br>② Suggestion to SEZ developers that they should construct a clinic and manage this facility in line with Law on SEZ   |
| 6 . Education and training of Labor         | Cambodia Gov. : Aid agencies<br>Private Sector • NGO                        | ① Preparation of the training facilities in SEZ : **<br>② Development of the linguistic/ cultural/professional capacities of the people working for the Private Sector and NGOs : ***   |
| 7. Lack of entertainment, amenities         | Private Sector  | ① Preparation of entertaining facilities to match the demand : ***<br>② Desirable installation of Japanese cuisine restaurants : ***  |
| 8. Commuting problem                        | Private Companies<br>Cambodian Government :<br>Private Companies            | ① Introduction of tuk-tuk and its improved versions to rural communities : ***<br>② Use of commutation Bus : **<br>③ Encouragement of motorbike commutation : provision of loan for employees to purchase motorbikes : ***  |
| 9. High Labor Turnover problem              | SEZ Tenants<br>SEZ Tenants<br>SEZ Developers<br>The 3 <sup>rd</sup> parties | ① Strengthening of incentives for long-term employment : ***<br>② Joint securing of more laborers : preparation of boarding houses and residences for laborers : ***<br>③ Improvement of salary scale and compensation package (eg. fringe benefits) ***                                  |
| 10 . Labor disputes problem                 | Cambodia Government   | ① Assignment of specialists on labor dispute : ***<br>② Joint securement of more laborers : preparation of boarding houses and residences for laborers***<br>③ CDC's and Ministry of Labor's strengthening of conversation and dialogue in collaboration with provincial/township govern- |



|  |                                |   |
|--|--------------------------------|---|
|  |                                | ments and OSS office : ***  |
| 11. OSS problem  | Cambodia Gov. & Aid agencies   | ① CDC's recommendation/instruction to OSS : ***<br>② Capacity Building by JICA : **   |
| 12 . CDC/CSEZA problem                                       | Cambodia Gov. 府 & Aid agencies | ① Recommendation and instruction of awareness-raising and organizational reformation***<br>② Capacity Building by JICA : **   |
| 13 . SEZ sub-degree problem                                  | Cambodia Gov. & Aid agencies   | ① Legal changes and recommendations and instructions for improvement ***<br>② Capacity Building to be implemented by JICA : **  |
| 14 . Counter measures of JICA expert for CDC, JETRO, Embassy | Japan Government, JICA &JETRO  | ① Correct understanding of site situation and conveyance of instruction : ***<br>② Collection of information through JICA specialists fielded to project sites and coordination of /instruction to the parties concerned. : *** |

## 14. PRIORITY PROJECTS AND SCHEDULE

Basically, a range of problems currently occurring in Bavet have been created from a lack of supervision and leadership skills, chaotic planning by CSEZA. Resolution of the problems should be performed by CSEZA as soon as possible, but, CSEZA's ability to solve problems is weak and it has a very thin sense of its institutional responsibility for the problem. Therefore one can not expect CSEZA to solve this issue unfortunately. In the present situation, where 2 Japanese companies have already advanced to Bavet (SMEs mainly), serious problems across the multiple subjects must be resolved as soon as possible. Otherwise the 22 Japanese companies may even be forced to go bankrupt or withdraw. Therefore, the Japanese government and the private sector should continue to support short-term, medium-term and long-term efforts towards solving the problem.

### 1. Short Term Projects

**Figure 14-1: Project List**

| Project  | Relevant Aid Agencies                       | Problems and Issues Outlines   |
|--|---|--|
| ① Dispatch of experts  | JICA  | Experts are to do information gathering and problem-solving together with CDC, OSS SEZ developer.  |
| ② Prompt improvement of village roads through Grass-roots fund | JICA, NGO & Private organizations           | Concrete paving of village roads is one solution to the labor shortage issue. According to other countries' experiences, village road improvement has been advanced by providing equipment, materials and coordinators based on villagers' participation. It is recommendable to implement it as a pilot project urgently.                               |
| ③ Survey for counter measures for labor shortage               | JICA  | Labor shortage is serious and there will be shortage of tens of thousands of workers by 2015 and hundreds of thousands of workers will be needed by 2030. City development needs to be implemented for the development of workers housing in public-private partnership. The road map and action plan should be formulated for immediate implementation. |
| ④ Housing development by private organizations                 | Private organizations and JICA (PPP Office) | For urgent worker housing projects, two private plans have come up in two locations in Bavet. These projects may be able to be carried out by JVs of Japanese and local companies. It is recommendable to conduct a study such as "PPP FS" and implement immediately.  |
| ⑤ Support for SEZ improvement by Private organizations         | Private organizations and JICA (PPP Office) | SEZs have been developed by two Taiwanese and two local companies in Bavet, who do not have enough experience in SEZ development. If well-experienced Japanese companies can participate in SEZs development, this should be promoted by utilizing overseas investment/loan fund and F/S supports.   |
| ⑥ Urgent counter measures for CDC/CSEZ and OSS                 | Dispatch of JICA experts                    | It is often reported that CSEZA and OSS are not very supportive to investors. Urgent support by Japanese experts is needed, which is apart from a long term capacity building.   |

## 2. Medium-Long Term Projects

**Figure 14-2: Medium-Long Term Projects**

| Project   | Relevant Aid Agencies                     | Outline  |
|---|---|--|
| ① Capacity Building for CDC/CSEZA, OSS          | Aid Agencies (JICA, ADB, IFC etc)         | CDC/CSEZA is lack of human resources and it is difficult to properly manage, supervise and plan on SEZs. For example, LAO SEZ Authority had a TA of ADB and now has about 30 professional staff, supervising 4 SEZs in Laos.   |
| ② Amendment of SEZ sub-decree                   | Aid Agencies (JICA, ADB, IFC etc)         | The current SEZ sub-decree, which was approved in Dec. 2005, was considered to upgrade into a law but is still in the form of a sub-decree. So far 23 SEZs have been approved by CDC but the criteria of approval is unclear. Only 8 SEZs are currently operational. A draft SEZ law was prepared in 2008 with the assistance of IFC but is not yet finalized. |
| ③ Bavet City Master Plan                        | Aid Agencies (ADB in particular)          | Bavet City Master Plan was formulated in 2009 with assistance of ADB. Since then, new SEZs (1,500ha in total) have been planned and constructed towards west. The master plan should be revised based on the present situation.  |
| ④ Infrastructure and Environmental conservation | Aid Agencies                              | <ul style="list-style-type: none"> <li>(1) Widening of NR1</li> <li>(2) Improvement of Provincial and village roads</li> <li>(3) Housing and public facilities</li> <li>(4) Water and wastewater treatment plant</li> <li>(5) Industrial and urban waste disposal station</li> <li>(6) Flood prevention</li> </ul>   |
| ⑤ Support to Human Resource Development         | Aid Agencies, private organizations, NGOs | <ul style="list-style-type: none"> <li>(1) Pre-Employment Training</li> <li>(2) Skill Development Program</li> <li>(3) Higher Education Expansion (Up-Grading of Svay Rieng University)</li> <li>(4) Language Schools</li> </ul>   |

## **Appendix**

**(1) 3-Year Gradual Investment Program in Svay Rieng Province**

**(2) 3-Year Gradual Investment Program in Bavet City**

## Appendix (1)

### **3-Year Gradual Investment Program in Svay Rieng Province 2012-2014**



**Kingdom of Cambodia  
Nation-Religion-King**

**Svay Rieng administration**  
No. 01 SSR.KB

**Decision  
On  
Council of Svay Rieng Province**

- Having seen the constitution of Kingdom of Cambodia
- Having seen Royal Kram No. NS/RKM/0508/017, dated 22 May 2008, promulgating the Law of Administrative Management in Capital, Province, City, District, and Sangkat
- Having seen Royal Kram No. NS/RKM/0508/018, dated 24 May 2008, promulgating the Law on Election and Selection of Capital, Provincial, City, District and Communal Sangkat
- Having seen Sub Decree No. 219 ANKr.BK, dated 14 December 2009, on the Establishment of the Development Plan and 3-Year Gradual Investment Program in Capital, Province, City, District and Sangkat
- Inter-Ministry Prakas No. 2417, dated 27 December 2010, on the Establishment of Development Plan and 3-Year Gradual Investment Program in Capital, Province, City, District and Sangkat
- Referring to the Minute of meeting of provincial council on 27 December 2011

**Decide**

**Article 1:** Agree with the 3-Year Gradual Investment Program in Svay Rieng province in 2012-2014 as stated in the attachment.

**Article 2:** Board of Provincial governor must continue all legal acts to practice the 3-year moving investment program in Svay Rieng province in 2012-2014.

**Article 3:** This decision is promulgated from signing date forward.

Copy to:

- Ministry of Interior
- Ministry of Planning
- Ministry of Economy and Finance
- Secretariat of K.J.A.B  
(To inform)
- Head of Svay Rieng provincial officer  
(For occupation)
- Chronology

Svay Rieng, 3 January 2012  
Head of Svay Rieng province council  
(Seal and Signature)

Kim Thea

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### Chapter 1

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### Chapter 2

#### Project of 3-Year Gradual Investment Program of Svay Rieng Province 2012-2014

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## PREFACE

According to the Law of administrative management in Capital, Province, City, District, and Sangkat, each council must have a 5-Year Development Plan and 3-Year Gradual Investment Program for the councils to control and investigate all implementations of investment program and development of all sectors under its administrated territory.

In first mandate, Svay Rieng provincial council, created by the local election in 2009, have already adopted a 5-Year Development Plan (2011-2015) and 3-Year Gradual Investment Program in 2011-2013 for investment aids needs as capital and technic to implement provincial development strategies so as to succeed targets and objectives of provincial development in 2015.

In the process of preparing the Svay Rieng Provincial 3-Year Gradual Investment Program in 2012-2014, working group who established Development Plan and Provincial Investment Program reformed and updated 2011 Investment Plan and also prepared new project proposal which is a priority project proposal of sector department of city and district, and managed the priority, calculated mean point of provincial level, determined technical point, calculated beneficial point and effective rate of price of new 381 projects (46 projects failed in technical point). There are 41 projects which are not promised in 2011, gradually moved into the investment program in 2012. Meanwhile, working group who established Development Plan and Provincial Investment Program have drafted a list of provincial project proposal to give chance to all related people to check, discuss, give ideas and agree with the drafted list of provincial project proposal. After showing Table 1.3 “drafted list of provincial project proposal”<sup>1</sup>, working group who established plan and Provincial Investment Program made decision to select priority project which responded to development framework and fitted the provincial council’s policy guidance. Those projects were selected and included in Table 1.4 “list of provincial priority project”<sup>2</sup>.

After having selected the provincial priority project (Table 1.4), working group who established Development Plan and Provincial Investment Program has also prepared draft for 3-Year Gradual Investment Program in order to submit to the provincial council to check and adopt. This draft for 3-Year Gradual Investment Program is formed into many important parts such as economic and social situation in 2011, list of Svay Rieng provincial 3-Year Gradual Investment Project in 2012-2014, supporting fund from outside, 3-Year intermediate-term expenditure framework (have not been calculated due to waiting for guidance), and action plan for implementing first year investment program project (2012).

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<sup>1</sup> There are 376 projects

<sup>2</sup> There are 351 projects

After checking and recommending on the draft of Provincial 3-Year Gradual Investment Program by provincial board of governor and Provincial Technical Facilitation Committee, working group who established Development Plan and Provincial Investment Program announced the integration seminar of Provincial Investment Program so as to find development partners, both national and international organizations, to support those provincial priority projects which are the priority projects being not promised yet (Table 2.1 Part iii)<sup>3</sup>.



After the seminar finished, working group have checked, reformed in accordance with many recommendations, and also finished the draft of provincial investment program. This provincial investment program in 2012-2014 consists of 486 projects.

The provincial council made a remark on 3-Year Gradual Investment Program of Svay Rieng province in 2012-2014 and the use of provincial council, board of governors, department, organizations, institutions and other development partners. The council also reconfirmed and inspired all development partners, who would sponsor and support Svay Rieng province and should have foundation to check high priority projects of the list of 3-Year Gradual Investment Program of Svay Rieng province in 2012-2014. This could reach the goal and priority which were included in 5-Year Development Plan of Svay Rieng province (2011-2015) in order to contribute to poverty reduction in Cambodia with the Royal Government and promote welfare of people in accordance with Cambodia Millennium Development Goal.

I would like to express profound thanks to His and Her Excellency, ladies and gentlemen who attentively participated in the process of preparing the 3-Year Gradual Investment Program of Svay Rieng province in 2012-2014. I would like to appeal to all development partners, departments, organizations, institutions, aid-providing communities, social civil organizations, civil servants, all levels of local authorities and all citizens to continue supporting the implementation of all priority investment projects proposed to succeed; and respond to Royal Government of Cambodia's policies for the fourth parliamentary session especially, the implementation of the second round of Rectangular Strategies to increase of jobs, equity and effectiveness in Cambodia.

Svay Rieng, 3 January 2012  
**Head of Svay Rieng provincial council**  
(Seal and Signature)

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<sup>3</sup> There are 3 projects

**Kim Thea**

## INTRODUCTION

The preparation of the 3-Year Gradual Investment Program of Svay Rieng province in 2012-2014 is to prioritize all priorities of the projects in provincial development planning framework in 2011-2015 to be under a good condition which is easy to implement effectively. The priority projects proposed by departments, organizations, institutions, city and districts in 2011 are also carefully combined and calculated for the effectiveness rate of price with high responsibilities. Under the recommendation of the board of governors and Provincial Technical Facilitation Committee, the working group who established Provincial Investment Project and plan elaborated content of economic, social, situation of land Use, natural resources and environment management, situation of disasters management and climate change, situation of administrative management, security and public order in order to show the potential of the priority projects which are supported and meet the local needs.

The 3-Year Gradual Investment Program of Svay Rieng province in 2012-2014, described in the following pages reflects the projects and activities implemented in each sector and 3-Year Gradual Investment Programs for the following years. The investigation, control and evaluation of the progress of priority projects implementation are very important for provincial council, board of governors and other related people to ensure that Development Plan and Provincial Investment Program will be achieved following targets and objectives set. This Investment Program has the following forms:

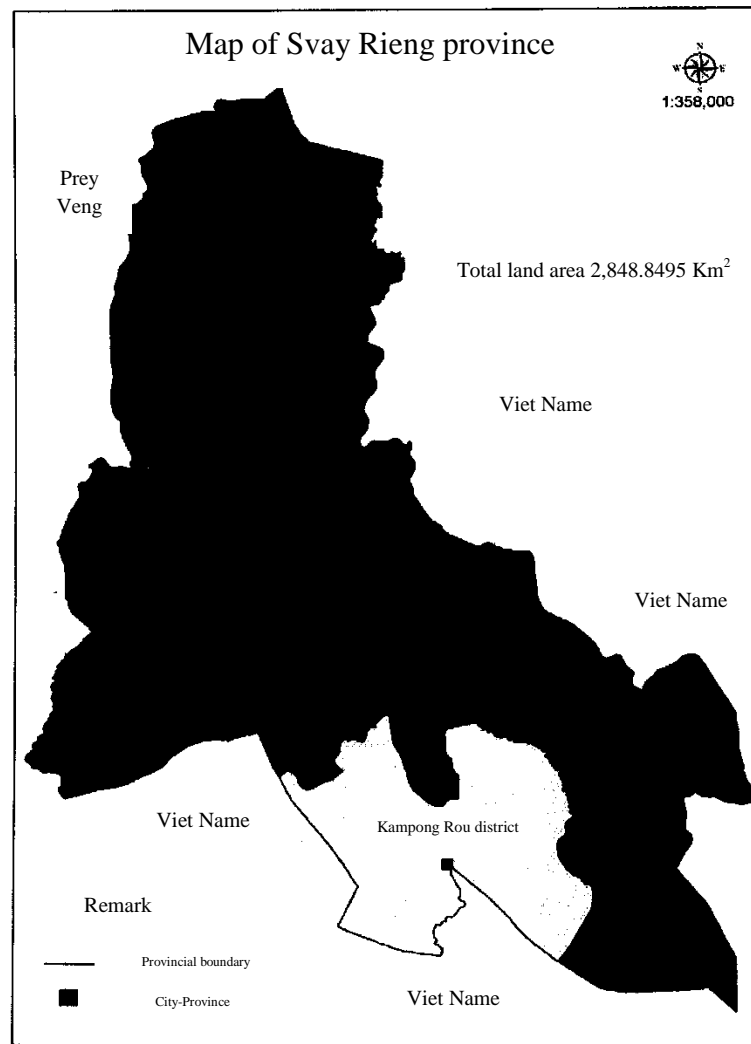
- Decision on enforcement of the 3-Year Gradual Investment Program of Svay Rieng province in 2012-2014
- Preface
- Introduction
- Provincial Map

Chapter 1: Economic and Social Situation in 2011

Chapter 2: Project of 3-Year Gradual Investment Program in 2012-2014

Annex

## Svay Rieng Provincial Administrative Map



Source: Land Management, Urban Planning and construction department in Svay Rieng Province

# Chapter 1

## Economic and Social Situation in 2011

### 1.1. Summary Data of Economic and Social Situation

#### Key information in Svay Rieng Province in 2011

| No. | Description   | Unit            | Year 2011 |
|-----|---|-----------------|-----------|
| 1   | Provincial land area (after compromising) <sup>4</sup>                | Km <sup>2</sup> | 2,848.85  |
| 2   | Number of cities and districts (2 cities, 6 districts)                | City-district   | 8         |
| 3   | Number of commune and sangkat (12 Sangkats, 68 communes)              | commune-sangkat | 80        |
| 4   | Number of villages  | Village         | 690       |
| 5   | Total population  | Person          | 579,015   |
| 6   | Total number of women   | Person          | 299,887   |
| 7   | Yearly population growth  | %               | 1         |
| 8   | Total number of families  | Family          | 127,872   |
| 9   | Rate of women being the head of the family                            | %               | 17.18     |
| 10  | Rate of poor families   | %               | 20.93     |
| 11  | Rate of families employing in agriculture as a main job               | %               | 90.15     |
| 12  | Rate of children aging between 6-11 years old who not going to school | %               | 9.66      |
| 13  | Rate of illiterates aging between 15-60 years old                     | %               | 8.15      |
| 14  | Rate of illiterate women aging between 15-60 years old                | %               | 4.58      |
| 15  | Total number of women giving birth of babies                          | Person          | 8,905     |
| 16  | Rate of women giving birth of babies at health center rate            | %               | 88.45     |
| 17  | Rate of women giving birth of babies with traditional midwife         | %               | 11.55     |
| 18  | Maternal death among 100,000 births after giving birth from 0-1 month | Person          | 66        |
| 19  | Rate of using running water (urban)                                   | %               | 46.1      |
| 20  | Rate of families using clean well                                     | %               | 96.38     |
| 21  | Proportion of Families having hygiene toilets                         | %               | 29.8      |

<sup>4</sup> Royal decree No. NS/RKT/1110/862, dated 08 November 2010

Svay Rieng province is situated duck beak-like area, along the National road #1, at eastern of Kingdom of Cambodia and totaling 125 km away from Phnom Penh City. It is bordered to the North and West by Prey Veng province, to the South and East by Long An province and Tay Ninh province, approximately 258 km away (Tay Ninh 130 km and Long An 128 km) of Socialist Republic of Vietnam.

Svay Rieng province is located in flat area, having total land area of 2,848.85 km<sup>2</sup>, after compromising administrative border between Prey Veng province and Svay Rieng provinces by dividing a part of land area of Tros commune, Romeas Haek district, Svay Rieng province into Krboa commune, Kamchay Mea district, Prey Veng province (Royal decree NS/RKT/1110/862, dated 08 November 2010). Its geographic feature is pan-like. There are Kampong Trach river in Romeas Haek district and VaiKo river flows through from the North to South, and down to Cambodia-Vietnam border situated at the border between Kampong Chamlong commune and Basac commune, Svay Chrum district, Svay Rieng Province of Kingdom of Cambodia and Heong Deang Ar Commune, Vinh Hong district, Long An province of Socialist Republic of Vietnam; in which the provincial land area seems to be divided into one half each.

Svay Rieng provincial administrative management consists of two cities (Svay Rieng City and Bavet City), in which there are 6 districts (Chantrea District, Kompong Rou District, Romdoul District, Romeas Haek District, Svay Chrum District and Svay Teap District), in which there are 12 Sangkats, 68 communes, and 690 villages. Provincial administrative area is in Svay Rieng City. Total population is 579,015, of which 299,887 are women, and 127,872 families which have 4.52 per family on average, in density of 195 people per square kilometer. There are 336,842 people (199,850 people are women) whose names are listed in election list in 2010.

Climate and rain volume in Svay Rieng province located in tropical area, being wet and dry, which the hottest is 38.5 degree Celsius and the coldest is 19 degree Celsius. The average of rain volume given by monsoon is 1,995.8 mm in rainy season.

There are two main sources of rivers in dry season to meet people's needs: VaiKo River linking from Mekong river bank and flowing through Kampong Trabaek district, Prey Veng province and Kampong Trach River. VaiKo River has two overflow dams, in which one situates at Ta Hor Bridge in Sangkat Por Ta Hor of Svay Rieng City and another one is at Doun Sar Bridge in Doun Sar commune of Svay Chrum district. Wells can be dug or drilled for usage in accordance with each local geographical situation. The water from the wells in some communes of Chantrea district contains lime and rust and arsenic from 10% to 30% in all cities and districts in provinces.

## **1.2. Current Situation and Problems**

### **1.2.1. Economic Situation**

Economic Situation in province almost depends on agriculture, especially rice crop. 91% of population being equal to 116,065 families employs in agriculture as their main job.

Land areas for farming production in Svay Rieng province are: 181,500 hectares of rice growing land, in which 165,000 hectares of raining-season rice giving 2.4 ton per hectare of rice yield and 16,500 hectares of dry-season rice giving 4.1 ton per hectare of rice yield. There are 17,525 hectares of land for growing diverse crop: cassava, sugarcane and rubber plant (Source: Svay Rieng Provincial Department of Agriculture in 2011). The total length of canal is 410,731 meters, in which main canal has 191,028 meters, and it can water 53,768 hectares of rice field, including 38,436 hectares of raining-season rice. There are 902 tractors, 3,562 plowing tractors and 6,564 pumping machines.

There are 4 special economic zones in Bavet City but only two zones are working: Manhattan Special Economic Zone and Tai Seng Special Economic Zone. There are totally 14 working factories, including 7 garment and shoe factories, 1 screw factory, 2 bike factories, 3 package factories and 1 Kova brand painting factory. Beside from these, there are 2,662 small rice mills, 2,041 handicraft and service providers, 10 banks, 4 private security companies and 18 casinos, in which there are 10 casinos in Bavet City, 4 in Prey Vor, Thmey commune, Kampong Rou district, 3 in Samroung commune, Chantrea district and 1 in Bos Morn commune, Romdoul district (Source: Provincial Department of Labor and Vocational Training in Svay Rieng province).

Svay Rieng province has electricity link, which has 7 MW, linking from Vietnam through border of Prey Vor in Kampong Rou district and another link, which has 10 MW, connected through Bavet international border, Sangkat Bavet, Bavet City, and electricity link will be expended 16MW in 2012 (Source: Electricity of Cambodia in Svay Rieng province).

### **1.2.2. Social Situation**

There are 3 higher education institutions: Svay Rieng University (5 faculties) is under the control of Ministry of Education Youth and Sports, Institute of Sociology and Technology, and University of Business controlled by private sector. There are 19 high schools, 53 secondary schools, 260 primary school controlled by state and there are also some private schools. The total number of students is 115,545, in which 53,552 students being equal to 46% are female and university students are 2,271, in which 34% are female. Children who completed compulsory foundation of education are accounted for 53.77%. Children who study at secondary school are accounted for 94% (female 93%).

Public health bases cover 1 provincial hospital, 2 referral hospitals, 38 health centers and 1 health post controlled by Svay Rieng provincial Department of Health, employed totally 503 employees and workers such as doctors, pharmacists, dentists, male and female nurses, midwives, experimenters and physiotherapists; till 2011, one health staff must serve about 2,000 citizens and 90% of women delivering their babies with clinical midwife. The baby mortality rate is 10 per 1,000 and rate of maternal death is 66 per 100,000. There will be 5 more constructions of health centers, 2 reformations of health centers to referral hospitals, and more delivery rooms for each health center. (Source: Svay Rieng provincial Department of Health in 2011).

Rate of families having hygiene toilet is 29.80%. There are 5 clean running water systems (urban area of Svay Rieng City, Bavet City, urban area of Svay Teap district, Roumdoul district and Chiphu market) and 91,288 pumping and other diverse wells, accounted for 71% of all families. On the other hand, violence in families has decreased from 0.91% (2010) to 0.70% (2011).

Poverty rate decreases from 30.90% in 2009 to 20.93% in 2011 (temporary source: poverty family identification 2011, Svay Rieng provincial Department of Plan); the district having the highest poverty rate is Rormeas Haek district (24.97%). People who live in the highest standard are living in Svay Rieng City (11.60%) and Bavet City. Rate of families using iodized salt is 39% in 2011 (first semester report of Svay Rieng provincial Department of Planning in 2010). According to the census in 2008, there are 7,101 disable people (3,144 female). 99.75% of all people are Buddhist, besides from this, 0.05% is Muslim, 0.19 % is Christian and 0.01% believes in other religions.

### **1.2.3. Situation of Land Use, Natural Resources and Environment Management**

90% of people use their land mainly for growing rice. There are not any families living by finding forest by-product. Rate of families having rice field less than 1 hectare is 31% and families not having their own rice field is 4%. Provincial administration has announced the impact of using chemical fertilizer and pesticide, and encourages people to use organic fertilizer with their rice and other diverse crops.

To respond to the Royal Government's strategy in enhancing increase of rice yield to 4 million tons per year and encouraging the export of rice product to reach 1 million tons per year by 2015 (Prime Minister Hun Sen's speech in the 13<sup>th</sup> Forum of Private Sector), provincial administration committed to make a strategy in increasing land area for growing dry-season rice crop to 30,000 hectares by 2014 and expected to get yield of raining-season rice crop for 3t/hectare on average and that of dry-season rice for 5t/hectare on average by 2014.

Trash collecting service activities is very low for only 1%. On the other hand, land area of Svay Rieng province decrease from 2,966.40 square kilometer to only 2,848.85 square kilometer, after compromising border of Svay Rieng and Prey Veng provincial administration, by dividing some part of land area of Tros commune in Rormeas Haek district of Svay Rieng province into Krar Boa commune, Kamchay Mea district in Prey Veng province, according to the royal decree NS/RKT/1110/862, dated 08 November 2010.

#### **1.2.4. Situation of Disaster Management and Climate Change**

In the last decades, climate changes very often which causes disasters such as storm, lightning strike, fire which impact directly and indirectly on economic and social sector, especially people's living and destroyed many human lives and properties. For instance, in 2010, fire destroyed 49 houses, storm destroyed 165 houses and 17 people were struck by lightning.

In 2011, Svay Reing province has been affected by flood and caused many damages as following:

- Flood affected 7 Cities-districts: Svay Rieng City, Svay Chrum, Kampong Rou, Roemeas Haek, Chantrea, Svay Teap, and Romdoul district, totaling 39 sangkat-communes, 161 villages. Cities-districts which are severely affected are: Svay Rieng City, Svay Chrum, Kampong Rou, Rormeas Haek and Chantrea district
- There are 6,140 houses flooded (equal to 17,076 families)
- 4,160 families were evacuated to safe places
- Affected 13,350 hectares of rice field, totally damaged 7,761 hectares, and 444 hectare of diverse crops
- Affected 17 schools, most of them are primary schools.
- Affected 16 pagodas
- Affected 58 km of unsealed roads, 2.2 km of sealed road and 66 km of canal
- Affected 5 bridges
- Affected 9,973 animals

#### ***The restoration after flooding:***

To respond to the priority needs and enhancement of the living standard of the citizens after flooding, Head of Svay Rieng provincial board of governors has prepared and announced many strategies as following:

- Help and encourage people to replant their crops (sow, transplant seedling) with co-sowing or giving seed, especially encourage them to practice recession rice and dry-season on time
- Encourage replanting other diverse crops
- Strive to restore all damaged constructions and infrastructures such as roads, bridges, canals
- Maintain public order, hygiene along the road, public places and citizens' residences in order to ensure good environment and welfare of people



### **1.2.5. Situation of Administrative, Security and Public Order Management**

15% of population migrated to find jobs. Because of the economic and living condition, 0.45 % of total families moved in and 0.38 moved out of the province. Robberies, murders, and conflicts usually occur almost in every city and district. However, according to the data analysis, those cases become less and less than the previous years. 12% of babies have not been registered for birth certificate yet.

Along with the strong points mentioned above, some problems still occur in Svay Rieng province such as production factor, innovation, improvement of agricultural output quality, use of potential land and other resources, irrigation system capacity and the existing water resource still being limited, especially irrigation system.

Though there have encouraged and gathered investors to invest in the province to create more job opportunities for people so as to cut down the number of immigrants, Svay Rieng province has still faced problems which people immigrate to find jobs. In 2010, there are 46,674 immigrants. There are 6,039 immigrants, who do not have an actual job (Source: provincial statistic document in 2011, Svay Rieng provincial Department of Plan). Moreover, the province still lacks of resources to support the process of development, providing high quality of public services, visible and invisible infrastructures and low quality procurement. On the other hand, traffic accidents still continue to happen, and natural disasters usually occur; that is reason why the province lost a lot of benefits which take a part of building the national economy.

## **Chapter 2**

### **Project of 3-Year Gradual Investment Program of Svay Rieng province 2012-2014**

The 3-Year Gradual Investment Program of Svay Rieng province 2012-2014 plays a key factor in contributing to the continuous of development. This program is held for Svay Rieng province development plan 2011-2015, especially for successful and timely implementation of all strategies, and for targets and objects achievement of all the province development plans which is responsive to the priority needs of departments, organizations, institutions, cities and districts in order to urgently supply the basic needs. This program also covers expenses of sectors during the 3 years (2012-2014).

### **2.1 Project of 3-Year Gradual Investment Program of Svay Rieng province 2012-2014**

#### **2.1.1 Ongoing Projects (Table 2.1, Part i)**

In 2011, the province has 21 ongoing projects, all of which mainly focus on only the support of social section.

#### **2.1.2 Promised Projects (Table 2.1, Part ii)**

There are 146 promised projects, which need 2,411,682.67 million Riel of total budget (2,300,049.71 million Riel for 71 internal projects, and 111,632.96 million Riel for 75 external projects). These projects are listed as follow:

##### **2.1.2.1 Economic Sector**

- 7 projects for Agriculture
- 5 projects for Water Resource
- 4 projects for Public Work
- 4 projects for Rural Development
- 1 project for Industry

##### **2.1.2.2 Social Sector**

- 2 projects for Economic and Society
- 10 projects for Rural Development
- 3 projects for Health
- 15 projects for Education
- 3 project for Plan

##### **2.1.2.3 Land, Natural Resources, Environment, Disaster, and Climate Change Management**

- 1 project for Environment
- 3 projects for Rural Development
- 7 projects for Public Work
- 1 project for Health
- 1 project for Land

##### **2.1.2.4 Administration, Security and Public Order**

- 4 projects for Administration

### **2.1.3 Not Promised Projects (Table 2.1, Part iii)**

Not Promised Projects have been finding supports, totaling 319 projects which are in need 5,964,331.96 million Riel of total budget for duration of 3-Years Gradual Investment Program (2012-2014), and all projects are listed as follow:

#### **2.1.3.1 Economic Sector**

- 9 projects for Agriculture
- 15 projects for Water Resource
- 1 project for Plan
- 11 projects for Public Work
- 11 projects for Industry and Service
- 3 projects for Rural Development

#### **2.1.3.2 Social Sector**

- 6 projects for Agriculture
- 26 projects for Education
- 12 projects for Health
- 9 projects for Employment
- 4 projects for Plan
- 1 project for Public Work
- 3 projects for Culture and Religion
- 45 projects for Women Affair
- 5 projects for Economy, Social Affair
- 1 project for Commerce
- 1 project for Information
- 1 project for Land
- 56 projects for Rural Development
- 4 projects for Service and Poverty

#### **2.1.3.3 Land, Natural Resources, Environment, Disaster, and Climate Change Management**

- 15 projects for Environment
- 2 projects for Agriculture
- 3 projects for Water Resource
- 9 projects for Land
- 3 projects for Administration
- 3 projects for Culture and Religion
- 5 projects for Social Affair
- 6 projects for Public Work
- 1 projects for Service

#### **2.1.3.4 Administration, Security and Public Order**

- 11 projects for Women Affair
- 4 projects for Plan
- 1 project for Land
- 12 projects for Administration

- 4 projects for Social Affair
- 1 project for Public Work
- 1 project for Health
- 21 project for Education

## **2.2 Intermediate-Term Expenditure Framework**

(Waiting for guidance)

## **2.3 Action Plan for Implementing Projects of Svay Rieng Provincial Investment Program 2012**

### **A. Promised Projects (Internal project)**

#### **1. Economic Sector**

##### **1.1 Public Work**

1. To maintain road #314D paved with mountain sand, by plowing and rolling
2. To maintain national road in Svay Rieng City, Romeas Haek district, Prey Koki Commune, from Bro Sot Downtown to Kampong Rou district
3. Repair drainages along the roads in Svay Reing City
4. Repair, asphalt, and install water pipes and drainages across the roads, and repair rectangle drainages along the roads in Kampong Trach commune, Chantrea district, Dos district, Sangkat Chek, Prey Koki commune, Mes Tgok commune, Samroung commune, from Bro Sot Downtown to Kampong Rou district

##### **1.2 Water Resources**

1. Construct and repair DaunToy Irrigation System in Chantrea district
2. Construct and repair Kampong Chrey Irrigation System in Svay Chrum district
3. Construct and repair Veal Tnach Irrigations System in Svay Chrum district
4. Construct and repair Batu Irrigation System in Chantrea district
5. Reconstruct Neal Creek in Svay Chrum district

##### **1.3 Rural Development**

1. Construct DBST type of sealed road, road of Kory Trobaek Bridge to Basac commune in Svay Chrum district
2. Construct DBST type of sealed road, and entrance road of Bavet City Hall
3. Construct MACADAM type of sealed road on the dam preventing flood at the western of Svay Rieng City
4. Repair and refill in hole of the roads and to maintain all drainages in provinces.

##### **1.4 Industry**

1. Construct public power poles in Svay Reing City

##### **1.5 Agriculture**

1. Provide rice seeds, which can produce high yields, to all farmers in Svay Chrum district and Svay Rieng City
2. Promote the System of Rice Intensification (SRI) in accordance with Natural Principle and Field Demonstration in Kampong Rou district and Svay Reing City
3. Six technical training courses about raising animals in Bavet City

4. Strengthen qualification of village veterinary in the Bavet City
5. Provide technical uses of chemistry fertilizer and poisonous chemical in Agriculture in Bavet City
6. Vaccinate and treat illness of cattle in all districts
7. Construct biogas kilns in Kampong Rou, Svay Chrum district and Svay Rieng City

## **2. Social Affair Sector**

### **2.1 Economy and Social Affair**

1. Organize slaughterhouse in all districts
2. Organize and repair market stalls in front of Veal Yon Market

### **2.2 Rural Development**

1. Enhance infrastructure of clean water supply system and rural sanitation in Chantrea, Romdoul, Romeas Haek and Svay Chrum district
2. Construct structure and cover of toilets amount 870 places for families and 2,610 drainages in Chantrea, Romdoul, Romeas Haek and Svay Chrum district
3. Educate the importance of maintenance and using hygiene toilets, and build toilets for schools
4. Publicize Community-Led Total Sanitation (CLTS) to 25 communes in Chantrea, Romdoul, Svay Chrum and Svay Teap district
5. Educate the importance of using soap to wash hand (PHAST) to 22 communes in Chantrea, Kampong Rou, Romdoul, Svay Chrum and Svay Teap district
6. Clean Water Program and sanitation in 30 schools and communities in Chantrea, Kampong Rou, Romdoul, Svay Chrum and Svay Teap district
7. Propose toilet construction to families and instruct them to use the toilets
8. Educate sanitation to clean up houses
9. Eliminate infection of AIDS and Bird Flu (h5n1)
10. Propose parents to take their children to get 9-type illness vaccination

### **2.3 Health**

1. Celebrate the International AIDS Day in Bavet City
2. Celebrate Tuberculosis Day in the province, Bavet City and Romeas Haek district
3. Control and eliminate counterfeit medicines and illegal healthcare services in Bavet City

### **2.4 Education**

1. Announce and educate parents to understand about the importance of their children's education in Bavet City
2. Educate in each house (Mother Group) in Bavet City
3. Train and support kindergarten teachers, and supply facilities to kindergarten classes in Sangkat Prey Angkunn and Sangkat Chrok Mtes
4. Survey the number of children between 0-5 years old in villages
5. Construct kindergarten classes at elementary schools
6. Support community's kindergarten classes
7. Sketch the map to study at each house
8. Construct 7 classroom buildings in Chantrea district, Romdoul district, Romeas Haek district, Svay Chrum district and Svay Rieng City
9. Train elementary teachers in Sangkat Svay Rieng and Svay Rieng province

10. Train community's kindergarten teachers newly selected at Education Institute
11. Reinforce teaching tasks for community's kindergarten teachers at Education Institute
12. Provide scholarship to poor elementary students in Kampong Rou district, Romeas Haek district, Svay Chrum district and Svay Teap district
13. Provide nourishment to poor secondary school students
14. Open training classes for existing literacy teachers at Education Institute
15. Strengthen qualification of literacy teachers at Education Institute

## **2.5 Plan**

1. Prepare and create documents supporting PIW and DIW process in all districts and cities
2. Collect, key in and create documents of basic data for villages, commune/Sangkat, city/district and province
3. Qualification training course for organizing 3-Year Gradual Investment Program in all districts and Cities

## **3. Land, Natural Resources, Environment, Disaster, and Climate Change Management**

### **3.1 Environment**

1. Celebrate 05<sup>th</sup> March National-International Environment Day in all districts and Cities

### **3.2 Rural Development**

1. Install 0.60m diameter of drainages on the both sides of road to the south of Chiphu Market and 60 manholes
2. Install 0.60m diameter of drainages along the road #212 and 16 manholes in Svay Rieng City
3. Install 1m diameter of drainages on the both sides of National Road #1 and 320 manholes in Bavet City

### **3.3 Health**

1. Build referral hospital of level 1 in Bavet Health Center

### **3.4 Public Work**

1. Build 1,000m of dike along eastern bank of Veiko River in Svay Rieng City
2. Announce 10 courses of traffic law in the whole province
3. Teach and offer 120 courses of motor driving tests in the whole province
4. Install new traffic signs in the whole province
5. Repair traffic signs in the whole province
6. Enhance garages in the whole province
7. Enhance driving schools in the whole province

### **3.5 Land**

1. Register in list of land ownership with system in Svay Chrum district

## **4. Administration, Security and Public Order**

### **4.1 Administration**

1. To maintain parks and lay carpet tiles in line of parks in Svay Rieng City
2. To maintain provincial offices, district offices and city hall
3. Construct meeting building and sitting room of Eo+E1 at provincial offices
4. Build health centers and provincial hospitals

### **B. Promised Project (External project)**

1. Control and eliminate counterfeit medicines and illegal healthcare services in Romeas Haek district
2. Celebrate World Breastfeeding Week in Romeas Haek district
3. Promote Children Education Program and increase number of school children between 3-5 years old at the education institute
4. Take action in recording the number of disable children at 257 schools
5. Educate vulnerable orphans in 7 districts and Cities
6. Gather people living with AIDS to meditate in 7 districts and Cities
7. Sponsor all patient's families in 7 districts and Cities
8. Provide education about AIDS and reproductive health to women working at the entertainment places in Svay Rieng City and Bavet City
9. Take care of people living with AIDS in communities of Svay Rieng City and Bavet City
10. Bird Flu Prevention Program in all districts and Cities
11. Build leisure booths in Prey Basak Resort
12. Build restaurants in Prey Basak Resort
13. Construct entrance and exit in Prey Basak Resort
14. Find labor market for people in all companies in the province
15. Carry out work inspection in all companies in the province
16. Carry out work, health and safety inspection in all companies in the province
17. Broadcast and educate about the safety migration in all districts and cities
18. Carry out child labour inspection in all companies in the province
19. Inspect on operations of companies dispatching workers to foreign counties in all districts and cities
20. Examine health of workers and employees in all companies in the province
21. Create work books for Khmer employees in all companies in the province
22. Create work books for foreign employees in all companies in the province
23. Inspect on apprentices training work in all companies in the province
24. Train apprentices in all companies in the province
25. Collect information from all private training institutes and organizations
26. Train teaching methodologies to teachers in-training at Provincial Professional Training Center
27. Train work inspection and settlement procedure of labor dispute at Department of Labor
28. Research jobs and training requirement in all districts and cities
29. Train tailor skills at Provincial Professional Training Center
30. Train wedding salon skill at Provincial Professional Training Center
31. Train utility skill at Provincial Professional Training Center
32. Train motor repairing skill at Provincial Professional Training Center
33. Train automobile repairing skill at Provincial Professional Training Center
34. Train electronic skill at Provincial Professional Training Center
35. Train Air conditioner repairing skill at Provincial Professional Training Center



36. Train hairdresser skill at Provincial Professional Training Center
37. Train computer skill at Provincial Professional Training Center
38. Train veterinarian skill at Provincial Professional Training Center
39. Train building skill at Provincial Professional Training Center
40. Train welding and soldering skill at Provincial Professional Training Center
41. Train pigs raising skill and vaccination in 6 districts
42. Train fish hatchery skill in 6 districts
43. Train poultry raising skill in 6 districts
44. Train vegetable planting skill in 6 districts
45. Train rice intensification (Transplant 1 rice seed) in 6 districts
46. Train composing fertilizer producing skill in 6 districts
47. Train mushrooms planting skill in 6 districts
48. Train in local communities in 6 districts
49. Train all enterprises in 6 districts
50. Organize and establish Village Development Committee in all districts and Cities
51. Strengthen capability of Village Development Committee in all districts and Cities
52. To Maintain roads in cycle time from Mok Da to Ta Menh in Romeas Haek district
53. To Maintain roads in cycle time in Kraol kou commune in Svay Chrum district
54. To Maintain roads in cycle time from Mok Da to Kampong Trach in Romeas Haek district
55. To Maintain roads in cycle time in Bavet City
56. To Maintain roads daily in Kampong Trach commune, Romeas Haek district
57. To Maintain roads daily in Preah Ponlea commune, Kampong Rou district
58. To Maintain roads daily from Svay Chrum to Boeung Rai in Svay Chrum district
59. To Maintain roads daily from Prey Pdao to Chres commune, Chantrea district
60. To Maintain roads daily from Svay Ta Yean commune to Ksae To commune in Kampong Rou district
61. Establish committee of banking in cash, animals and rice in Romeas Haek district
62. Establish Committee of Cash Credit in Kampong Rou district, Romeas Haek district and Svay Chrum district
63. Stimulate rural economic development ideas in Romeas Haek district
64. Evaluate Credit Action in Kampong Rou, Romeas Haek, and Svay Chrum district
65. Train motor-repairing skill at Provincial Professional Training Center
66. Train agriculture machinery skill at Provincial Professional Training Center
67. Train electronic skill at Provincial Professional Training Center
68. Train tailor skill at Provincial Professional Training Center
69. Train hairdressing and beauty surgery skill at Provincial Professional Training Center
70. Train bamboo furniture manufacturing skill at Provincial Professional Training Center
71. Train English language using skill at Provincial Professional Training Center
72. Repair and enlarge DBST of Kampong Spean road separating from boundary poles #171 at Sangkat Bavet, Bavet City
73. Repair and seal road #314C with DBST and Reseal DBST type in Svay Rieng City
74. Repair and seal road #119-206 in Svay Rieng City
75. Repair and seal road #208 with DBST type in Svay Rieng City



# Annex



**Table 2.1 3-Year Gradual Investment Plan in province**

**i. Ongoing Projects**

| No.                             | Project Name   | Participate in achieving the objectives | Project location       | Project Result | Funded by  | Implemented by    | Implementation Period | Beneficiary |        | Investment Budget (in million Riels) |        |        |         |
|---------------------------------|--|---|------------------------|----------------|------------|-------------------|-----------------------|-------------|--------|--------------------------------------|--------|--------|---------|
|                                 |  |   |                        |                |            |                   |                       | Total       | Female | 2013                                 | 2014   | 2015   | Total   |
| 1                               | 2  | 3                                       | 4                      | 5              | 6          |                   | 7                     | 8           | 9      | 10                                   | 11     | 12     | 13      |
| <b>1. Economy Sector: None</b>  |  |   |                        |                |            |                   |                       |             |        |                                      |        |        |         |
| <b>2. Social Affairs Sector</b> |  |   |                        |                |            |                   |                       |             |        |                                      |        |        |         |
| <i>2.1 Health</i>               |  |   |                        |                |            |                   |                       |             |        |                                      |        |        |         |
| 1                               | Provide health care service in villages                          | 2.2.1                                   | 8 cities and districts | 651 villages   | HSSP2      | Health Department | 3 years               | 121,500     | 80,000 | 162.00                               | 162.00 | 162.00 | 486.00  |
| 2                               | Breastfeeding Day  | 2.2.1                                   | 8 cities and districts | 1400 people    | HSSP2      | Health Department | 3 years               | 4,200       | 3,360  | 10.40                                | 10.40  | 10.40  | 31.20   |
| 3                               | Provide child delivery service at health centers                 | 2.2.8                                   | 8 cities and districts | 60%            | Government | Health Department | 3 years               | 19,998      | 19,998 | 400.00                               | 400.00 | 400.00 | 1200.00 |
| 4                               | Provide minimum training activities to doctors at health centers | 2.2.8                                   | 8 cities and districts | 296 people     | HSSP2      | Health Department | 3 years               | 296         | 178    | 67.20                                | 67.20  | 67.20  | 201.60  |
| 5                               | Promote healthcare for mothers and infants                       | 2.2.8                                   | 8 cities and districts | 75%            | UNICEF     | Health Department | 3 years               | 30,000      | 18,000 | 240.00                               | 240.00 | 240.00 | 720.00  |
| 6                               | Gather 625 traditional midwives at health centers                | 2.2.8                                   | 8 cities and districts | 625 people     | HSSP2      | Health Department | 3 years               | 625         | 625    | 70.80                                | 70.80  | 70.80  | 212.40  |
| 7                               | Provide education on vaccinations                                | 2.2.7                                   | 8 cities and districts | 40 people      | HSSP2      | Health Department | 3 years               | 4,800       | 3,840  | 20.00                                | 20.00  | 20.00  | 60.00   |

| 1  | 2  | 3     | 4                      | 5            | 6      |                   | 7       | 8      | 9      | 10     | 11     | 12     | 13      |
|----|--|-------|------------------------|--------------|--------|-------------------|---------|--------|--------|--------|--------|--------|---------|
| 8  | Provide trainings on CIMCI to VHSGs in the communities             | 2.2.7 | 8 cities and districts | 942 people   | HSSP2  | Health Department | 3 years | 942    | 362    | 94.00  | 94.00  | 94.00  | 282.00  |
| 9  | Destroy the shelters of tiger mosquitos by introducing insecticide | 2.2.2 | 8 cities and districts | 124 villages | HSSP2  | Health Department | 3 years | 36,912 | 22,147 | 28.00  | 28.00  | 28.00  | 84.00   |
| 10 | Provide tetanus vaccinations at factories                          | 2.2.3 | 8 cities and districts | 3 times      | HSSP2  | Health Department | 3 years | 9,000  | 9,000  | 28.00  | 28.00  | 28.00  | 84.00   |
| 11 | Provide AIDS antiviral therapy to those infected by the disease    | 2.2.4 | 8 cities and districts | 95%          | GF     | Health Department | 3 years | 1,620  | 1,044  | 690.00 | 750.00 | 810.00 | 2250.00 |
| 12 | International Tuberculosis Day                                     | 2.2.1 | 8 cities and districts | 3 times      | GF     | Health Department | 3 years | 3,600  | 2,160  | 4.80   | 4.80   | 4.80   | 14.40   |
| 13 | Research on Tuberculosis B positive                                | 2.2.1 | 8 cities and districts | 70%          | GF     | Health Department | 3 years | 2,100  | 840    | 184.00 | 184.00 | 184.00 | 552.00  |
| 14 | Governance to be included in health centers                        | 2.2.1 | 8 cities and districts | 38 HCs       | HSSP2  | Health Department | 3 years | 80     | 25     | 72.00  | 72.00  | 72.00  | 216.00  |
| 15 | Technical working groups meetings at Health Departments            | 2.2.1 | 8 cities and districts | 12 times     | HSSP2  | Health Department | 3 years | 1,080  | 324    | 6.00   | 6.00   | 6.00   | 18.00   |
| 16 | Technical working groups meetings in operating districts           | 2.2.1 | 8 cities and districts | 36 times     | HSSP2  | Health Department | 3 years | 2,160  | 648    | 18.00  | 18.00  | 18.00  | 54.00   |
| 17 | Management Committee Meetings at health centers                    | 2.2.1 | 8 cities and districts | 456 times    | NB/NGO | Health Department | 3 years | 4,560  | 1,368  | 66.80  | 66.80  | 66.80  | 200.40  |

| 1   | 2   | 3     | 4                      | 5         | 6     |                   | 7       | 8  | 9  | 10    | 11    | 12    | 13     |
|---|---|-------|------------------------|-----------|-------|-------------------|---------|----|----|-------|-------|-------|--------|
| 18  | Provide trainings to officers at the 38 RHs and HCs on collecting data regarding injuries from traffic accidents and other accidents            | 2.2.1 | 8 cities and districts | 90 people | HSSP2 | Health Department | 3 years | 90 | 32 | 14.40 | 14.40 | 14.40 | 43.20  |
| 19  | Provide trainings to officers at the 38 RHs and HCs on traffic safety, injuries from traffic accidents, and first aid                           | 2.2.1 | 8 cities and districts | 91 people | HSSP2 | Health Department | 3 years | 90 | 32 | 24.00 | 24.00 | 24.00 | 72.00  |
| 20  | Provide trainings to officers at the 37 VHSGs and VHV's on collecting data regarding injuries from traffic accidents and other accidents        | 2.2.1 | 8 cities and districts | 61 people | HSSP2 | Health Department | 3 years | 61 | 26 | 55.20 | 55.20 | 55.20 | 165.60 |
| 21  | Provide trainings to officers at VHSGs and VHV's on strengthening Law on Road Traffic, wearing safety helmets and prevention of getting injured | 2.2.1 | 8 cities and districts | 60 people | HSSP2 | Health Department | 3 years | 60 | 28 | 92.00 | 92.00 | 92.00 | 276.00 |
| <b>III. Land, Natural Resources, Environment, Disasters and Climate Change Management: None</b> |   |       |                        |           |       |                   |         |    |    |       |       |       |        |
| <b>IV. Administration, Security and Public Order: None</b>                                      |   |       |                        |           |       |                   |         |    |    |       |       |       |        |

**Table 2.1 3-Year Gradual Investment Plan in province**

| <b>ii. Promised Project (External Project)</b> |  |   |                                 |                  |           |                      |                       |             |             |                                      |      |      |        |
|--|--|---|---------------------------------|------------------|-----------|----------------------|-----------------------|-------------|-------------|--------------------------------------|------|------|--------|
| No.  | Project Name   | Participate in achieving the objectives | Project location                | Projected Result | Funded by | Implemented by       | Implementation Period | Beneficiary |             | Investment Budget (in million Riels) |      |      |        |
|  |  |   |                                 |                  |           |                      |                       | Total       | Female      | 2013                                 | 2014 | 2015 | Total  |
| 1  | 2  | 3                                       | 4                               | 5                | 6         |                      | 7                     | 8           | 9           | 10                                   | 11   | 12   | 13     |
| 1  | Strengthen the control and elimination of counterfeit medications and illegal health services              | 2.2.3                                   | Romeas Haek District            | 1 time           | HSSP2     | Health Department    | 1 year                | 450         | 300         | 3.40                                 | 0.00 | 0.00 | 3.40   |
| 2  | International Breastfeeding Week   | 2.2.1                                   | Romeas Haek District            | 1 time           | HSSP3     | Health Department    | 1 year                | 400         | 350         | 2.60                                 | 0.00 | 0.00 | 2.60   |
| 3  | Promoting the education program for small children and encouraging children to start school at the age 3-5 | 2.1.1                                   | Provincial Education Department | 3 times          | UNICEF    | Education Department | 1 year                | 5,763       | 1,152       | 380.00                               | 0.00 | 0.00 | 380.00 |
| 4  | Activities in collecting data of disabled children in all the 257 schools                                  | 2.1.2                                   | 257 primary schools             | 1 time/year      | UNICEF    | Education Department | 1 year                | 805         | 360         | 30.84                                | 0.00 | 0.00 | 30.84  |
| 5  | Provide education to the orphans and the disadvantaged   | 2.2.6                                   | 7 cities and districts          | 28               | UNICEF    | Cult Department      | 1 year                | 210         | 96          | 26.67                                | 0.00 | 0.00 | 26.67  |
| 6  | Meditation by those infected by AIDS   | 2.2.4                                   | 7 cities and districts          | 28               | UNICEF    | Cult Department      | 1 year                | 245         | 133         | 26.67                                | 0.00 | 0.00 | 26.67  |
| 7  | Provide support to the infected families by houses   | 2.2.5                                   | 7 cities and districts          | 28               | UNICEF    | Cult Department      | 1 year                | 84 families | 83 families | 26.67                                | 0.00 | 0.00 | 26.67  |
| 8  | Educate women working at entertainment areas on AIDS and reproductive health                               | 2.2.4                                   | Svay Rieng and Bavet District   | 4 communes       | USAID     | RHAC Organization    | 1 year                | 3           | 2           | 79.92                                | 0.00 | 0.00 | 79.92  |
| 9  | Care plan in the communities for those who are infected by AIDS  | 2.2.4                                   | Svay Rieng and Bavet District   | 33 communes      | GFR9      | RHAC Organization    | 1 year                | 5           | 2           | 131.98                               | 0.00 | 0.00 | 131.98 |

| 1  | 2   | 3     | 4                            | 5                      | 6                    |                        | 7            | 8      | 9      | 10     | 11    | 12   | 13     |
|----|---|-------|------------------------------|------------------------|----------------------|------------------------|--------------|--------|--------|--------|-------|------|--------|
| 10 | Prevention programs from bird flu                                     | 2.2.4 | 8 cities and districts       | 8 cities and districts | WB                   | Agriculture Department | 1 year       | 587    | 58     | 211.32 | 0.00  | 0.00 | 211.32 |
| 11 | Build leisure booths in the Prey Basak Resort                         | 2.3.1 | Basac Commune                | 6 places               | National Budget      | Tourism Department     | 2 years      | 18,740 | 4,628  | 10.00  | 12.00 | 0.00 | 22.00  |
| 12 | Construct entrance and exist in the Prey Basak Resort                 | 2.3.1 | Basac Commune                | 1 place                | National Budget      | Tourism Department     | 1 year       | 18,740 | 4,628  | 24.00  | 0.00  | 0.00 | 24.00  |
| 13 | Build the main entrance to the Prey Basak Resort                      | 2.3.1 | Basac Commune                | 1 place                | National Budget      | Tourism Department     | 1 year       | 18,740 | 4,628  | 32.00  | 0.00  | 0.00 | 32.00  |
| 14 | Search jobs for the locals  | 2.3.6 | Companies in the province    | 4200 people            | LVT Department       | Labor Office           | 1 year       | 4,200  | 3,780  | 5.60   | 0.00  | 0.00 | 5.60   |
| 15 | Carry out work inspection   | 2.3.6 | Companies in the province    | 150 people             | LVT Department       | Labor Office           | 1 day/time   | 296    | 0      | 2.36   | 0.00  | 0.00 | 2.36   |
| 16 | Inspect on work health and work safety                                | 2.3.6 | Companies in the province    | 36 times               | LVT Department       | Labor Office           | 1 day/time   | 72     | 0      | 0.57   | 0.00  | 0.00 | 0.57   |
| 17 | Educate and broadcast about safe migration                            | 2.3.6 | All the districts and cities | 1000 people            | Searching for donors | Labor Office           | 1 day/time   | 1,000  | 760    | 32.00  | 0.00  | 0.00 | 32.00  |
| 18 | Child work inspection   | 2.3.6 | Companies in the province    | 12 times               | LVT Department       | Labor Office           | 1 day/time   | 24     | 0      | 0.19   | 0.00  | 0.00 | 0.19   |
| 19 | Inspect on the operation of companies dispatching workers to overseas | 2.3.6 | All the districts and cities | 36 times               | LVT Department       | Labor Office           | 1 day/time   | 72     | 0      | 0.57   | 0.00  | 0.00 | 0.57   |
| 20 | Examine health of workers or employees                                | 2.3.6 | Companies in the province    | 21000 people           | Companies            | Labor Office           | 15 days/year | 21,000 | 18,480 | 84.00  | 0.00  | 0.00 | 84.00  |

| 1  | 2   | 3     | 4                                | 5           | 6              |                            | 7               | 8     | 9     | 10     | 11   | 12   | 13     |
|----|---|-------|----------------------------------|-------------|----------------|----------------------------|-----------------|-------|-------|--------|------|------|--------|
| 21 | Create workbooks for Khmer employees  | 2.3.6 | Companies in the province        | 7500 people | Companies      | Labor Office               | 1 year          | 7,500 | 6,600 | 6.25   | 0.00 | 0.00 | 6.25   |
| 22 | Create workbooks for foreign employees                                      | 2.3.6 | Companies in the province        | 1600 people | Companies      | Labor Office               | 1 year          | 1,600 | 544   | 240.00 | 0.00 | 0.00 | 240.00 |
| 23 | Inspect on apprentice training works  | 2.3.6 | Companies in the province        | 72 times    | LVT Department | Vocational Training Office | 1 day/time      | 144   | 72    | 1.15   | 0.00 | 0.00 | 1.15   |
| 24 | Train apprentices   | 2.3.6 | Companies in the province        | 3300 people | Companies      | Vocational Training Office | 1 - 3 months    | 3,300 | 2,805 | 30.80  | 0.00 | 0.00 | 30.80  |
| 25 | Collect information in from private training institutions and organizations | 2.3.6 | Private training institutions    | 15 times    | LVT Department | Vocational Training Office | 1 day/time      | 30    | 12    | 0.24   | 0.00 | 0.00 | 0.24   |
| 26 | Train teaching methodologies to teachers in-training                        | 2.3.6 | Vocational training center       | 3 courses   | MLVT           | Centers                    | 5 days/training | 60    | 20    | 4.00   | 0.00 | 0.00 | 4.00   |
| 27 | Train work inspection and settlement procedure of labor dispute             | 2.3.6 | LVT Department                   | 3 courses   | LVT Department | LVT Department             | 5 days/training | 30    | 12    | 2.00   | 0.00 | 0.00 | 2.00   |
| 28 | Research jobs and training requirement                                      | 2.3.6 | All the 6 Districts and 2 cities | 31 communes | MLVT           | Vocational Training Office | 1 month         | 3,100 | 1,600 | 5.76   | 0.00 | 0.00 | 5.76   |
| 29 | Train tailor skills   | 2.3.6 | Centers                          | 5 courses   | MLVT           | Vocational Training Office | 4 months        | 100   | 100   | 16.00  | 0.00 | 0.00 | 16.00  |



| 1  | 2                                   | 3     | 4       | 5         | 6    |                            | 7        | 8   | 9   | 10    | 11   | 12   | 13    |
|----|-------------------------------------|-------|---------|-----------|------|----------------------------|----------|-----|-----|-------|------|------|-------|
| 30 | Train on wedding salon skill        | 2.3.6 | Centers | 2 courses | MLVT | Vocational Training Office | 4 months | 40  | 40  | 8.00  | 0.00 | 0.00 | 8.00  |
| 31 | Train on utility skill              | 2.3.6 | Centers | 2 courses | MLVT | Vocational Training Office | 4 months | 40  | 0   | 8.00  | 0.00 | 0.00 | 8.00  |
| 32 | Train on motor repairing skill      | 2.3.6 | Centers | 6 courses | MLVT | Vocational Training Office | 4 months | 120 | 120 | 16.00 | 0.00 | 0.00 | 16.00 |
| 33 | Train on automobile repairing skill | 2.3.6 | Centers | 2 courses | MLVT | Vocational Training Office | 4 months | 40  | 0   | 8.00  | 0.00 | 0.00 | 8.00  |
| 34 | Train on electronic skills          | 2.3.6 | Centers | 1 course  | MLVT | Vocational Training Office | 4 months | 20  | 0   | 8.00  | 0.00 | 0.00 | 8.00  |
| 35 | Train on air-con repairing skills   | 2.3.6 | Centers | 3 courses | MLVT | Vocational Training Office | 4 months | 60  | 0   | 8.00  | 0.00 | 0.00 | 8.00  |
| 36 | Train on hairdresser skills         | 2.3.6 | Centers | 3 courses | MLVT | Vocational Training Office | 4 months | 60  | 0   | 8.00  | 0.00 | 0.00 | 8.00  |
| 37 | Train on computer skills            | 2.3.6 | Centers | 7 courses | MLVT | Vocational Training Office | 4 months | 140 | 78  | 16.00 | 0.00 | 0.00 | 16.00 |
| 38 | Train on veterinary skills          | 1.2.3 | Centers | 6 courses | MLVT | Vocational Training Office | 4 months | 120 | 0   | 16.00 | 0.00 | 0.00 | 16.00 |
| 39 | Train on building skills            | 2.3.6 | Centers | 1 course  | MLVT | Vocational Training Office | 4 months | 20  | 0   | 8.00  | 0.00 | 0.00 | 8.00  |

| 1  | 2  | 3     | 4                   | 5          | 6    |                            | 7                | 8     | 9     | 10     | 11   | 12   | 13     |
|----|--|-------|---------------------|------------|------|----------------------------|------------------|-------|-------|--------|------|------|--------|
| 40 | Train on welding and soldering skill                   | 2.3.6 | Centers             | 1 course   | MLVT | Vocational Training Office | 4 months         | 20    | 0     | 8.00   | 0.00 | 0.00 | 8.00   |
| 41 | Train on pigs raising skill and vaccination            | 2.3.6 | All the 6 Districts | 68 courses | MLVT | Vocational Training Office | 1 week - 1 month | 2,040 | 1,300 | 46.00  | 0.00 | 0.00 | 46.00  |
| 42 | Train on fish hatchery skill                           | 1.2.3 | All the 6 Districts | 21 courses | MLVT | Vocational Training Office | 1 week - 1 month | 630   | 280   | 14.00  | 0.00 | 0.00 | 14.00  |
| 43 | Train on poultry raising skill                         | 1.2.3 | All the 6 Districts | 69 courses | MLVT | Vocational Training Office | 1 week - 1 month | 2,070 | 850   | 48.00  | 0.00 | 0.00 | 48.00  |
| 44 | Train on vegetable planting skill                      | 1.2.3 | All the 6 Districts | 21 courses | MLVT | Vocational Training Office | 1 week - 1 month | 630   | 280   | 14.00  | 0.00 | 0.00 | 14.00  |
| 45 | Train on rice intensification (Transplant 1 rice seed) | 1.2.3 | All the 6 Districts | 21 courses | MLVT | Vocational Training Office | 1 week - 1 month | 630   | 280   | 14.00  | 0.00 | 0.00 | 14.00  |
| 46 | Train on composing fertilizer producing skill          | 1.2.3 | All the 6 Districts | 16 courses | MLVT | Vocational Training Office | 1 week - 1 month | 480   | 210   | 14.00  | 0.00 | 0.00 | 14.00  |
| 47 | Train on mushrooms planting skill                      | 1.2.3 | All the 6 Districts | 59 courses | MLVT | Vocational Training Office | 1 week - 1 month | 1,770 | 680   | 54.00  | 0.00 | 0.00 | 54.00  |
| 48 | Train in local communities                             | 2.3.1 | All the 6 Districts | 27 courses | MLVT | Vocational Training Office | 1 week - 1 month | 4,860 | 2,100 | 324.00 | 0.00 | 0.00 | 324.00 |
| 49 | Train in all enterprises                               | 2.3.1 | All the 6 Districts | 27 courses | MLVT | Vocational Training Office | 4 months         | 111   | 29    | 266.40 | 0.00 | 0.00 | 266.40 |

| 1  | 2  | 3     | 4                                  | 5            | 6               |                        | 7      | 8      | 9      | 10        | 11   | 12   | 13        |
|----|--|-------|------------------------------------|--------------|-----------------|------------------------|--------|--------|--------|-----------|------|------|-----------|
| 50 | Organize and establish Village Development Committee     | 2.3.2 | 8 cities and districts             | 150 villages | National Budget | Development Department | 1 year | 1,050  | 420    | 60,000.00 | 0.00 | 0.00 | 60,000.00 |
| 51 | Strengthen capability of Village Development Committee   | 2.3.2 | 8 cities and districts             | 80 courses   | National Budget | Development Department | 1 year | 2,400  | 960    | 40,000.00 | 0.00 | 0.00 | 40,000.00 |
| 52 | To Maintain roads in cycle time                          | 2.3.2 | Mok Da, Ta Menh                    | 21.80 km     | National Budget | Development Department | 1 year | 28,709 | 10,135 | 1,042.00  | 0.00 | 0.00 | 1,042.00  |
| 53 | To Maintain roads in cycle time                          | 2.3.2 | Kraol Kou                          | 11.50 km     | National Budget | Development Department | 1 year | 15,956 | 8,705  | 549.00    | 0.00 | 0.00 | 549.00    |
| 54 | To Maintain roads in cycle time                          | 2.3.2 | Mok Da, Kampong Trach              | 9 km         | National Budget | Development Department | 1 year | 8,668  | 4,879  | 511.00    | 0.00 | 0.00 | 511.00    |
| 55 | To Maintain roads in cycle time                          | 2.3.2 | Bavet                              | 6.64 km      | National Budget | Development Department | 1 year | 5,750  | 2,891  | 317.00    | 0.00 | 0.00 | 317.00    |
| 56 | To Maintain roads daily                                  | 2.3.2 | Kampong Trach                      | 24.40 km     | National Budget | Development Department | 1 year | 32,145 | 17,058 | 110.00    | 0.00 | 0.00 | 110.00    |
| 57 | To Maintain roads daily                                  | 2.3.2 | Preah Ponlea                       | 16.70 km     | National Budget | Development Department | 1 year | 11,159 | 8,035  | 82.00     | 0.00 | 0.00 | 82.00     |
| 58 | To Maintain roads daily                                  | 2.3.2 | Svay Chrum/ Boeung Rei             | 13 km        | National Budget | Development Department | 1 year | 7,557  | 3,879  | 64.00     | 0.00 | 0.00 | 64.00     |
| 59 | To Maintain roads daily                                  | 2.3.2 | Prey Pdao/Chres                    | 12 km        | National Budget | Development Department | 1 year | 11,625 | 6,128  | 94.00     | 0.00 | 0.00 | 94.00     |
| 60 | To Maintain roads daily                                  | 2.3.2 | Svay Ta Yean/Ksae To               | 13.20 km     | National Budget | Development Department | 1 year | 28,816 | 14,921 | 65.00     | 0.00 | 0.00 | 65.00     |
| 61 | Establish committee of banking in cash, animals and rice | 1.6.1 | Romeas Haek District               | 15 courses   | National Budget | Development Department | 1 year | 750    | 150    | 4.00      | 0.00 | 0.00 | 4.00      |
| 62 | Establish Committee of Cash Credit                       | 1.6.1 | Romeas Haek/Svay Chrum/Kampong Rou | 15 courses   | National Budget | Development Department | 1 year | 250    | 80     | 2.00      | 0.00 | 0.00 | 2.00      |
| 63 | Stimulate rural economic development ideas               | 2.3.1 | Romeas Haek District               | 15 courses   | National Budget | Development Department | 1 year | 750    | 150    | 4.00      | 0.00 | 0.00 | 4.00      |

| 1  | 2   | 3     | 4                                  | 5           | 6               |                        | 7        | 8       | 9       | 10       | 11   | 12   | 13         |
|----|---|-------|------------------------------------|-------------|-----------------|------------------------|----------|---------|---------|----------|------|------|------------|
| 64 | Evaluate Credit Action  | 2.3.1 | Romeas Hach/Svay Chrum/Kampong Rou | 30 courses  | National Budget | Development Department | 1 year   | 500     | 160     | 4.00     | 0.00 | 0.00 | 4.00       |
| 65 | Train on motor-repairing skill  | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 35      | -       | 23.00    | 0.00 | 0.00 | 23.00      |
| 66 | Train on agriculture machinery skill  | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 36      | -       | 22.00    | 0.00 | 0.00 | 22.00      |
| 67 | Train on electronic skill   | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 36      | -       | 20.00    | 0.00 | 0.00 | 20.00      |
| 68 | Train on tailor skill   | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 27      | 20      | 22.00    | 0.00 | 0.00 | 22.00      |
| 69 | Train hairdressing and beauty surgery skill                                       | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 34      | -       | 22.00    | 0.00 | 0.00 | 22.00      |
| 70 | Train bamboo furniture manufacturing skill  | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 22      | -       | 20.00    | 0.00 | 0.00 | 20.00      |
| 71 | Trainings on English language   | 2.3.6 | Centers                            | 2 courses   | National Budget | Development Department | 8 months | 67      | 42      | 15.00    | 0.00 | 0.00 | 15.00      |
| 72 | Repair and enlarge DBST of Kampong Spean road separating from boundary poles #171 | 1.5.1 | Bavet Commune                      | 4 km x 4 m  | National Budget | Public Work Department | 1 year   | 37,032  | 18,936  | 5,211.00 | 0.00 | 0.00 | 5,211.00   |
| 73 | Repair and seal road #314C with DBST and Reseal DBST type                         | 1.5.1 | Svay Rieng City                    | 150 m x 6 m | National Budget | Public Work Department | 1 year   | 45,020  | 23,547  | 95.00    | 0.00 | 0.00 | 95.00      |
| 74 | Repair Road 119-206, total length 1660 m, width 6 m and paved with asphalt        | 1.5.1 | Svay Rieng City                    | 1660 m      | National Budget | Public Work Department | 1 year   | 45,020  | 23,547  | 804.00   | 0.00 | 0.00 | 804.00     |
| 75 | Repair Road 208, length 440 m x 6 m, paved with DBST                              | 1.5.1 | Svay Rieng City                    | 440 m       | National Budget | Public Work Department | 1 year   | 45,020  | 23,547  | 195.00   | 0.00 | 0.00 | 195.00     |
|    | Sub-total   |       |                                    |             |                 |                        |          | 277,459 | 135,988 | 105,316  | 12   | 0    | 111,632.96 |

**Table 2.1 3-Year Gradual Investment Plan in province**

| <b>ii. Promised Project</b> |  |   |   |                  |                 |                        |                       |             |        |                                      |      |      |        |
|-----------------------------|--|---|---|------------------|-----------------|------------------------|-----------------------|-------------|--------|--------------------------------------|------|------|--------|
| No                          | Project Name   | Participate in achieving the objectives | Project location                                    | Projected Result | Funded by       | Implemented by         | Implementation Period | Beneficiary |        | Investment Budget (in million Riels) |      |      |        |
|                             |  |   |   |                  |                 |                        |                       | Total       | Female | 2013                                 | 2014 | 2015 | Total  |
| 1                           | 2  | 3                                       | 4   | 5                | 6               |                        | 7                     | 8           | 9      | 10                                   | 11   | 12   | 13     |
| <b>I. Economy Sector</b>    |  |   |   |                  |                 |                        |                       |             |        |                                      |      |      |        |
| <i>I. 1 Agriculture</i>     |  |   |   |                  |                 |                        |                       |             |        |                                      |      |      |        |
| 1                           | Provide high-yield paddy rice seeds  | 1.2.2                                   | 200501-17+200601-07                                 | 36,800 kgs       | National Budget | Agriculture Department | 1 month               | 102,288     | 54,480 | 20.80                                | 0.00 | 0.00 | 20.80  |
| 2                           | Promote the system of rice intensification in accordance with principles of nature and paddy rice field demonstrations | 1.2.1                                   | All the communes in Kampong Rou District, 200601-07 | 51 Courses       | National Budget | Agriculture Department | 1 year                | 37,437      | 18,130 | 8.34                                 | 0.00 | 0.00 | 8.34   |
| 3                           | Trainings on animals raising   | 1.2.3                                   | Bavet District, 5 communes                          | 6 courses        | National Budget | Agriculture Department | 1 month               | 31,331      | 16,014 | 2.40                                 | 0.00 | 0.00 | 2.40   |
| 4                           | Strengthen qualification of village veterinary   | 1.2.3                                   | Bavet District, 5 communes                          | 3 courses        | National Budget | Agriculture Department | 1 month               | 31,331      | 16,014 | 1.20                                 | 0.00 | 0.00 | 1.20   |
| 5                           | Provide technical uses of chemistry fertilizer and poisonous chemical in agriculture                                   | 1.2.3                                   | Bavet District, 5 communes                          | 6 courses        | National Budget | Agriculture Department | 1 month               | 31,331      | 16,014 | 2.40                                 | 0.00 | 0.00 | 2.40   |
| 6                           | Provide vaccinations and medical treatments to animals (cattle)  | 1.2.3                                   | 8 districts and cities                              | 150,000 animals  | National Budget | Agriculture Department | 3 years               | 150,000     | -      | 128.40                               | 0.00 | 0.00 | 128.40 |

| 1                          | 2   | 3     | 4  | 5             | 6                       |                        | 7       | 8       | 9       | 10        | 11        | 12        | 13        |
|----------------------------|---|-------|--|---------------|-------------------------|------------------------|---------|---------|---------|-----------|-----------|-----------|-----------|
| 7                          | Construct biogas kilns  | 1.2.2 | 200605,06,07, 200501-17, all communes in Kampong Rou District                      | 1,226 kilns   | SNV and National Budget | Agriculture Department | 1 year  | 9       | 10      | 36.00     | 0.00      | 0.00      | 36.00     |
|                            | Sub-total   |       |  |               |                         |                        |         | 383,727 |         | 199.54    |           |           | 199.54    |
| <i>1.2 Water Resources</i> |   |       |  |               |                         |                        |         |         |         |           |           |           |           |
| 8                          | DaunToy Irrigation System   | 1.3.1 | Kampong Rou District   | 6354 hectares | IMF                     | Ministry of WRM        | 1 year  | 650     | -       | 4,700.00  | 0.00      | 0.00      | 4,700.00  |
| 9                          | Kampong Chrey Irrigation System   | 1.3.1 | Svay Chrum District  | 400 hectares  | IMF                     | Ministry of WRM        | 1 year  | 3,390   | -       | 4,000.00  | 0.00      | 0.00      | 4,000.00  |
| 10                         | Veal Tnach Irrigations System   | 1.3.1 | Svay Chrum District  | 300 hectares  | National Budget         | WRM Department         | 1 year  | 250     | -       | 300.00    | 0.00      | 0.00      | 300.00    |
| 11                         | Batu Irrigation System  | 1.3.1 | Chantrea District  | 300 hectares  | National Budget         | WRM Department         | 1 year  | 300     | -       | 300.00    | 0.00      | 0.00      | 300.00    |
| 12                         | Reconstruct Neal Creek  | 1.3.1 | Chantrea District  | 6354 hectares | National Budget         | WRM Department         | 1 year  | 2,118   | -       | 4,000.00  | 0.00      | 0.00      | 4,000.00  |
|                            | Sub-total   |       |  |               |                         |                        |         | 6,708   | 0       | 13,300.00 | 0         | 0         | 13,300.00 |
| <i>1.3 Public Work</i>     |   |       |  |               |                         |                        |         |         |         |           |           |           |           |
| 13                         | To maintain road #314D paved with mountain sand, by plowing and rolling | 1.5.1 | Bro Sot - Kampong Rou  | 14 km         | National Budget         | Public Work Department | 2 years | 60,000  | 24,000  | 266.50    | 266.50    | 0.00      | 533.00    |
| 14                         | To maintain national road   | 1.5.1 | Svay Rieng City - Romeas Haek District - Prey Koki Commune – Bro Sot - Kampong Rou | 46 km         | National Budget         | Public Work Department | 3 years | 500,000 | 200,000 | 2,227.00  | 2,227.00  | 2,227.00  | 6,681.00  |
| 15                         | Repair the drainages on both sides of the roads in Svay Rieng City      | 1.5.1 | Svay Rieng City  | 3,000 km      | National Budget         | Public Work Department | 3 years | 30,000  | 12,000  | 12,177.00 | 12,177.00 | 12,177.00 | 36,531.00 |

| 1                            | 2   | 3     | 4  | 5                                 | 6               |                        | 7       | 8       | 9       | 10        | 11        | 12        | 13         |
|------------------------------|---|-------|--|-----------------------------------|-----------------|------------------------|---------|---------|---------|-----------|-----------|-----------|------------|
| 16                           | Repair, asphalt, and install water pipes and drainages across the roads, and repair rectangle drainages along the roads | 1.5.1 | Kampong Trach commune, Prey Koki, Mes Tgok, Samroung , Sangkat Chek, Doan Sor, Chantri, Bro Sot, Kampong Rou | 26,833 m + 30 places of drainages | National Budget | Public Work Department | 3 years | 500,000 | 200,000 | 21,280.33 | 21,280.33 | 21,280.33 | 63,841.00  |
|                              | Sub-total   |       |  |                                   |                 |                        |         |         |         | 35,950.83 | 35,950.83 | 35,684.33 | 107,586.00 |
| <i>1.4 Rural Development</i> |   |       |  |                                   |                 |                        |         |         |         |           |           |           |            |
| 17                           | Construct DBST type of sealed road, road of Kory Trobaek Bridge   | 1.5.1 | Svay Rieng City  | 10,000 m x 6 m                    | National Budget | Provincial Office      | 1 year  | 9,415   | 7,315   | 7,140.00  | 0.00      | 0.00      | 7,140.00   |
| 18                           | Construct DBST type of sealed road, and entrance road of Bavet City Hall  | 1.5.1 | Bavet City   | 1000 m x 6 m                      | National Budget | Provincial Office      | 1 year  | 9,415   | 7,315   | 714.00    | 0.00      | 0.00      | 714.00     |
| 19                           | Construct MAKADAM type of sealed road on the dam preventing flood at the western  | 1.5.1 | Svay Rieng City  | 1000 m x 6 m                      | National Budget | Provincial Office      | 1 year  | 9,415   | 7,315   | 796.00    | 0.00      | 0.00      | 796.00     |
| 20                           | Repair and refill the deteriorated roads in the cities and provinces and take care of them                              | 1.5.1 | Throughout the city  | 2350                              | National Budget | Provincial Office      | 3 years | 390,059 | 161,070 | 93.33     | 93.33     | 93.33     | 280.00     |
|                              | Sub-total   |       |  |                                   |                 |                        |         |         |         | 8,743.33  |           |           | 8,930.00   |
| <i>1.5 Industry</i>          |   |       |  |                                   |                 |                        |         |         |         |           |           |           |            |
| 21                           | Build public power poles  | 1.4.1 | Svay Rieng City  | 72 poles                          | National Budget | Provincial Office      | 1 year  | 260,000 | 139,150 | 300.00    | 0.00      | 0.00      | 300.00     |
|                              | Sub-total   |       |  |                                   |                 |                        |         |         |         | 300.00    |           |           | 300.00     |

| 1                                      | 2   | 3     | 4  | 5              | 6                             |                        | 7       | 8      | 9      | 10       | 11       | 12       | 13       |
|--|---|-------|--|----------------|-------------------------------|------------------------|---------|--------|--------|----------|----------|----------|----------|
| <b>II. Social Affairs Sector</b>       |   |       |  |                |                               |                        |         |        |        |          |          |          |          |
| <i>II.1 Economy and Social Affairs</i> |   |       |  |                |                               |                        |         |        |        |          |          |          |          |
| 22                                     | Organize slaughterhouse   | 2.3.1 | Cities and Districts   | 8 places       | National Budget               | Provincial Office      | 3 years | 80     | 48     | 7.33     | 7.33     | 7.33     | 22.00    |
| 23                                     | Organize and repair market stalls in front of Veal Yon Market                                     | 2.3.1 | Svay Rieng City  | 127 stalls     | National Budget               | Provincial Office      | 1 year  | 8,967  | 5,814  | 600.00   | 0.00     | 0.00     | 600.00   |
|  | Sub-total   |       |  |                |                               |                        |         |        |        | 607.33   |          |          | 622.00   |
| <i>II.2 Rural Development</i>          |   |       |  |                |                               |                        |         |        |        |          |          |          |          |
| 24                                     | Enhance infrastructure of clean water supply system and rural sanitation                          | 2.3.3 | Svay Chrum District - Romduol - Chantrea - Romeas Haek                         | 4100 buildings | IMF                           | Development Department | 3 years | 25,320 | 11,394 | 1,433.00 | 1,805.00 | 1,874.00 | 5,112.00 |
| 25                                     | Build 870 toilets, 2610 drainages, 870 toilet covers in houses                                    | 2.3.3 | Svay Chrum District - Romduol - Chantrea - Romeas Haek                         | 665 buildings  | Ministry of Rural Development | Development Department | 3 years | 2,220  | 999    | 17.00    | 272.00   | 278.00   | 567.00   |
| 26                                     | Educate people on using, taking care of, and significance of toilets and build toilets in schools | 2.3.3 | 6 districts - 2 cities - 25 communes - 59 villages                             | 39 buildings   | Ministry of Rural Development | Development Department | 3 years | 10,750 | 4,838  | 14.00    | 257.00   | 291.00   | 562.00   |
| 27                                     | Publicize Community-Led Total Sanitation (CLTS)   | 2.3.3 | Svay Chrum District - Romduol - Chantrea - Svay Teap, 25 communes/ 95 villages | 10 steps       | UNICEF                        | Development Department | 3 years | 21,215 | 9,547  | 163.00   | 109.00   | 109.00   | 381.00   |



| 1                  | 2   | 3     | 4  | 5           | 6                             |                        | 7       | 8      | 9      | 10       | 11    | 12    | 13       |
|--------------------|---|-------|--|-------------|-------------------------------|------------------------|---------|--------|--------|----------|-------|-------|----------|
| 28                 | Promote hand cleaning with soap(PHAST)  | 2.3.3 | Svay Chrum District - Romduol - Chantrea - Svay Teap - Kampong Rou, 22 communes/ 75 villages | 8 steps     | UNICEF                        | Development Department | 3 years | 23,520 | 10,584 | 130.00   | 77.00 | 77.00 | 284.00   |
| 29                 | Clean water and hygiene programs at schools and in communities                                    | 2.3.4 | Svay Chrum District - Romduol - Chantrea - Svay Teap - Kampong Rou, 30 schools/ 80 villages  | 10 steps    | UNICEF                        | Development Department | 3 years | 6,334  | 2,850  | 115.00   | 71.00 | 71.00 | 257.00   |
| 30                 | Encourage the construction of hygiene toilets in houses and educate them on using hygiene toilets | 2.3.3 | 6 districts - 2 cities - 80 communes - 125 villages  | 156 courses | Ministry of Rural Development | Development Department | 3 years | 12,567 | 5,655  | 19.00    | 17.00 | 20.00 | 56.00    |
| 31                 | Educate sanitation to clean up houses   | 2.3.3 | 6 district - 2 cities - 80 communes - 184 villages   | 218 courses | Ministry of Rural Development | Development Department | 3 years | 13,500 | 6,075  | 29.00    | 12.00 | 12.00 | 53.00    |
| 32                 | Eliminate infection of AIDS and Bird Flu (h5n1)   | 2.3.3 | 6 districts - 2 cities - 80 communes - 205 villages  | 274 courses | Ministry of Rural Development | Development Department | 3 years | 16,082 | 7,237  | 30.00    | 13.00 | 14.00 | 57.00    |
| 33                 | Propose parents to take their children to get 9-type illness vaccination                          | 2.2.7 | 6 districts - 2 cities - 80 communes - 125 villages  | 200 courses | Ministry of Rural Development | Development Department | 3 years | 13,505 | 6,077  | 25.00    | 17.00 | 20.00 | 62.00    |
| Sub-total          |   |       |  |             |                               |                        |         |        |        | 1,975.00 |       |       | 7,391.00 |
| <i>II.3 Health</i> |   |       |  |             |                               |                        |         |        |        |          |       |       |          |
| 34                 | Tuberculosis Day  | 2.2.1 | Svay Rieng/Bavet City  | 3           | GF                            | Health Department      | 1 day   | 1,500  | 800    | 4.00     | 0.00  | 0.00  | 4.00     |
| 35                 | Celebration of International AIDS Day   | 2.2.1 | Bavet City   | 1           | HSSP2                         | Health Department      | 1 month | 800    | 500    | 48.00    | 0.00  | 0.00  | 48.00    |

| 1                    | 2   | 3     | 4   | 5           | 6                   |                      | 7        | 8      | 9      | 10       | 11   | 12   | 13       |
|----------------------|---|-------|---|-------------|---------------------|----------------------|----------|--------|--------|----------|------|------|----------|
| 36                   | Control and eliminate counterfeit medications and illegal health service                      | 2.2.3 | Bavet City  | 1           | HSSP2               | Health Department    | 1 year   | 180    | 100    | 1.20     | 0.00 | 0.00 | 1.20     |
|                      | Sub-total   |       |   |             |                     |                      |          |        |        | 53.20    |      |      | 53.20    |
| <i>2.4 Education</i> |   |       |   |             |                     |                      |          |        |        |          |      |      |          |
| 37                   | Announce and educate parents to understand about the importance of their children's education | 2.1.1 | 5 communes  | 3 times     | Commune counterpart | Education Department | 1 year   | 31,331 | 16,014 | 1.20     | 0.00 | 0.00 | 1.20     |
| 38                   | Educate in each house (Mother Group)  | 2.1.1 | 5 communes  | 6 courses   | UNICEF              | Education Department | 1 year   | 31,331 | 16,014 | 2.40     | 0.00 | 0.00 | 2.40     |
| 39                   | Train and support kindergarten teachers, and supply facilities to kindergarten classes        | 2.1.1 | Prey Ang Kunh and Chrok Mtes                          | 5 classes   | UNICEF              | Education Department | 1 year   | 2,501  | 1,371  | 5.00     | 0.00 | 0.00 | 5.00     |
| 40                   | Collect data on children from the age of 0 to 5 in villages                                   | 2.1.1 | Communities   | 6 times     | Commune counterpart | Education Department | 3 years  | 3,657  | 730    | 380.00   | 0.00 | 0.00 | 380.00   |
| 41                   | Construct kindergarten classes at elementary schools  | 2.1.1 | 200301/02/03/05/09                                    | 4 places    | Commune counterpart | Education Department | 6 months | 858    | 66     | 66.00    | 0.00 | 0.00 | 66.00    |
| 42                   | Support community kindergartens   | 2.1.1 | 200702  | 8 classes   | Commune counterpart | Education Department | 1 year   | 210    | 115    | 8.00     | 0.00 | 0.00 | 8.00     |
| 43                   | Sketch the map to study at each house   | 2.1.1 | Communities   | 3 times     | UNICEF              | Education Department | 3 years  | 5,763  | 1,152  | 870.00   | 0.00 | 0.00 | 870.00   |
| 44                   | Construct school buildings  | 2.1.1 | Chantrea/ Svay Chrum/ Romduol/Romeas Haek/ Svay Rieng | 7 buildings | FTI                 | Education Department | 1 year   | 3,530  | 1,572  | 1,512.00 | 0.00 | 0.00 | 1,512.00 |

| 1               | 2  | 3     | 4   | 5                  | 6       |                      | 7        | 8     | 9     | 10         | 11         | 12         | 13           |
|-----------------|--|-------|---|--------------------|---------|----------------------|----------|-------|-------|------------|------------|------------|--------------|
| 45              | Train elementary teachers in Sangkat Svay Rieng                | 2.1.2 | Sangkat Svay Rieng                                    | 120 people         | EDU     | Education Department | 2 years  | 120   | 50    | 1,571.00   | 1,571.00   | 0.00       | 3,142.00     |
| 46              | Train community's kindergarten teachers newly selected         | 2.1.1 | Education Department                                  | 40 people          | Unicef  | Education Department | 10 days  | 40    | 40    | 51.20      | 0.00       | 0.00       | 51.20        |
| 47              | Reinforce teaching tasks for community's kindergarten teachers | 2.1.1 | Education Department                                  | 40 people          | Unicef  | Education Department | 10 days  | 40    | 40    | 51.20      | 0.00       | 0.00       | 51.20        |
| 48              | Provide scholarship to poor elementary students                | 2.1.2 | Kampong Rou/Romeas Haek/Svay Chrum/Svay Teap district | 165 schools        | WFP     | Education Department | 3 years  | 3,598 | 1,870 | 708,710.67 | 708,710.67 | 708,710.66 | 0.00         |
| 49              | Provide nourishment to poor secondary school students          | 2.1.3 | Secondary School                                      | 2,498 people       | PB 2012 | Education Department | 1 year   | 2,498 | 1,298 | 449.64     | 0.00       | 0.00       | 449.64       |
| 50              | Open training classes for existing literacy teachers           | 2.1.5 | Education Department                                  | 30 people          | PB 2012 | Education Department | 1 year   | 30    | 10    | 41.67      | 0.00       | 0.00       | 41.67        |
| 51              | Strengthen qualification of literacy teachers                  | 2.1.5 | Education Department                                  | 3 times(52 people) | PB 2012 | Education Department | 1 year   | 52    | 25    | 1,320.00   |            |            | 1,320.00     |
|                 | Sub-Total  |       |   |                    |         |                      |          |       |       | 715,039.98 |            |            | 2,134,032.31 |
| <i>2.5 Plan</i> |  |       |   |                    |         |                      |          |       |       |            |            |            |              |
| 52              | Prepare and create documents supporting DIW process            | 2.4.1 | 8districts/cities                                     | 8 districts/cities | PA3     | Education Department | 2 months | 570   | 100   | 10.20      | 0          | 0          | 10           |

| 1   | 2   | 3     | 4                 | 5            | 6               |                        | 7        | 8      | 9      | 10       | 11   | 12   | 13       |
|---|---|-------|-------------------|--------------|-----------------|------------------------|----------|--------|--------|----------|------|------|----------|
| 53  | Collect, key in and create documents of basic data for commune/Sangkat                                      | 1.1.1 | 690 villages      | 690 villages | PA3             | Plan Department        | 2 months | 860    | 172    | 54       | 0    | 0    | 54       |
| 54  | Qualification training course for organizing 3-Year Gradual Investment Program                              | 2.4.1 | 8districts/cities | 4 courses    | PA3             | Plan Department        | 4 months | 30     | 9      | 9        | 0    | 0    | 9        |
|   | Subtotal  |       |                   |              |                 |                        |          | 1460   | 281    | 73.20    | 0.00 | 0.00 | 73       |
| <b>3. Land, Natural Resources, Environment, Disaster, and Climate Change Management</b> |   |       |                   |              |                 |                        |          |        |        |          |      |      |          |
| <i>3.1 Environment</i>  |   |       |                   |              |                 |                        |          |        |        |          |      |      |          |
| 55  | Celebrate 05th March National-International Environment Day   | 3.1.2 | Districts/Cities  | 1            | National Budget | Environment Department | 1 year   | 500    | 250    | 4.00     | 0.00 | 0.00 | 4.00     |
| <b>3.2 Rural Development</b>  |   |       |                   |              |                 |                        |          |        |        |          |      |      |          |
| 56  | Install 0.60m diameter of drainages on the both sides of road to the south of Chiphu Market and 60 manholes | 2.3.2 | Bavet City        | 1,500 m      | National Budget | Provincial Office      | 1 year   | 19,867 | 9,058  | 460.00   | 0.00 | 0.00 | 460.00   |
| 57  | Install 0.60m diameter of drainages along the road #212 and 16 manholes                                     | 2.3.2 | Svay Rieng City   | 451 m        | National Budget | Provincial Office      | 1 year   | 29,678 | 18,750 | 120.00   | 0.00 | 0.00 | 120.26   |
| 58  | Install 1m diameter of drainages on the both sides of National Road #1 and 320 manholes                     | 2.3.2 | Bavet City        | 8000 m       | National Budget | Provincial Office      | 1 year   | 29,678 | 18,750 | 5,241.60 | 0.00 | 0.00 | 5,241.60 |
|   | Sub-Total   |       |                   |              |                 |                        |          |        |        | 5,821.60 |      |      | 5,821.86 |

| 1                      | 2   | 3     | 4                | 5           | 6               |                        | 7       | 8       | 9        | 10       | 11       | 12       | 13        |
|------------------------|---|-------|------------------|-------------|-----------------|------------------------|---------|---------|----------|----------|----------|----------|-----------|
| <b>3.3 Public Work</b> |   |       |                  |             |                 |                        |         |         |          |          |          |          |           |
| 59                     | Build 1,000m of dike along eastern bank of Veiko River    | 2.3.2 | Svay Rieng City  | 1000mx6m    | National Budget | Provincial Office      | 1 year  | 59,313  | 21,313   | 180.00   | 0.00     | 0.00     | 180.00    |
| 60                     | Announce road traffic law                                 | 2.3.1 | A whole province | 30 courses  | National Budget | Public Work Department | 3 years | 15,000  | 4,000    | 8.00     | 8.00     | 8.00     | 24.60     |
| 61                     | Teach and test motor driving                              | 2.3.1 | A whole province | 120 courses | National Budget | Public Work Department | 3 years | 3,000   | 1,000    | 8.33     | 8.33     | 8.33     | 25.00     |
| 62                     | Install new traffic signs                                 | 2.3.1 | A whole province | 30 places   | National Budget | Public Work Department | 3 years | 500,000 | 200,000  | 13.66    | 13.66    | 13.66    | 41.00     |
| 63                     | Repair traffic signs                                      | 2.3.1 | A whole province | 14 places   | National Budget | Public Work Department | 3 years | 500,000 | 200,000  | 3,280.00 | 3,280.00 | 3,280.00 | 9,840.00  |
| 64                     | Enhance garages   | 2.3.1 | A whole province | 12 places   | National Budget | Public Work Department | 3 years | 100,000 | 40,000   | 1,640.00 | 1,640.00 | 1,640.00 | 4,920.00  |
| 65                     | Enhance driving schools                                   | 2.3.1 | A whole province | 09 places   | National Budget | Public Work Department | 3 years | 5,000   | 2,000    | 615.00   | 615.00   | 615.00   | 1,845.00  |
|                        | Subtotal  |       |                  |             |                 |                        |         |         |          | 5,744.99 |          |          | 16,875.60 |
| <b>3.4 Health</b>      |   |       |                  |             |                 |                        |         |         |          |          |          |          |           |
| 66                     | Build referral hospital of level 1 in Bavet Health Center | 2.3.2 | Bavet City       | 1           | National Budget | Ministry of Health     | 1 year  | 48,325  | 2,628.00 | 600.00   | -        | -        | 600.0000  |
|                        | Sub-Total   |       |                  |             |                 |                        |         | Unable  | Unable   | Unable   |          |          | 600.00    |

| 1   | 2  | 3     | 4                      | 5             | 6               |                   | 7       | 8      | 9      | 10       | 11     | 12     | 13           |
|---|--|-------|------------------------|---------------|-----------------|-------------------|---------|--------|--------|----------|--------|--------|--------------|
| <b>3.5 Land</b>                                     |  |       |                        |               |                 |                   |         |        |        |          |        |        |              |
| 67  | Register in list of land ownership with system                 | 3.1.1 | Svay Chrum District    | 20,000 Papers | National Budget | Land Department   | 3 years | 16,002 | 8,368  | 561.00   | 560.00 | 560.00 | 1,681.00     |
|   | Sub-Total  |       |                        |               |                 |                   |         | 16,002 | 8,368  | 561.00   | 560.00 | 560.00 | 1,681.00     |
| <b>4. Administration, Security and Public Order</b> |  |       |                        |               |                 |                   |         |        |        |          |        |        |              |
| <b>4.1 Administration</b>                           |  |       |                        |               |                 |                   |         |        |        |          |        |        |              |
| 68  | To maintain parks and lay carpet tiles in line of parks        | 2.3.2 | Svay Rieng City        | 1,000 m2      | National Budget | Provincial Office | 2 years | 59,313 | 21,313 | 60.00    | 60.00  | 0.00   | 120.00       |
| 69  | To maintain provincial offices, district offices and city hall | 2.3.2 | Province/City/District | 8 places      | National Budget | Provincial Office | 3 years | 319    | 98     | 103.33   | 103.33 | 103.33 | 310.00       |
| 70  | Construct building for meeting and living room of Eo+E1        | 2.3.2 | Provincial Office      | 12x24m        | National Budget | Provincial Office | 3 years | 350    | 45     | 250.00   | 250.00 | 250.00 | 750.00       |
| 71  | Build health centers and hospital building                     | 2.3.2 | Province/City/District | 7 HCs         | NB/NGO          | Health Department | 3 years | 0      | 0      | 600.00   | 400.00 | 400.00 | 1,400.00     |
|   | Sub-Total  |       |                        |               |                 |                   |         |        |        | 1,013.33 |        |        | 2,580.00     |
|   | Total  |       |                        |               |                 |                   |         |        |        |          |        |        | 2,300,049.70 |

**Table 2.1 3-Year Gradual Investment Project in Province**

**iii. Not Promised Projects**

| N <sup>o</sup>            | Project name   | Participate in achieving the objectives | Project location             | Project result | Proposed by            | Implementation period | Beneficiary |        | Investment Budget (in million Riels) |        |        |        | Effective Rate |
|---------------------------|--|---|------------------------------|----------------|------------------------|-----------------------|-------------|--------|--------------------------------------|--------|--------|--------|----------------|
|                           |  |   |                              |                |                        |                       | Total       | Female | 2012                                 | 2013   | 2014   | Total  |                |
| 1                         | 2  | 3                                       | 4                            | 5              | 6                      | 7                     | 8           | 9      | 10                                   | 11     | 12     | 13     | 14             |
| <b>1. Economic Sector</b> |  |   |                              |                |                        |                       |             |        |                                      |        |        |        |                |
| <i>1.1 Agriculture</i>    |  |   |                              |                |                        |                       |             |        |                                      |        |        |        |                |
| 1                         | Provide vaccinations to prevent cattle from being effected by diseases   | 1.2.3                                   | 200601-07                    | 9,653          | Svay Rieng City        | 1 month               | 21,600      | 11,200 | -                                    | 11.20  | -      | 11.20  | 1,163.5423     |
| 2                         | Provide vaccinations to prevent animals' diseases  | 1.2.3                                   | Bavet City 5 Sangkats        | 06 courses     | Bavet City             | 1 month               | 31,331      | 16,014 | -                                    | 20.00  | -      | 20.00  | 303.7357       |
| 3                         | Vaccinate to prevent animals' diseases   | 1.2.3                                   | 200303/04/07/08              | 30,009         | Romdoul City           | 2 months              | 9,796       | 4,243  | -                                    | 33.20  | -      | 33.20  | 185.8229       |
| 4                         | Promote 10 types of rice seeds produced high yield   | 1.2.2                                   | Kampong Rou District all Kom | 77 courses     | Kampong Rou            | 1 year                | 14,752      | 7,820  | -                                    | 3.00   | -      | 3.00   | 176.2064       |
| 5                         | Create mechanisms to prevent disaster, reduce bad effect from flood, drought, pest (water, species, pesticide) | 1.2.2                                   | 8districts/cities            | 9000 ha        | Agriculture Department | 3 years               | 9,000       | -      | -                                    | 360.00 | -      | 360.00 | 44.4444        |
| 6                         | Agriculture school program IMP   | 1.2.2                                   | 8districts/cities            | 171 schools    | Agriculture Department | 3 years               | 21,371      | -      | -                                    | -      | 960.00 | 960.00 | 12.3675        |
| 7                         | Implement Rice Intensification and field demonstration   | 1.2.2                                   | 8districts/cities            | 1500 places    | Agriculture Department | 3 years               | 4,500       | -      | -                                    | -      | 456.00 | 456.00 | 8.7719         |
| 8                         | Promote the importance and build Biogas kiln   | 1.2.2                                   | 8districts/cities            | 1500 places    | Agriculture Department | 3 years               | 1,500       | -      | -                                    | -      | 900.00 | 900.00 | 0.5556         |
| 9                         | Recycle organic product - food and fodder  | 1.2.2                                   | 8districts/cities            | 1500 places    | Agriculture Department | 3 years               | 150         | -      | -                                    | -      | 240.00 | 240.00 | 0.4167         |

| 1                          | 2  | 3     | 4  | 5         | 6   | 7        | 8       | 9      | 10       | 11        | 12      | 13        | 14         |
|----------------------------|--|-------|--|-----------|---|----------|---------|--------|----------|-----------|---------|-----------|------------|
|                            | Sub-Total  |       |  |           |   |          | 114,000 | 39,277 | -        | 427.40    | 2,556.0 | 2,983.40  | 1,895.86   |
| <i>1.2 Water Resources</i> |  |       |  |           |   |          |         |        |          |           |         |           |            |
| 10                         | Restore canals in Chiphu downtown (Sangkat Chrak Mtes, Sangkat Prey Angkunh)                                     | 1.3.3 | Sangkat Prey Angkunh, Chrak Mtes                       | 5,330 m   | Bavet City  | 1 year   | 17,274  | 9,016  | 1.00     | -         | -       | 1.00      | 1,747.4226 |
| 11                         | Build dams to free water   | 1.3.1 | 200103/04+200401/02/03/07/11/12/13/15                  | 14 places | Remeas Haek + chantrea                                    | 3 months | 141,407 | 3,295  | 856.00   | -         | -       | 856.00    | 331.4952   |
| 12                         | Repair water gate  | 1.3.1 | 200103/04  | 2 places  | Chantrea district   | 2 months | 7,060   | 3,742  | 20.00    | -         | -       | 20.00     | 101.9611   |
| 13                         | Install drainages to free water from roads   | 1.4.3 | Sangkat Bavet + 200303/06/07                           | 55 places | Bavet City+ Romdoul district                              | 1 year   | 29,063  | 13,134 | 220.79   | -         | -       | 220.79    | 99.3523    |
| 14                         | Restore sub canals   | 1.3.1 | 200505/07+200406/10/13/14                              | 2,9650 m  | Svay Chrum district + Remean Haek                         | 1 year   | 8,397   | 4,033  | 185.50   | -         | -       | 285.50    | 46.2184    |
| 15                         | Restore main canals  | 1.3.1 | 200703/07/09+200601-07+200303/05/06/07/09+200511/13/15 | 22.58 Km  | Svay Chrum district + Romdoul+ Svay Teap+ Svay Rieng City | 1 year   | 46,355  | 23,486 | 3,848.20 | -         | -       | 3,848.20  | 30.2188    |
| 16                         | Dig canals   | 1.3.1 | 200103/09+200502                                       | 9,500 m   | Svay Chrum district +Chantrea                             | 3 months | 9,273   | 2,656  | -        | 260.00    | -       | 260.00    | 25.5271    |
| 17                         | Rebuild old ditches  | 1.3.1 | Sangkat Bavet ( 05 Villages)                           | 6,000 m   | Bavet City  | 3 months | 48,325  | 2,628  | -        | 800.00    | -       | 800.00    | 5.9833     |
| 18                         | Build water pump station   | 1.3.1 | 200503   | 1 place   | Svay Chrum district                                       | 2 months | 7,005   | 1,511  | -        | 140.00    | -       | 140.00    | 3.1292     |
| 19                         | Construct MAKADAM type of sealed road and install drainages on the both sides of roads in downtown in Bavet City | 1.5.1 | Sangkat Bati   | 4 Km      | Bavet City  | 1 year   | 48,325  | 2,628  | -        | 10,320.00 | -       | 10,320.00 | 1.1448     |
| 20                         | Build clean water station  | 1.4.3 | 20015  | 1 place   | Chantrea district   | 6 months | 5,500   | 2,750  | -        | 1,097.00  | -       | 1,097.00  | 0.6857     |
| 21                         | Build water retaining gate   | 1.3.1 | 200503/04/11/15  | 4 places  | Svay Chrum district                                       | 2 months | 1,215   | 603    | -        | -         | 500.00  | 500.00    | 0.5319     |



| 1                      | 2   | 3     | 4  | 5            | 6   | 7        | 8       | 9       | 10        | 11       | 12       | 13        | 14         |
|------------------------|---|-------|--|--------------|---|----------|---------|---------|-----------|----------|----------|-----------|------------|
| 22                     | Repair unsealed road paved with mountain sand and install drainages to free water | 1.5.3 | Sangkat basac  | 6,000 m      | Bavet City  | 1 year   | 2,357   | 119     | -         | -        | 1,000.00 | 1,000.00  | 0.5265     |
| 23                     | Dig crossing canals   | 1.3.1 | 200509/10/13/16  | 180980 m     | Svay Chrum district   | 7 months | 7,311   | 3,762   | -         | -        | 4,524.00 | 4,524.00  | 0.2779     |
| 24                     | Restore canals  | 1.3.3 | Chantrea district- Svay Chrum-Kampong Rou                          | 6,350 ha     | Department of water resources   | 1 year   | 4,567   | -       | -         | 17,320.0 | -        | 17,320.00 | 0.2535     |
|                        | Sub-Total   |       |  |              |   |          | 383,434 | 73,363  | 5,131     | 29,937   | 6,024    | 41,192.89 | 2,394.7284 |
| <i>1.3 Plan</i>        |   |       |  |              |   |          |         |         |           |          |          |           |            |
| 25                     | Process program of poor families identification                                   | 2.3.6 | 690 villages   | 690 villages | Plan Department   | 1 year   | 207,800 | 108,100 | 642.27    | -        | -        | 642.27    | 138.2649   |
|                        | Sub-Total   | 1     |  |              |   |          | 207,800 | 108,100 | 642.27    | -        | -        | 642.27    | 138.2649   |
| <i>1.4 Public Work</i> |   |       |  |              |   |          |         |         |           |          |          |           |            |
| 26                     | Repair and wider unsealed roads and pave with mountain sand                       | 1.5.1 | Sangkat Bati   | 9,500 m      | Bavet City  | 1 year   | 5,681   | 294     | 1.60      | -        | -        | 1.60      | 838.0822   |
| 27                     | Improve unsealed road paved with mountain sand                                    | 1.5.1 | 200303/06/07+200702/03/09+200103/04/05/08/09/10+ Prey Angkunh      | 42,490 m     | Chantrea district-Romdoul- Svay Teap- Bavet City                        | 1 year   | 134,537 | 32,964  | 15,758.00 | -        | -        | 15,758.00 | 18.6348    |
| 28                     | Repair unsealed roads and improve by paving with mountain sand                    | 1.5.1 | 200105/09  | 2,300 m      | Chantrea district   | 3 months | 9,068   | 4,454   | 92        | -        | -        | 92.00     | 65.9299    |
| 29                     | Repair unsealed road paved with mountain sand                                     | 1.5.1 | 200405/11/12/13/14/15+5 sangkats Bavet City + 200601-07+ 200510/13 | 100,818 m    | Remean Haek district/Bavet City/Svay Rieng Provinc+ Svay Chrum district | 1 year   | 134,537 | 32,964  | 15,758.00 | -        | -        | 15,758.00 | 18.6348    |
| 30                     | Pave existing road with mountain sand   | 1.5.1 | Chrak Mtes   | 2,900 m      | Bavet City  | 1 year   | 10,571  | 5,545   | -         | 190.00   | -        | 190.00    | 12.6634    |
| 31                     | Repair MAKADAM type of sealed roads   | 1.5.1 | 200601/02  | 1,000 m      | Svay Rieng City   | 4 months | 2,725   | 1,800   | -         | 187.20   | -        | 187.20    | 6.8277     |

| 1                               | 2  | 3     | 4   | 5                     | 6   | 7         | 8       | 9       | 10       | 11        | 12       | 13        | 14       |
|---------------------------------|--|-------|---|-----------------------|---|-----------|---------|---------|----------|-----------|----------|-----------|----------|
| 32                              | Repair sealed roads  | 1.5.1 | 200502/04/05/09<br>/10/14/16+ Nhor, Ksae To,<br>SomLei, Tnout, Department,<br>Banteay Krang,<br>Samyong+200401-08/1013/16 | 110,000 m             | Kampong<br>Rou District-<br>Romeas<br>Haek- Svay<br>Chrum | 1 year    | 121,893 | 45,593  | -        | 97,824.00 | -        | 97,824.00 | 1.8810   |
| 33                              | Build concrete bridges   | 1.5.1 | 200413  | 4 places              | Romeas Haek   | 3 months  | 5,232   | 2,673   | -        | 5,232.00  | -        | 5,232.00  | 0.6993   |
| 34                              | Repair and wider nation road #1, create parks<br>with light poles in the middle, and construct<br>drainages on the both sides of roads | 1.5.1 | Sangkat Bavet- Bati-Chrak Mtes  | 10 Km                 | Bavet City  | 1 year    | 48,325  | 2,628   | -        | -         | 49,200.0 | 49,200.00 | 0.2443   |
| 35                              | Build roads paved with red gravel  | 1.5.1 | 200401/03/06/09/<br>10/14/15/16   | 58,900 m              | Romean<br>Haek District                                   | 3 months  | 69,115  | 38,361  | -        | -         | 523,913  | 523,913.0 | 0.0554   |
| 36                              | Repair white sand roads  | 1.5.1 | 200401/04/08/16   | 23,000 m              | Romeas Haek<br>District                                   | 3 months  | 1,990   | 954     | -        | -         | 230,570  | 230,570.0 | 0.0024   |
|                                 | Sub-Total  |       |   |                       |   |           | 543,674 | 168,230 | 31,610   | 103,433.2 | 803,683  | 938,726   | 963.6551 |
| <i>1.5 Industry and Service</i> |  |       |   |                       |   |           |         |         |          |           |          |           |          |
| 37                              | Organize and extend nation electricity delivery<br>for all families consumption  | 1.4.1 | 05 sangkats   | 2993<br>houses        | Bavet City  | 1 year    | 9,168   | 462     | 25.00    | -         | -        | 25.00     | 61.8285  |
| 38                              | Extend electricity cable/ power line   | 1.4.1 | 201103/04/05/08/0<br>9/10+200508/17+200605/06/07  | 4,500 m +<br>6 places | Chantrea<br>District- Svay<br>Chrum-Svay<br>Rieng City    | 06 months | 82,965  | 25,969  | 1,511.00 | -         | -        | 1,511.00  | 47.5961  |
| 39                              | Clean water industry   | 1.4.3 | Svay Chrum Commune-Doun<br>Sor Svay Chrum District  | 60 m3                 | Department<br>of industry                                 | 3 years   | 3,600   | -       | 1,520.00 | -         | -        | 1,520.00  | 9.4737   |
| 40                              | Construct power pole   | 1.4.1 | 200603  | 40                    | Svay Rieng<br>City  | 1 month   | 1,767   | 960     | 140.50   | -         | -        | 140.50    | 4.4261   |
| 41                              | Complete construction project of clean water<br>industry in Kroul Kou downtown   | 1.4.3 | Kroul Kou Commune   | 30 m3/h               | Department<br>of industry                                 | 2 years   | 2,500   | 1,300   | -        | 629.00    | -        | 629.00    | 4.3439   |

| 1                            | 2  | 3     | 4   | 5          | 6                      | 7       | 8       | 9       | 10     | 11        | 12       | 13        | 14      |
|------------------------------|--|-------|---|------------|------------------------|---------|---------|---------|--------|-----------|----------|-----------|---------|
| 42                           | Create clean water system (expand more) in Svay Rieng City | 1.4.3 | Svay Rieng City   | 20 Km x 2  | industrial Department  | 2 years | 7,000   | 3,700   | -      | 1,640.00  | -        | 1,640.00  | 4.0531  |
| 43                           | Build power line   | 1.4.1 | Chantrea District-Svay Chrum-Kampong Rou-Svay Chrum/Romeas haek-Romdoul                     | 5.4MW      | industrial Department  | 2 years | 28,800  | 15,400  | -      | 9,553.00  | -        | 9,553.00  | 1.5664  |
| 44                           | Build clean water industry                                 | 1.4.3 | Kampong Trach Commune-Nhor-Ksae Tro-Mes Tgok-Svay Chrum-Ta Sous-Doun Sor-Chantey-Angbroesae | 210m3/h    | industrial Department  | 3 years | 18,750  | 10,050  | -      | 13,940.00 | -        | 13,940.00 | 1.0845  |
| 45                           | Enhance clean water produced capacity in city              | 1.4.3 | Svay Rieng City   | 50m3/h     | industrial Department  | 1 year  | 1,500   | 800     | -      | -         | 1,117.00 | 1,171.00  | 0.8492  |
| 46                           | Rural Electricity Project                                  | 1.4.1 | Krosang Commune-Sambath Meanchey-Tros- Angdong Trobaek                                      | 200 houses | industrial Department  | 2 years | 1,000   | 540     | -      | -         | 738.00   | 738.00    | 0.5098  |
| 47                           | Construct electricity center                               | 1.4.1 | in province   | 400 KVA    | industrial Department  | 2 years | 1,500   | 800     | -      | -         | 2,625.00 | 2,625.00  | 0.1331  |
|                              | Sub-Total  |       |   |            |                        |         | 158,550 | 59,981  | 3,197  | 25,762    | 4,534    | 33,493    | 136     |
| <i>1.6 Rural Development</i> |  |       |   |            |                        |         |         |         |        |           |          |           |         |
| 48                           | To maintain roads daily                                    | 2.3.2 | Romeas Haek District+ Kampong Rou+ Svay Chrum+Chantrea                                      | 79.30 Km   | development Department | 1 year  | 91,302  | 50,021  | 424.00 | -         | -        | 424.00    | 56.7916 |
| 49                           | To maintain roads in cycle time                            | 2.3.2 | Bavet City+Romeas Haek District+Svay Chrum  | 6.64 Km    | development Department | 1 year  | 59,083  | 26,610  | 2,419  | -         | -        | 2,419.00  | 6.5950  |
| 50                           | Repair DBST type of sealed roads                           | 1.5.1 | Romeas Haek District+ Svay Rieng City   | 40.30 Km   | development Department | 1 year  | 60,566  | 27,142  | -      | 60,566.00 | -        | 25,389.00 | 0.6142  |
|                              | Sub-Total  |       |   |            |                        |         | 210,951 | 103,773 | 2,843  | 60,566    | -        | 28,232    | 64      |

| 1                              | 2  | 3     | 4   | 5            | 6                                  | 7        | 8      | 9      | 10       | 11    | 12     | 13       | 14         |
|--------------------------------|--|-------|---|--------------|------------------------------------|----------|--------|--------|----------|-------|--------|----------|------------|
| <b>2. Social Affair Sector</b> |  |       |   |              |                                    |          |        |        |          |       |        |          |            |
| <i>2.1 Agriculture</i>         |  |       |   |              |                                    |          |        |        |          |       |        |          |            |
| 51                             | Train composing fertilizer producing method                                      | 1.2.2 | 5 sangkats+200702/11  | 15 courses   | Bavet City-Svay Teap District      | 1 month  | 31,697 | 208    | 5.40     | -     | -      | 5.40     | 2,301.8945 |
| 52                             | Establish livestock raising community  | 1.2.2 | 5 sangkats  | 10 groups    | Bavet City                         | 1 month  | 31,331 | 16,014 | 5.00     | -     | -      | 5.00     | 1,162.1193 |
| 53                             | Provide training courses about livestock raising technique and provide livestock | 1.2.2 | 10 communes   | 10 courses   | Romdoul District                   | 7 months | 1,750  | 982    | -        | 46.62 | -      | 46.62    | 9.2873     |
| 54                             | Promote to dig pond for fish hatchery  | 1.2.3 | All communes in Kampong Rou District                                    | 2 times      | Kampong Rou District               | 3 years  | 207    | 68     | -        | 2.00  | -      | 2.00     | 1.2363     |
| 55                             | Provide training courses to village veterinarian's agency                        | 1.2.2 | 8 City-District   | 2,070 people | Agriculture Department             | 3 years  | 690    | -      | -        | -     | 196.00 | 196.80   | 0.7791     |
| 56                             | Provide study tour to farmers  | 1.2.2 | 8 City-District   | 4,500 people | Agriculture Department             | 3 years  | 300    | -      | -        | -     | 60.00  | 60.00    | 0.5556     |
|                                | Sub-Total  |       |   |              |                                    |          | 65,975 | 17,272 | 10.40    | 48.62 | 256.00 | 315.80   | 3,475.8721 |
| <i>2.2 Education</i>           |  |       |   |              |                                    |          |        |        |          |       |        |          |            |
| 57                             | Build capacity/ skill for staffs   | 2.1.1 | 200301/02/03/04/05/06/07/08/09/10+Chantrea district office              | 17 courses   | Chantrea District/Romdoul District | 21 days  | 78     | 12     | 1.77     | -     | -      | 1.77     | 20.0656    |
| 58                             | Promote and educate community  | 2.1.1 | Department of Education   | 9 times      | Education Department               | 3 years  | 5,763  | 1,152  | 380.00   | -     | -      | 380.00   | 4.8314     |
| 59                             | Construct school building  | 2.1.1 | Ksae Tro-Prey Tom-Svay Tayean+200702/05+200105/08/09+200502/03/09/12/15 | 16           |                                    | 1 year   | 3,530  | 1,572  | 2,303.00 | -     | -      | 2,303.00 | 1.3217     |
| 60                             | Install computer system in schools   | 2.1.1 | Secondary School  | 14 places    | Kampong Rou District               | 3 years  | 30     | 5      | 17.00    | -     | -      | 17.00    | 1.2078     |

| 1  | 2  | 3     | 4                      | 5            | 6                    | 7       | 8     | 9     | 10 | 11       | 12        | 13        | 14     |
|----|--|-------|------------------------|--------------|----------------------|---------|-------|-------|----|----------|-----------|-----------|--------|
| 61 | Train primary school teachers in Svay Rieng Province                       | 2.1.1 | Sangkat Svay Rieng     | 333 people   | Education Department | 3 years | 333   | 67    | -  | 4,453.00 | -         | 4,453.00  | 0.7867 |
| 62 | Train lower secondary school teacher in Prey Veng region                   | 2.1.1 | Prey Veng Province     | 273 people   | Education Department | 3 years | 273   | 54    | -  | 4,713.00 | -         | 4,713.00  | 0.7182 |
| 63 | Train kindergarten teachers in community                                   | 2.1.1 | 200702                 | 8 people     | Svay Teap District   | 1 year  | 8     | 8     | -  | 8.00     | -         | 8.00      | 0.6478 |
| 64 | Reinforce teaching tasks for community's kindergarten teacher              | 2.1.1 | Development Department | 9 times      | Education Department | 3 years | 657   | 657   | -  | 380.00   | -         | 380.00    | 0.5374 |
| 65 | Build schools and increase kindergarten teachers                           | 2.1.1 | Sangkat Prey Angkunh   | 2            | Bavet City           | 1 year  | 1,943 | 1,009 | -  | 500.00   | -         | 500.00    | 0.3194 |
| 66 | Accept number of primary school teacher provided by ministry               | 2.1.1 | Ministry of Education  | 333 people   | Education Department | 3 years | 333   | 67    | -  | 207.00   | -         | 207.00    | 0.2875 |
| 67 | Train community's kindergarten teachers newly selected                     | 2.1.1 | Education Department   | 9 times      | Education Department | 3 years | 147   | 147   | -  | 380.00   | -         | 380.00    | 0.1172 |
| 68 | Take actions to survey children at school age                              | 2.1.1 | Education Department   | 3 times      | Education Department | 3 years | 805   | 360   | -  | 2,250.00 | -         | 2,250.00  | 0.1029 |
| 69 | Offer graduated students from higher secondary school to apply for         | 2.1.1 | Education Department   | 300 people   | Education Department | 3 years | 300   | 60    | -  | 380.00   | -         | 380.00    | 0.0736 |
| 70 | Gather mother group from targeted villages                                 | 2.1.1 | Community              | 21 times     | Education Department | 3 years | 225   | 225   | -  | 1,140.00 | -         | 1,140.00  | 0.0583 |
| 71 | Provide scholarship to poor students in primary schools                    | 2.1.1 | Education Department   | 1,500 people | Education Department | 3 years | 1,500 | 350   | -  | -        | 12,507.00 | 12,507.00 | 0.0326 |
| 72 | Accept number of primary school teachers provided by Ministry of Education | 2.1.1 | Ministry of Education  | 273 people   | Education Department | 3 years | 273   | 54    | -  | -        | 2,087.00  | 2,087.00  | 0.0224 |

| 1                 | 2   | 3     | 4                                     | 5             | 6                       | 7        | 8       | 9      | 10    | 11     | 12           | 13           | 14         |
|-------------------|---|-------|---------------------------------------|---------------|-------------------------|----------|---------|--------|-------|--------|--------------|--------------|------------|
| 73                | Open more education classes for illiterates                           | 2.1.1 | District-town Department of Education | 15 places     | Education Department    | 3 years  | 3,120   | 1,767  | -     | -      | 23,400.00    | 23,400.00    | 0.0181     |
| 74                | Recruit more kindergarten teachers                                    | 2.1.1 | Ministry of Education                 | 24 position   | Education Department    | 3 years  | 28      | 24     | -     | -      | 530.00       | 530.00       | 0.0086     |
| 75                | Provide breakfast at Primary school                                   | 2.1.1 | School                                | 61,336 people | Education Department    | 3 years  | 61,336  | 39,868 | -     | -      | 21,26,132.00 | 2,126,132.00 | 0.0076     |
| 76                | Strengthen the duty practice of teacher                               | 2.1.1 | School                                | 3 times       | Education Department    | 3 years  | 2,726   | 545    | -     | -      | 85,460.00    | 85,460.00    | 0.0074     |
| 77                | Strengthen the control ability of school director                     | 2.1.1 | Education Department                  | 3 times       | Education Department    | 3 years  | 442     | 37     | -     | -      | 14,540.00    | 14,540.00    | 0.0073     |
| 78                | Provide nourishment to high school poor students                      | 2.1.1 | School                                | 7,495         | Education Department    | 3 years  | 7,495   | 3,899  | -     | -      | 447,700      | 447,700      | 0.0043     |
| 79                | Collect study of dropout children                                     | 2.1.1 | Community                             | 6 times       | Education Department    | 3 years  | 4,737   | 1,265  | -     | -      | 410.00       | 410.00       | 0.0031     |
| 80                | Collect data of illiterates in all communes                           | 2.1.4 | Community                             | 6 times       | Education Department    | 3 years  | 8,550   | 3,710  | -     | -      | 380.00       | 380.00       | 0.0028     |
| 81                | Open training course for existing literate teacher                    | 2.1.1 | Education Department                  | 156 teachers  | Education Department    | 3 years  | 468     | 210    | -     | -      | 4,500.00     | 4,500.00     | 0.0025     |
| 82                | Strengthen the ability of existing literate teacher                   | 2.1.1 | Department of Education               | 3 times       | Department of Education | 3 years  | 156     | 75     | -     | -      | 1,200.00     | 1,200.00     | 0.0000     |
|                   | Sub-total   |       |                                       |               |                         |          | 105,256 | 57,199 | 2,702 | 14,411 | 1,718,846    | 2,735,959    | 31.1923    |
| <b>2.3 Health</b> |   |       |                                       |               |                         |          |         |        |       |        |              |              |            |
| 83                | Provide Vitamin A and anti-intestine worms medicine to children       | 2.2.2 | 5 Sangkats                            | 6 times       | Bavet City              | 6 months | 48,325  | 2,628  | 1.20  | -      | -            | 1.20         | 5,261.9424 |
| 84                | Inspect on selling and distribution of salt without iodine            | 2.2.2 | 5 Sangkats                            | 6 times       | Bavet City              | 1 year   | 48,325  | 2,628  | 1.20  | -      | -            | 1.20         | 2,546.1012 |
| 85                | Control and eliminate counterfeit medicine and illegal health service | 2.2.3 | 5 Sangkats                            | 12 times      | Bavet City              | 1 year   | 48,325  | 2,628  | 2.40  | -      | -            | 2.40         | 2,291.4910 |

| 1               | 2   | 3     | 4                          | 5                    | 6                    | 7       | 8       | 9      | 10    | 11    | 12       | 13       | 14         |
|-----------------|---|-------|----------------------------|----------------------|----------------------|---------|---------|--------|-------|-------|----------|----------|------------|
| 86              | Disseminate the diseases and prevention                         | 2.2.2 | 5 Sangkats                 | 12 times             | Bavet City           | 1 year  | 48,325  | 2,628  | 2.40  | -     | -        | 2.40     | 976.0054   |
| 87              | Provide children all kind of vaccine                            | 2.2.7 | 5 Sangkats                 | 12 times             | Bavet City           | 1 year  | 4,573   | 225    | -     | 2.40  | -        | 2.40     | 232.9066   |
| 88              | Provide children the nourishment campaign                       | 2.2.2 | 5 Sangkats                 | 12 times             | Bavet City           | 1 year  | 4,573   | 225    | -     | 2.40  | -        | 2.40     | 224.8753   |
| 89              | Disseminate risks to pregnant women                             | 2.2.6 | 5 Sangkats                 | 12 times             | Bavet City           | 1 year  | 2,628   | 2,628  | -     | 2.40  | -        | 2.40     | 96.9231    |
| 90              | Provide iron tablet to pregnant and reproductive age            | 2.2.3 | 5 Sangkats                 | 12 times             | Bavet City           | 1 year  | 2,628   | 2,628  | -     | 2.40  | -        | 2.40     | 87.6923    |
| 91              | Build district hospital   | 2.2.2 | Nhor communes              | 1 Place              | Kampong Rou District | 3 years | 66,209  | 35,029 | -     | -     | 200.00   | 200.00   | 31.6335    |
| 92              | Disseminate to pregnant women to go to the health center        | 2.2.8 | 200303/08                  | 3 Courses            | Romdoul District     | 15 Days | 85      | 75     | -     | -     | 0.60     | 0.60     | 6.3728     |
| 93              | Disseminate the safety of motherhood                            | 2.2.8 | 200704                     | 2 times              | Svay Teap District   | 1 day   | 65      | 65     | -     | -     | 1.20     | 1.20     | 2,1930     |
| 94              | Build labor room for pregnant women before delivery             | 2.2.8 | 200105/08                  | 2 buildings          | Chantrea District    | 1 month | 10,672  | 5,432  | -     | -     | 5,432.00 | 5,432.00 | 1.0770     |
|                 | Sub-total   |       |                            |                      |                      |         | 284,733 | 56,819 | 7.20  | 9.60  | 5,624.80 | 5,641.60 | 11,759.214 |
| <i>2.4 Work</i> |   |       |                            |                      |                      |         |         |        |       |       |          |          |            |
| 95              | Research the job and training requirement                       | 2.3.6 | 8 Districts/Cities         | 93 Communes/Sangkats | Labor Department     | 2 years | 72      | -      | 17.28 | -     | -        | 17.28    | 65.2747    |
| 96              | Train on pig raising skill                                      | 1.2.3 | SvayChek-Minchey           | 2 courses            | Labor Department     | 7 days  | 60      | 26     | 4.00  | -     | -        | 4.00     | 16.4835    |
| 97              | Train on fish hatchery skill                                    | 1.2.3 | Songke Commune             | 1 course             | Labor Department     | 7 days  | 30      | 12     | 2.00  | -     | -        | 2.00     | 10.9890    |
| 98              | Train on teaching methodologies to teacher in-training          | 2.3.6 | Vocational training center | 3 courses            | Labor Department     | 2 years | 60      | -      | -     | 12.00 | -        | 12.00    | 10.0000    |
| 99              | Train work inspection and settlement procedure of labor dispute | 2.3.6 | Labor Department           | 3 courses            | Labor Department     | 2 years | 30      | -      | -     | 6.00  | -        | 6.00     | 8.5714     |

| 1                               | 2   | 3     | 4  | 5                   | 6                     | 7        | 8      | 9   | 10    | 11    | 12   | 13    | 14         |
|---------------------------------|---|-------|--|---------------------|-----------------------|----------|--------|-----|-------|-------|------|-------|------------|
| 100                             | Train on wedding salon skill  | 2.3.6 | 8 Districts/<br>Town                     | 1 course            | Labor<br>Department   | 4 months | 20     | 20  | -     | 8.00  | -    | 8.00  | 5.4945     |
| 101                             | Train on vegetable growing skill  | 2.3.1 | Chrong<br>Porpel<br>commune<br>Svay Chek | 2<br>courses        | Labor<br>Department   | 7 days   | 60     | 37  | -     | -     | 4.00 | 4.00  | 5.4945     |
| 102                             | Train on motorbike repairing skill  | 2.3.6 | 8 Districts/<br>Cities                   | 1 course            | Labor<br>Department   | 4 months | 20     | 20  | -     | -     | 8.00 | 8.00  | 4.5788     |
| 103                             | Basic computer  | 2.3.6 | 8 Districts/<br>Cities                   | 1 course            | Labor<br>Department   | 4 months | 20     | 9   | -     | -     | 8.00 | 8.00  | 3.6630     |
| Sub-total                       |   |       |  |                     |                       |          | 372    | 124 | 23    | 26    | 20   | 69    | 131        |
| <b>2.5 Plan</b>                 |   |       |  |                     |                       |          |        |     |       |       |      |       |            |
| 104                             | Collect statistical data of paralyzed children, handicapped children and orphan, poor families in all villages and advise them to send the kids to school | 2.1.1 | 5 Sangkats                               | 3 times             | Bavet City            | 1 year   | 4,573  | 225 | 1.20  | -     | -    | 1.20  | 578.2508   |
| 105                             | Mid-term control of provincial development plan   | 2.4.1 | Svay Rieng Province                      | 4 courses           | Plan<br>Department    | 2 years  | 60     | 20  | -     | 4.60  | -    | 4.60  | 19.5095    |
| 106                             | Train on creating the district planning task to team of plan  | 2.4.1 | Romdoul District                         | 5 courses           | Romdoul District      | 2 months | 46     | 12  | -     | -     | 4.78 | 4.78  | 3.8961     |
| 107                             | Train on planning task and investment program   | 2.4.1 | 5 Sangkats                               | 3 courses           | Bavet City            | 1 year   | 70     | 2   | -     | -     | 1.20 | 1.20  | 1.7211     |
| Sub-total                       |   |       |  |                     |                       |          | 4,749  | 259 | 1     | 5     | 6    | 12    | 603        |
| <b>2.6 Public Work</b>          |   |       |  |                     |                       |          |        |     |       |       |      |       |            |
| 108                             | Recruit more staffs   | 2.4.1 | Chantrea District                        | 9 persons           | Chantrea District     | 1 month  | 9      | 3   | 29.00 | -     | -    | 29    | 0.0283     |
| <b>2.7 Culture and religion</b> |   |       |  |                     |                       |          |        |     |       |       |      |       |            |
| 109                             | Announce the laws of patrimony protection   | 2.3.2 | 08 City-District                         | 30 courses          | Culture<br>Department | 9 months | 49,825 | 900 | 20.40 | -     | -    | 20.40 | 5,542.9252 |
| 110                             | Archaeology in Toul Sampov  | 2.3.2 | Basac Commune                            | 3,000m <sup>2</sup> | Culture<br>Department | 1 year   | 3,000  | -   | -     | 30.00 | -    | 30.00 | 146.5201   |



| 1                       | 2  | 3     | 4  | 5          | 6                        | 7      | 8       | 9      | 10     | 11 | 12     | 13     | 14      |
|-------------------------|--|-------|--|------------|--------------------------|--------|---------|--------|--------|----|--------|--------|---------|
| 111                     | Make Toul Boran blueprint  | 2.3.2 | All communes in Kampong Rou District                   | 3 times    | Kampong Rou District     | 1 year | 66,209  | 35,209 | -      | -  | 167.00 | 167.00 | 37.8845 |
|                         | Sub-total  |       |  |            |                          |        | 119,034 | 36,109 | 20     | 30 | 167    | 217    | 5,727   |
| <i>2.8 Women affair</i> |  |       |  |            |                          |        |         |        |        |    |        |        |         |
| 112                     | Announce the enhancement of social morality, women value and Cambodian family to people in 36 targeted communes                    | 2.4.2 | 5 Districts=35 communes                                | 36 courses | Women affair Department  | 1 year | 2,160   | 1,080  | 12.30  | -  | -      | 12.30  | 70.5932 |
| 113                     | Prepare 08 March workshop  | 2.4.3 | 5 Sangkats in Bavet City + all communes in Kampong Rou | 51 times   | Bavet City – Kampong Rou | 1 year | 55,975  | 10,055 | 165.00 | -  | -      | 165.00 | 61.9695 |
| 114                     | Announce the right of women and children   | 2.4.1 | 200702/03/04/05/06/07/08/09/11                         | 18 times   | Svay Teap district       | 1 day  | 1,088   | 538    | 4.60   | -  | -      | 4.60   | 57.4547 |
| 115                     | Training course for preventing domestic violence and women and children trafficking  | 2.4.3 | 6 districts=65 communes                                | 65 times   | Women affair Department  | 1 year | 3,250   | 1,666  | 14.35  | -  | -      | 14.35  | 56.5145 |
| 116                     | The conference to strengthen the ability with related people at commune level, commune caregiver, commune council, village leaders | 2.4.1 | 5 districts =35 communes                               | 2 times    | Women affair Department  | 1 year | 300     | 133    | 2.87   | -  | -      | 2.87   | 49.1025 |
| 117                     | Announce the laws of domestic violence prevention to people in 45 places   | 2.4.3 | 45 communes/san gkats                                  | 45 courses | Women affair Department  | 1 year | 2,168   | 1,000  | 14.35  | -  | -      | 14.35  | 47.8922 |
| 118                     | Announce the laws preventing women and children trafficking  | 2.4.2 | 80 communes  | 80 courses | Women affair Department  | 1 year | 2,333   | 1,333  | 16.40  | -  | -      | 16.40  | 42.7269 |

| 1   | 2   | 3     | 4  | 5          | 6                                | 7       | 8      | 9     | 10       | 11    | 12 | 13      | 14      |
|-----|---|-------|--|------------|----------------------------------|---------|--------|-------|----------|-------|----|---------|---------|
| 119 | Health and nourishment enhancement course   | 2.4.2 | 690 districts, communes, villages  | 30 courses | Women affair Department          | 1 year  | 25,875 | 1,300 | 21.32    | -     | -  | 21.32   | 42.4353 |
| 120 | Six months conference of female team for food invention and handcraft goods   | 2.3.1 | 3 districts=11 communes  | 2 times    | Women affair Department          | 1 year  | 43     | 33    | 0.20     | -     | -  | 0.82    | 26.4097 |
| 121 | Workshop with village women and commune leaders   | 2.4.1 | 200301-10  | 2 courses  | Romdoul District                 | 3 days  | 90     | 90    | 2.00     | -     | -  | 2.00    | 26.3158 |
| 122 | Announce the laws of domestic violence  | 2.4.3 | 200702/03/04/05/06/07/08/09/11+5 sangkats/Bavet + Women Affairs Department (5 districts =35 communes | 57 courses | Bavet City – Svay Teap district  | 1 month | 51,573 | 3,166 | 1,235.80 | -     | -  | 1235.80 | 16.1994 |
| 123 | Strengthen women's ability in leadership  | 2.4.1 | All communes of Kampong Rou district + Svay Teap district  | 16 courses | Kampong Rou + Svay Teap district | 1 year  | 1,161  | 1,161 | 33.20    | -     | -  | 33.20   | 12.5072 |
| 124 | Meet and educate parents in villages  | 2.4.3 | 34 communes  | 1 time     | Women Affairs Department         | 1 year  | 1,500  | 666   | 10.25    | -     | -  | 10.25   | 11.6956 |
| 125 | Support village community kindergarten  | 2.1.1 | 34 communes  | 1 time     | Women Affairs Department         | 1 year  | 1,500  | 666   | 10.25    | -     | -  | 10.25   | 11.3301 |
| 126 | Prepare the forum for those who provide care for children and women affair, member of commune and village council, and female village leaders | 2.4.1 | 80 communes  | 1 time     | Women Affairs Department         | 1 year  | 80     | 80    | 4.10     | -     | -  | 4.10    | 7.1826  |
| 127 | Workshop with female members of council of city-district and of board of governors  | 2.4.1 | District level   | 2 times    | Women Affairs Department         | 1 year  | 3,400  | 3,400 | -        | 18.45 | -  | 18.45   | 5.9832  |
| 128 | Training course for women about up to date styles and small business  | 2.3.1 | 3 districts = 11 communes  | 1 course   | Women Affairs Department         | 1 year  | 43     | 33    | -        | 4.10  | -  | 4.10    | 5.6373  |
| 129 | Reflective meeting after preparing workshop   | 2.4.4 | 7 districts / Cities   | 1 time     | Women Affairs Department         | 1 year  | 80     | 80    | -        | 3.28  | -  | 3.28    | 4.2826  |

| 1   | 2  | 3     | 4                          | 5          | 6                        | 7       | 8     | 9     | 10 | 11    | 12 | 13    | 14     |
|-----|--|-------|----------------------------|------------|--------------------------|---------|-------|-------|----|-------|----|-------|--------|
|     |  |       |                            |            |                          |         |       |       |    |       |    |       |        |
| 130 | Workshop on educating about HIV and AIDS using video clips in communities                                | 2.2.5 | District and commune level | 30 courses | Women Affairs Department | Year    | 1,755 | 1,000 | -  | 16.40 | -  | 16.40 | 4.2762 |
| 131 | Participate in day of 08 March, 01 June and breast-feeding in commune level                              | 2.2.2 | 45 communes/sang kats      | 45 times   | Women Affairs Department | 1 year  | 666   | 500   | -  | 20.50 | -  | 20.50 | 4.2192 |
| 132 | Office of women affair prepare conferences with related offices and organizations in city-district level | 2.4.2 | District level             | 2 times    | Women Affairs Department | 1 year  | 1,600 | 1,500 | -  | 16.40 | -  | 16.40 | 3.4112 |
| 133 | Training course for female team about food packaging and reinvestment fund group                         | 2.3.1 | 3 districts = 11 communes  | 1 course   | Women Affairs Department | 1 year  | 25    | 19    | -  | 4.10  | -  | 4.10  | 3.1742 |
| 134 | Prepare monthly and trimester workshop with city-district office of women affair                         | 2.4.2 | Provincial level           | 4 times    | Women Affairs Department | 1 year  | 500   | 150   | -  | 8.20  | -  | 8.20  | 2.4366 |
| 135 | Prepare community workshop about women participation in leadership and politics                          | 2.4.1 | Provincial level           | 1 time     | Women Affairs Department | 1 year  | 270   | 270   | -  | 5.74  | -  | 5.74  | 2.3496 |
| 136 | Strengthen the ability of Kh.K.S.K   | 2.4.1 | All communes and offices   | 1 time     | Kampong Rou district     | 3 years | 312   | 120   | -  | 8.00  | -  | 8.00  | 2.3292 |
| 137 | Meeting with related people in district level before investing in commune and check integration graph    | 2.4.1 | 45 communes/sang kats      | 2 times    | Women Affairs Department | 1 year  | 150   | 100   | -  | 6.15  | -  | 6.15  | 2.3148 |
| 138 | Announce and educate about significance of small children education in community                         | 2.4.1 | 5 districts = 45 communes  | 1 time     | Women Affairs Department | 1 year  | 190   | 133   | -  | 25.65 | -  | 25.65 | 2.0206 |

| 1   | 2  | 3     | 4                         | 5         | 6                        | 7      | 8   | 9   | 10 | 11    | 12    | 13    | 14     |
|-----|--|-------|---------------------------|-----------|--------------------------|--------|-----|-----|----|-------|-------|-------|--------|
| 139 | Workshop showing goods of female team of food invention and local handcraft  | 2.3.1 | 5 districts = 35 communes | 1 time    | Women Affairs Department | 1 year | 100 | 66  | -  | 12.30 | -     | 12.30 | 1.5652 |
| 140 | Training course about knowledge of gender and important skills for village leaders   | 2.3.1 | 8 districts / cities      | 1 time    | Women Affairs Department | 1 year | 40  | 40  | -  | 4.92  | -     | 4.92  | 1.3587 |
| 141 | Outer province visit for female team of food invention and local handcraft   | 2.3.1 | 3 districts = 11 communes | 1 time    | Women Affairs Department | 1 year | 10  | 10  | -  | 4.10  | -     | 4.10  | 1.1870 |
| 142 | Training course for educating parents and family   | 2.4.3 | 34 communes               | 1 time    | Women Affairs Department | 1 year | 250 | 125 | -  | -     | 22.55 | 22.55 | 0.9137 |
| 143 | Train Kh.K.N.K about community kindergarten work and children education  | 2.1.1 | Province                  | 1 time    | Women Affairs Department | 1 year | 130 | 116 | -  | -     | 14.35 | 14.35 | 0.9001 |
| 144 | Forum facilitating training course for district official of women affair with those who provide care for women and children affair | 2.3.1 | Province level            | 1 time    | Women Affairs Department | 1 year | 300 | 300 | -  | -     | 14.35 | 14.35 | 0.7832 |
| 145 | Hairdressing and beauty salon vocational training course   | 2.3.1 | 5 districts = 35 communes | 4 courses | Women Affairs Department | 1 year | 24  | 24  | -  | -     | 16.40 | 16.40 | 0.6626 |
| 146 | Workshop with women who are members of city-district council and board of governors  | 2.4.1 | District level            | 2 times   | Women Affairs Department | 1 year | 180 | 100 | -  | -     | 9.84  | 9.84  | 0.5482 |
| 147 | Meeting for reporting after returning from forum   | 2.4.3 | 45 communes               | 1 time    | Women Affairs Department | 1 year | 40  | 40  | -  | -     | 6.15  | 6.15  | 0.3249 |

| 1                                     | 2   | 3     | 4                                 | 5          | 6                        | 7      | 8       | 9      | 10    | 11    | 12    | 13    | 14      |
|---------------------------------------|---|-------|-----------------------------------|------------|--------------------------|--------|---------|--------|-------|-------|-------|-------|---------|
| 148                                   | Strengthen the ability for provincial and district teachers   | 2.4.1 | Province                          | 71 times   | Women Affairs Department | 1 year | 25      | 25     | -     | -     | 6.15  | 6.15  | 0.2944  |
| 149                                   | Inner provincial visit for community team work in villages  | 2.1.1 | 5 districts                       | 1 time     | Women Affairs Department | 1 year | 25      | 23     | -     | -     | 10.25 | 10.25 | 0.2630  |
| 150                                   | Training course for nourishment announcer in commune level  | 2.2.2 | District and commune level        | 2 courses  | Women Affairs Department | 1 year | 80      | 80     | -     | -     | 8.20  | 8.20  | 0.2437  |
| 151                                   | Training course about important skills for provincial, district, Kh.N.K.N, village chief and village representative team work | 2.3.1 | 50 communes/sang kats             | 45 times   | Women Affairs Department | 1 year | 80      | 66     | -     | -     | 26.65 | 26.65 | 0.1649  |
| 152                                   | Visiting and meeting to other provinces   | 2.3.1 | Other provinces                   | 1 time     | Women Affairs Department | 1 year | 30      | 30     | -     | -     | 12.30 | 12.30 | 0.1523  |
| 153                                   | Prepare forum for those who provide care for women and children affair and commune council                                    | 2.4.1 | 45 communes/sang kat              | 2 times    | Women Affairs Department | 1 year | 40      | 40     | -     | -     | 14.35 | 14.35 | 0.1462  |
| 154                                   | Provincial and district main teachers training course about nourishment   | 2.3.1 | 690 districts, communes, villages | 30 courses | Women Affairs Department | 1 year | 60      | 50     | -     | -     | 12.30 | 12.30 | 0.1462  |
| 155                                   | Tailor vocational training course   | 2.3.1 | District level                    | 2 courses  | Women Affairs Department | 1 year | 20      | 20     | -     | -     | 16.40 | 16.40 | 0.0122  |
| 156                                   | Kroma producing training course   | 2.3.1 | District level                    | 2 courses  | Women Affairs Department | 1 year | 20      | 20     | -     | -     | 20.50 | 20.50 | 0.0049  |
|                                       | Sub-total   |       |                                   |            |                          |        | 159,539 | 31,450 | 1,547 | 159   | 211   | 1,918 | 592     |
| <i>2.9 Economy and Social Affairs</i> |   |       |                                   |            |                          |        |         |        |       |       |       |       |         |
| 157                                   | Training about system of financial management and administration under nation level   | 2.3.1 | Svay Teap district                | 1 course   | Svay Teap district       | 3 days | 30      | 8      | 1.00  | -     | -     | 1.00  | 10.9312 |
| 158                                   | Training about procurement affair and district development project  | 2.3.1 | Svay Teap district                | 1 course   | Svay Teap district       | 3 days | 30      | 8      | 1.00  | -     | -     | 1.00  | 9.7166  |
| 159                                   | Disseminate AIDS  | 2.2.5 | 2 districts                       | 14 courses | Social Affair Department | 1 year | 25      | 12     | -     | 10.00 | -     | 10.00 | 2.2189  |

| 1                             | 2  | 3     | 4   | 5           | 6                        | 7       | 8       | 9       | 10        | 11    | 12    | 13        | 14         |
|-------------------------------|--|-------|---|-------------|--------------------------|---------|---------|---------|-----------|-------|-------|-----------|------------|
| 160                           | Integration  | 2.4.1 | 8 city – districts                                | 7 courses   | Social Affair Department | 1 year  | 85      | 37      | -         | 20.00 | -     | 20.00     | 0.4191     |
| 161                           | Vocational skill training  | 2.3.1 | Svay Chrum  | 1 course    | Social Affair Department | 4 moths | 15      | 15      | -         | -     | 20.00 | 20.00     | 0.2589     |
|                               | Sub-total  |       |   |             |                          |         | 185     | 80      | 2         | 30    | 20    | 52        | 24         |
| <i>2.10 Business</i>          |  |       |   |             |                          |         |         |         |           |       |       |           |            |
| 162                           | Announce the proclamation No. 172 about advertising using bill board | 2.3.1 | 8 city – districts                                | 9 times     | Cult Department          | 1 year  | 500     | 300     | 6.00      | -     | -     | 6.00      | 30.5250    |
| <i>2.11 Information</i>       |  |       |   |             |                          |         |         |         |           |       |       |           |            |
| 163                           | Record all development activities of all department, town, commune   | 2.3.1 | Province – department – district – city – commune | 950 times   | Information Department   | 1 year  | 361,314 | 190,485 | 45,920.00 | -     | -     | 45,920.00 | 60.5257    |
| <i>2.12 Administration</i>    |  |       |   |             |                          |         |         |         |           |       |       |           |            |
| 164                           | Officer training   | 2.3.1 | Svay Rieng City                                   | 3 courses   | Land Department          | 3 year  | 50      | 2       | 12.30     | 12.30 | 12.30 | 36.90     | 0.1895     |
| <i>2.13 Rural development</i> |  |       |   |             |                          |         |         |         |           |       |       |           |            |
| 165                           | Announce to people to know about the benefit of using clean water    | 2.3.4 | 5 sangkats of Bavet city                          | 3 times     | Bavet city               | 1 year  | 48,325  | 2,638   | 1.20      | -     | -     | 1.20      | 2,885.5813 |
| 166                           | Educate people to use toilet   | 2.3.3 | 5 sangkats of Bavet city                          | 12 times    | Bavet city               | 1 year  | 31,331  | 16,014  | 2.40      | -     | -     | 2.40      | 1,430.6393 |
| 167                           | Announce about washing hands with soap                               | 2.3.5 | 5 sangkats of Bavet city                          | 15 times    | Bavet city               | 1 week  | 48,325  | 2,628   | 6.00      | -     | -     | 6.00      | 1,086.3365 |
| 168                           | Announce to people to build toilet                                   | 2.3.3 | 5 sangkats of Bavet city                          | 12 times    | Bavet city               | 1 year  | 31,331  | 16,014  | 9.80      | -     | -     | 9.80      | 336.8852   |
| 169                           | Encourage children to get 7 types of vaccination                     | 2.2.7 | 8 city - districts                                | 90 courses  | development Department   | 1 year  | 35,370  | 13,160  | 25.00     | -     | -     | 25.00     | 275.4085   |
| 170                           | AIDS and bird flu spreading  | 2.2.7 | 8 city - districts                                | 112 courses | development Department   | 1 year  | 37,423  | 14,325  | 30.00     | -     | -     | 30.00     | 250.6616   |

| 1   | 2  | 3     | 4  | 5                        | 6   | 7      | 8      | 9      | 10     | 11     | 12 | 13     | 14       |
|-----|--|-------|--|--------------------------|---|--------|--------|--------|--------|--------|----|--------|----------|
| 171 | Encourage to build toilet for every family and educate to know how to use toilet | 2.3.3 | 8 cities-districts   | 64 courses               | Development Department                                  | 1 year | 22,195 | 9,988  | 19.00  | -      | -  | 19.00  | 249.4026 |
| 172 | Educate about house cleaning   | 2.3.3 | 8 cities-districts   | 78 courses               | Development Department                                  | 1 year | 27,768 | 12,495 | 29.00  | -      | -  | 29.00  | 198.4180 |
| 173 | Build toilet in school   | 2.3.3 | 6 districts  | 28 toilets               | Development Department                                  | 1 year | 7,195  | 3,238  | 14.00  | -      | -  | 14.00  | 122.6329 |
| 174 | Announce the health and hygiene  | 2.3.3 | 100704/05/07/11  | 17 times                 | Svay Teap district                                      | 1 year | 5,367  | 4,803  | 7.00   | -      | -  | 7.00   | 93.1232  |
| 175 | Build toilet basin top in each house   | 2.3.3 | 6 districts  | 435 toilets              | Development Department                                  | 1 year | 2,175  | 925    | 17.00  | -      | -  | 17.00  | 31.3325  |
| 176 | Water testing (bacteria)   | 2.3.4 | All districts  | 3250 places              | Development Department                                  | 1 year | 16,250 | 8,450  | 91.00  | -      | -  | 91.00  | 25.7905  |
| 177 | Clean water and hygiene at school and community program                          | 2.3.4 | Svay Chrum, Romdoul, Chantrea, Svay Teap and Kampong Rou district  | 12 schools – 35 villages | Development Department                                  | 1 year | 12,195 | 3,238  | 115.00 | -      | -  | 115.00 | 23.3063  |
| 178 | Build toilet   | 2.3.3 | 200601-07 + 5 communes of Bavet City + 200501-17                   | 1590 toilets             | Svay Rieng City, Bavet City, Svay Chrum                 | 1 year | 37,151 | 18,986 | 859.00 | -      | -  | 859.00 | 18.0316  |
| 179 | Educate the goal of rural economic development                                   | 2.3.1 | Rormeas Haek district  | 15 courses               | Development Department                                  | 1 year | 750    | 150    | 4.00   | -      | -  | 4.00   | 17.6609  |
| 180 | Strengthen the road preserving committee   | 2.3.1 | All communes   | 1 course                 | Kampong Rou district                                    | 1 year | 550    | 175    | 3.00   | -      | -  | 3.00   | 13.1390  |
| 181 | Water testing (Arsenic)  | 2.3.4 | All districts  | 250 places               | Development Department                                  | 1 year | 1,250  | 650    | 15.00  | -      | -  | 15.00  | 12.5589  |
| 182 | Provide clean water purifier   | 2.3.4 | 200103/04/05/08/09/10+5 communes of Bavet city + all city-district | 2993 barrels             | Chantrea district + Bavet City + Development Department | 1 year | 12,958 | 6,172  | 468.00 | -      | -  | 468.00 | 11.2450  |
| 183 | Establish committee of banking in money, animal and rice                         | 2.3.1 | Rormeas Haek district  | 15 courses               | Development Department                                  | 1 year | 750    | 150    | 4.00   | -      | -  | 4.00   | 10.0078  |
| 184 | Enhancement of washing hands with soap   | 2.3.3 | Svay Chrum, Romdoul, Chantrea, Svay Teap and Kampong Rou district  | 6 communes, 34 villages  | Development Department                                  | 1 year | 4,835  | 2,178  | -      | 130.00 | -  | 130.00 | 8.4077   |

| 1   | 2   | 3      | 4  | 5                       | 6                      | 7      | 8     | 9     | 10 | 11      | 12 | 13      | 14     |
|-----|---|--------|--|-------------------------|------------------------|--------|-------|-------|----|---------|----|---------|--------|
| 185 | Disseminate to the whole community that leads hygiene CLTS      | 2.3.3  | Svay Chrum District /Romdoul/Chantrea/Svay Teap              | 9 Communes- 35 Villages | Development Department | 1 year | 4,935 | 2,238 | -  | 163.00  |    | 163.00  | 7.0343 |
| 186 | Establish committee of cash credit                              | 2.3.1  | Romeas Haek district/Svay Chrum/Kampong Rou/ Svay Rieng City | 15 courses              | Development Department | 1 year | 250   | 80    | -  | 2.00    |    | 2.00    | 6.2794 |
| 187 | Educate about clean water consumption and safe water storage    | 2.3.4. | all Districts  | 75 places               | Development Department | 1 year | 1,875 | 975   | -  | 45.00   | -  | 45.00   | 5.7561 |
| 188 | Train on clean water usage in the family and safe water storage | 2.3.4  | all Districts  | 35 groups               | Development Department | 1 year | 700   | 364   | -  | 14.00   | -  | 14.00   | 5.6515 |
| 189 | Evaluate credit actions   | 2.3.1  | Romeas Haek district/Svay Chrum/Kampong Rou/ Svay Rieng City | 30 courses              | Development Department | 1 year | 500   | 160   | -  | 4.00    | -  | 4.00    | 5.4945 |
| 190 | Train how to use and maintain well                              | 2.3.5  | all Districts  | 60 places               | Development Department | 1 year | 1,500 | 780   | -  | 24.00   | -  | 24.00   | 4.1209 |
| 191 | Train how to use and maintain rain water pond                   | 2.3.4  | all Districts  | 80 places               | Development Department | 1 year | 2,000 | 1,040 | -  | 32.00   | -  | 32.00   | 3.9246 |
| 192 | Train about roles and duties to (KhAPh))                        | 2.3.1  | all Districts  | 15 courses              | Kompong Rou district   | 1 year | 560   | 240   | -  | 10.00   | -  | 10.00   | 2.3411 |
| 193 | Provide Jar to stock rain water                                 | 2.3.4  | all Districts  | 770 jars                | Development Department | 1 year | 3,850 | 3,850 | -  | 200.00  | -  | 200.00  | 1.5110 |
| 194 | Build toilets in the communities (family-public)                | 2.3.3  | 6 Districts  | 1,300 toilets           | Development Department | 1 year | 6,500 | 2,925 | -  | 1433.00 | -  | 1433.00 | 1.1393 |
| 195 | Build rain water reservoir                                      | 2.3.4  | all Districts  | 30 reserviors           | Development Department | 1 year | 4,550 | 2,366 | -  | 490.00  | -  | 490.00  | 0.7580 |
| 196 | Gather water user group and hygiene                             | 2.3.4  | all Districts  | 35 groups               | Development Department | 1 year | 1,050 | 546   | -  | 91.00   | -  | 91.00   | 0.6883 |



| 1   | 2  | 3      | 4                            | 5          | 6                      | 7       | 8     | 9     | 10 | 11     | 12        | 13        | 14     |
|-----|--|--------|------------------------------|------------|------------------------|---------|-------|-------|----|--------|-----------|-----------|--------|
| 197 | Build pump well  | 2.3.5  | 200103/09/10                 | 3 wells    | Chantrea district      | 1 month | 30    | 25    | -  | 25.00  | -         | 25.00     | 0.5473 |
| 198 | Repair pump well   | 2..3.5 | 6 Districts                  | 200 wells  | Development Department | 1 year  | 3,000 | 1,560 | -  | 520.00 | -         | 520.00    | 0.5453 |
| 199 | Build new pump well  | 2.3.5  | all Districts                | 30 wells   | Development Department | 1 year  | 900   | 468   | -  | 180.00 | -         | 180.00    | 0.4239 |
| 200 | Dig community pond   | 2.3.4  | Chantrea district/Svay Chrum | 8 ponds    | Development Department | 1 year  | 1,200 | 624   | -  | 960.00 | -         | 960.00    | 0.2276 |
| 201 | Train on English language                                    | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 67    | -     | -  | 15.00  | -         | 15.00     | 0.1963 |
| 202 | Train on electronic skills                                   | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 36    | 20    | -  | 20.00  | -         | 20.00     | 0.1243 |
| 203 | Train on motorbike repairing skills                          | 2.3.1  | Center                       | 2 coures   | Development Department | 1 year  | 35    | -     | -  | -      | 23.00     | 23.00     | 0.1242 |
| 204 | Train on agriculture machinery skills                        | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 36    | -     | -  | -      | 22.00     | 22.00     | 0.1233 |
| 205 | Train on chicken raising skills                              | 2.3.1  | at the Commune               | 2 courses  | Development Department | 1 year  | 60    | 25    | -  | -      | 17.00     | 17.00     | 0.1108 |
| 206 | Train agriculture machinery skills (mobilize among communes) | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 45    | -     | -  | -      | 17.00     | 17.00     | 0.0997 |
| 207 | Repair pump well Afridev                                     | 2.3.5  | 8 districts/Cities           | 100 wells  | Development Department | 3 years | 4,200 | -     | -  | -      | 179000.00 | 179000.00 | 0.0939 |
| 208 | control and assess KhAph                                     | 2.3.1  | 8 districts/Cities           | 80 courses | Development Department | 1 year  | 2,400 | 960   | -  | -      | 8000.00   | 8000.00   | 0.0885 |
| 209 | Train on hairdressing and beauty surgery skill               | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 34    | -     | -  | -      | 22.00     | 22.00     | 0.0873 |
| 210 | Train on rice production skills                              | 2.3.1  | at the Commune               | 2 courses  | Development Department | 1 year  | 60    | 32    | -  | -      | 19.00     | 19.00     | 0.0793 |
| 211 | Train on tailor skills                                       | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 27    | -     | -  | -      | 22.00     | 22.00     | 0.0771 |
| 212 | Train on mushroom planting skills                            | 2.3.1  | at the Commune               | 2 courses  | Development Department | 1 year  | 60    | 42    | -  | -      | 15.00     | 15.00     | 0.0754 |
| 213 | Train on bamboo furniture manufacturing skill                | 2.3.1  | Center                       | 2 courses  | Development Department | 1 year  | 22    | 42    | -  | -      | 20.00     | 20.00     | 0.0553 |
| 214 | Train on vegetation skills                                   | 2.3.1  | at the Commune               | 2 courses  | Development Department | 1 year  | 60    | 34    | -  | -      | 19.00     | 19.00     | 0.0397 |

| 1   | 2   | 3     | 4                        | 5            | 6  | 7       | 8       | 9       | 10      | 11      | 12        | 13        | 14         |
|---|---|-------|--------------------------|--------------|--|---------|---------|---------|---------|---------|-----------|-----------|------------|
| 215   | Strengthen KhAph ability                                | 2.3.1 | 8 City -district         | 80 courses   | Development Department   | 1 year  | 2,400   | 960     | -       | -       | 40000.00  | 40000.00  | 0.0181     |
| 216   | Create diversified development village (sample village) | 2.3.1 | 8 City -district         | 29 villages  | Development Department   | 1 year  | 29,000  | 15,000  | -       | -       | 290000.00 | 290000.00 | 0.0141     |
| 217   | Prepare to create new KhAph                             | 2.3.1 | 8 City -district         | 150 villages | Development Department   | 1 year  | 1,050   | 420     | -       | -       | 60000.00  | 60000.00  | 0.0054     |
| 218   | Organize one village one product                        | 2.3.1 | 8 City -district         | 16 villages  | Development Department   | 1 year  | 1,480   | 1,200   | -       | -       | 128000.00 | 128000.00 | 0.0032     |
| 219   | Educate in external system                              | 2.1.1 | 8 City -district         | 26 classes   | Development Department   | 1 year  | 520     | 300     | -       | -       | 26000.00  | 26000.00  | 0.0029     |
| 220   | Maintain and repair the building so as the furniture    | 2.3.2 | Center                   | 4 buildings  | Development Department   | 1 year  | 4       | -       | -       | -       | 18.00     | 18.00     | 0.0007     |
|   | Sub-Total   |       |                          |              |  |         | 458,490 | 173,643 | 1719.00 | 4358.00 | 731214.00 | 737291.00 | 7148.0000  |
| <i>2.14 service sector and poverty</i>  |   |       |                          |              |  |         |         |         |         |         |           |           |            |
| 221   | Provide low interest credit                             | 2.3.1 | 200301/04/06/08          | 7 groups     | Romdoul district   | 1 year  | 750     | 350     | 14.00   | -       | -         | 14.00     | 7.2296     |
| 222   | Inspect at provincial departments and institutions      | 2.3.1 | Department-district-City | 60 times     | National assembly - senate relations and inspection department | 1 year  | 120     | 50      | 24.00   | -       | -         | 24.00     | 5.1282     |
| 223   | Enhance the committee capacity                          | 2.3.1 | Svay Chrum district      | 4 courses    | Svay Chrum district  | 15 days | 28      | 24      | -       | 3.20    | -         | 3.20      | 2.4625     |
| 224   | Receive and settle the complaint                        | 3.1.3 | district-City            | 30 times     | National assembly - senate relations and inspection department | 1 year  | 30      | 8       | -       | -       | 12.00     | 12.00     | 1.9231     |
|   | Sub-Total   |       |                          |              |  |         | 928     | 432     | 38      | 3       | 12        | 53        | 17         |
| <b>3. Land, Natural Resources, Environment Disaster and Climate Change Management</b> |   |       |                          |              |  |         |         |         |         |         |           |           |            |
| <i>3.1 Environmental</i>  |   |       |                          |              |  |         |         |         |         |         |           |           |            |
| 225   | In-City public park maintenance                         | 3.1.2 | 200601/0204/07           | 8 parks      | Svay Rieng City  | 1 year  | 45,088  | 23,595  | 4.50    | -       | -         | 4.50      | 8,563.7227 |
| 226   | Collect rubbish from the market                         | 3.1.2 | 200601/02/04             | 5 tones      | Svay Rieng City  | 1 year  | 45,088  | 23,595  | 5.00    | -       | -         | 5.00      | 7,253.9769 |
| 227   | Make rubbish bin and put in the public                  | 3.1.2 | district-City            | 65 courses   | Environment department   | 3 years | 30,000  | 12,000  | 12.30   | -       | -         | 12.30     | 2,680.2466 |
| 228   | Produce educating banner on the public hygiene          | 3.1.2 | district-City            | 40 courses   | Environment department   | 3 years | 30,000  | 12,000  | 32.80   | -       | -         | 32.80     | 1,340.1233 |

|                        |   |       |  |                 |                                |          |         |         |      |        |         |         |            |
|------------------------|---|-------|--|-----------------|--------------------------------|----------|---------|---------|------|--------|---------|---------|------------|
| 229                    | Inspect and assess the environmental impacts  | 3.1.3 | district-City  | 45 times        | Environment department         | 3 years  | 19,500  | 7,800   | 6.15 | -      | -       | 6.15    | 1,161.4402 |
| 230                    | Collect the rubbish   | 3.1.2 | 8 district/City s                                      | 8 district/City | Provincial Office              | 3 years  | 217,890 | 1,059   |      | 160.00 | -       | 160.00  | 770.2559   |
| 231                    | Take measurement for those who anarchically waste the rubbish                       | 3.1.2 | 5 Sangkats at Bavet City                               | 9 times         | Bavet City                     | 1 year   | 48,325  | 2,628   | -    | 3.60   | -       | 3.60    | 678.9603   |
| 232                    | Education awareness on environmental law  | 3.1.2 | 200303/07/09+200702/03/04/05/06/07/08/09/11            | 24 courses      | Svay Teap district/Rom Doul    | 6 months | 2,324   | 1,167   | -    | 5.70   | -       | 5.70    | 493.3715   |
| 233                    | Celebrate Tree Planting Day   | 3.1.2 | 200503   | 35,000 trees    | Svay Chrum district            | 1 month  | 15,700  | 8,500   | -    | 8.00   | -       | 8.00    | 429.5654   |
| 234                    | International Environmental Day celebration- 5th June                               | 3.1.2 | district-City  | 3 courses       | Environment department         | 3 years  | 1,500   | -       | -    | 12.30  | -       | 12.30   | 223.3539   |
| 235                    | Cooperate with authority-capable institutions to evaluate the environmental impacts | 3.1.3 | district-City  | 22 courses      | Environment department         | 3 years  | 1,000   | 400     | -    | -      | 3.80    | 3.80    | 192.7897   |
| 236                    | Environmental awareness course  | 3.1.2 | Commune-Sangkat  | 65 courses      | Environment department         | 3 years  | 3,000   | -       | -    | -      | 30.75   | 30.75   | 107.2099   |
| 237                    | Purchase the land to store litter   | 3.1.2 | Svay Rieng City  | 2 hectares      | Provincial Office              | 1 year   | 59,313  | 21,313  | -    | -      | 220.00  | 220.00  | 106.7439   |
| 238                    | Tree Planting Day   | 3.1.2 | 200306   | 80 trees        | Romdoul district               | 1 month  | 120     | 66      | -    | -      | 4.00    | 4.00    | 6.7476     |
| 239                    | Prepare dumping and solid waste renovation location                                 | 3.1.2 | Bavet City   | 1 place         | Bavet City                     | 1 year   | 48,325  | 2,628   | -    | -      | 4000.00 | 4000.00 | 0.5601     |
|                        | Sub-Total   |       |  |                 |                                |          | 567,173 | 116,751 | 61   | 190    | 4,259   | 4,509   | 24,009     |
| <i>3.2 Agriculture</i> |   |       |  |                 |                                |          |         |         |      |        |         |         |            |
| 240                    | Deseminate about fishery law  | 1.2.3 | 200702/03/04/05/06/07/08/09/11+5 Sangkat at Bavet City | 24 times        | Bavet City /Svay Teap district | 1 month  | 32,419  | 16,552  | 7.00 | -      | -       | 7.00    | 2,691.2879 |

| 1   | 2  | 3     | 4   | 5                     | 6                                      | 7        | 8       | 9         | 10     | 11      | 12     | 13        | 14         |
|-----|--|-------|---|-----------------------|--|----------|---------|-----------|--------|---------|--------|-----------|------------|
| 241 | Fish Releasing Day   | 1.2.3 | 200305/06/09                                  | 10,000 fish           | Romdoul district                       | 2 months |         |           | -      | 5.00    | -      | 5.00      | 83.8507    |
|     | Sub-Total  |       |   |                       |  |          | 32,419  | 16,552    | 7.00   | 5.00    | -      | 12.00     | 2,775      |
|     | <i>3.3 Water Resources</i>   |       |   |                       |  |          |         |           |        |         |        |           |            |
| 242 | Build drainage along both side of the national road #1 with 1 meter diameter   | 2.3.2 | Sangkat Chhak Mtes / Prey Angkunh             | 1,000 meters          | Bavet City                             | 1 year   | 11,961  | 5,119     | 1.60   | -       | -      | 1.60      | 787.7371   |
| 243 | Build main ditch to flow liquid waste and one liquid waste refinery reservoir and build roads along both side of the main drainage | 2.3.2 | Sangkat Bavet                                 | 2,733 meters          | Bavet City                             | 1 year   | 48,325  | 2,628     | -      | 8800.00 | -      | 8800.00   | 1.3193     |
| 244 | Build drainage along both sides of the road  | 2.3.2 | Sangkat Chhrey Angkun                         | 430 meters            | Bavet City                             | 3 months | 1,611   | 837       | -      | -       | 200.00 | 200.00    | 0.8318     |
|     | <i>3.4 Land</i>  |       |   |                       |  |          |         |           |        |         |        |           |            |
| 245 | Disseminate Land Law   | 3.1.1 | 5 Sangkats at Bavet City +200301-08+200702-07 | 23 courses/times      | Bavet City /Svay Teap district/Rom Dou | 1 year   | 35,759  | 18,858    | 35,759 | -       | -      | 35,759.00 | 2,580.7878 |
| 246 | public land titling  | 3.1.1 | 8 districts/Cities                            | 135 titles            | Land management department             | 3 years  | 54,000  | 16,000    | 27.68  | -       | -      | 27.68     | 818.6935   |
| 247 | Create main urban plan   | 3.1.1 | Svay Rieng City                               | 5 plans               | Land management department             | 3 years  | 50,000  | 25,000.00 | 205.00 | -       | -      | 205.00    | 136.449    |
| 248 | Prepare land usage plan  | 3.1.1 | Svay Rieng City /Bavet City                   | 8 Sangkats            | Land management department             | 3 years  | 45,000  | 20,000    | 164.00 | -       | -      | 164.00    | 76.7525    |
| 249 | Systematic land titling  | 3.1.1 | Chantrea District                             | 1,000 plans           | Chantrea District                      | 2 years  | 16,002  | 8,368     | -      | 60.00   |        | 60.00     | 28.3810    |
| 250 | Settle the complaints  | 3.1.1 | 8 districts/Cities                            | 30 cases              | Land management department             | 3 years  | 200     | 100       | -      | 12.30   | -      | 36.90     | 7.5805     |
| 251 | Issue construction permits   | 3.1.3 | 8 districts/Cities                            | 197 units             | Land management department             | 3 years  | 197     | -         | -      | -       | 26.65  | 26.65     | 6.2032     |
| 252 | Issue ownership letter to the poor people  | 3.1.1 | Rom Dou district                              | 300 ownership letters | Land management department             | 3 years  | 300     | 150       | -      | -       | 110.70 | 110.70    | 3.4112     |
| 253 | Separate land titling by cycle   | 3.1.1 | 8 districts/Cities                            | 405 ownership letters | Land management department             | 3 years  | 400     | 300       | -      | -       | 82.00  | 82.00     | 2.7290     |
|     | Sub-Total  |       |   |                       |  |          | 201,858 | 88,776    | 36,156 | 72      | 219    | 36,472    | 3,661      |

| 1                               | 2   | 3     | 4                                | 5          | 6                         | 7        | 8      | 9      | 10   | 11    | 12     | 13     | 14         |
|---------------------------------|---|-------|----------------------------------|------------|---------------------------|----------|--------|--------|------|-------|--------|--------|------------|
| <i>3.5 Administration</i>       |   |       |                                  |            |                           |          |        |        |      |       |        |        |            |
| 254                             | Disseminate about commune-village safety policy                 | 4.1.1 | 200301-10                        | 35 courses | Romdoul district          | 6 months | 17,500 | 8,761  | 7.00 | -     | -      | 7.00   | 2,024.2915 |
| 255                             | Build main urban plan   | 3.1.1 | Chantrea District                | 1 plan     | Chantrea district         | 1 year   | 2,779  | 1,402  | -    | 2.00  | -      | 2.00   | 211.2344   |
| 256                             | Outside court dispute resolution procedure course               | 4.1.1 | 5 Sangkats of Bavet City         | 6 courses  | Bavet City                | 1 year   | 31,331 | 16,014 | -    | -     | 2.40   | 2.40   | 55.0246    |
|                                 | Sub-Total   |       |                                  |            |                           |          | 51,610 | 26,177 | 7    | 2     | 2      | 11     | 2291       |
| <i>3.6 Culture and religion</i> |   |       |                                  |            |                           |          |        |        |      |       |        |        |            |
| 257                             | Disseminate the sub-degree number 6 on the film management      | 4.1.1 | 8 City -district                 | 10 places  | Culture Department        | 1 year   | 500    | 400    | 6.00 | -     | -      | 6.00   | 152.6252   |
| 258                             | Organize place to showcase antique                              | 4.1.1 | Sangkat Svay Rieng               | 60 pieces  | Culture Department        | 1 year   | 60     | -      | -    | 50.00 | -      | 50.00  | 0.8791     |
| 259                             | Build culture office building                                   | 4.1.1 | Romeas Haek district+ Bavet City | 140 m2     | Culture Department        | 1 year   | 4      | 1      | -    | -     | 200.00 | 200.00 | 0.0220     |
|                                 | Sub-Total   |       |                                  |            |                           |          | 564    | 401    | 6    | 50    | 200    | 256    | 154        |
| <i>3.7 Social affairs</i>       |   |       |                                  |            |                           |          |        |        |      |       |        |        |            |
| 260                             | Program to prevent children and family to go begging in Vietnam | 4.1.1 | Bavet                            | 10 courses | Social affairs department | 1 year   | 283    | 174    | 0.40 | -     | -      | 0.40   | 418.6391   |
| 261                             | Replaced care program   | 4.1.1 | 4 Districts                      | 2 courses  | Social affairs department | 1 year   | 120    | 40     | 0.40 | -     | -      | 0.40   | 325.4438   |
| 262                             | Disseminate about bad deeds                                     | 4.1.1 | Svay Rieng City                  | 24 times   | Social affairs department | 1 year   | 120    | 10     | -    | 20    | -      | 20.00  | 4.7337     |
| 263                             | Child protection network  | 4.1.1 | 4 Districts                      | 14 courses | Social affairs department | 1 year   | 150    | 70     | -    | 20.00 | -      | 20.00  | 4.4379     |
| 264                             | Help victims of natural phenomenon                              | 4.1.1 | 8 City -district                 | 2 times    | Social affairs department | 1 year   | 1,000  | 250    | -    | -     | 300.00 | 300.00 | 1.6437     |
|                                 | Sub-Total   |       |                                  |            |                           |          | 1,673  | 544    | 1    | 40    | 300    | 341    | 755        |

| 1   | 2   | 3     | 4  | 5          | 6  | 7        | 8              | 9             | 10        | 11           | 12           | 13           | 14           |
|---|---|-------|--|------------|--|----------|----------------|---------------|-----------|--------------|--------------|--------------|--------------|
| <b>3.8 Public Works</b>                             |   |       |  |            |  |          |                |               |           |              |              |              |              |
| 265   | Technical driving training course   | 4.1.1 | 200103/04/05/08/09/10                        | 18 times   | Chantrea district  | 3 months | 6,300          | 2,960         | 0.80      | -            | -            | 0.80         | 1,197.1724   |
| 266   | Restore drainage system   | 4.1.1 | 200601                                       | 460 m3     | Svay Rieng City  | 2 months | 8,928          | 4,628         | 15.00     | -            | -            | 15.00        | 269.3213     |
| 267   | Disseminate land traffic law and motorbike driving training   | 4.1.1 | 5 Sangkats of Bavet City                     | 6 times    | Bavet City   | 1 year   | 48,325         | 2,628         | -         | 2.40         | -            | 2.40         | 42.4350      |
| 268   | Build drainage  | 4.1.1 | 200505/08/10+ Nhor, Khseth +200303+200601/02 | 12,069m    | Kompong Rou, Svay Chrum, Svay Rieng City, Rom Doul             | 1 year   | 25,583         | 12,971        | -         | 2,051.40     | -            | 2,051.40     | 15.0238      |
| 269   | Extend and cover ceramic floor tile   | 4.1.1 | 200601                                       | 7m x 966m  | Svay Rieng City  | 4 months | 45,088         | 23,595        | -         | -            | 4000.00      | 4,000.00     | 0.5667       |
| 270   | Make concreting cement on the District hall's campus  | 4.1.1 | Svay Chrum district                          | 1000 m2    | Svay Chrum district  | 6 months | 50             | 12            | -         | -            | 90.00        | 90.00        | 0.0087       |
|   | <b>Sub-Total</b>  |       |  |            |  |          | <b>134,274</b> | <b>46,794</b> | <b>16</b> | <b>2,054</b> | <b>4,090</b> | <b>6,160</b> | <b>1,525</b> |
| <b>3.9 Service</b>                                  |   |       |  |            |  |          |                |               |           |              |              |              |              |
| 271   | Launch courses to disseminate various laws  | 4.1.1 | district-City                                | 60 courses | National assembly - senate relations and inspection department | 1 year   | 6,000          | 850           | 60.00     | -            | -            | 60.00        | 102.5641     |
| 272   | Investigate law implementation and contract   | 4.1.1 | district-City                                | 18 times   | National assembly - senate relations and inspection department | 1 year   | 60             | 10            | -         | 12.00        | -            | 12.00        | 2.5641       |
|   | <b>Sub-Total</b>  |       |  |            |  |          | <b>6,060</b>   | <b>860</b>    | <b>60</b> | <b>12</b>    | <b>-</b>     | <b>72</b>    | <b>105</b>   |
| <b>4. Administration, Security and Public Order</b> |   |       |  |            |  |          |                |               |           |              |              |              |              |
|   | <b>4.1 Women affairs</b>  |       |  |            |  |          |                |               |           |              |              |              |              |
| 273   | Inspect kindergarten affairs and child enrollment   | 2.1.1 | 6 Districts =65 communes                     | 65 times   | Women affairs department                                       | 1 year   | 166            | 133           | 6.15      | -            | -            | 6.15         | 7.1926       |
| 274   | Launch monthly or quarterly meeting with gender affairs networks at the pertinent institutions and organization in the province | 2.4.1 | Provincial level                             | 4 times    | Women affairs department                                       | 1 year   | 150            | 150           | 4.10      | -            | -            | 4.10         | 3.2894       |

| 1         | 2   | 3     | 4                         | 5          | 6                        | 7      | 8     | 9   | 10    | 11    | 12    | 13    | 14     |
|-----------|---|-------|---------------------------|------------|--------------------------|--------|-------|-----|-------|-------|-------|-------|--------|
| 275       | Meeting to stockpile gender works and semester data system with PTST, DTST, CEW, WCFP   | 2.4.1 | 5 Districts = 35 communes | 1 time     | Women affairs department | 1 year | 80    | 66  | 13.12 | -     | -     | 13.12 | 1.3289 |
| 276       | Inspect and assess the plan   | 2.4.1 | 45 communes               | 1 time     | Women affairs department | 1 year | 25    | 25  | 2.05  | -     | -     | 2.05  | 0.8223 |
| 277       | Meeting to stockpile and assess provincial gender works   | 2.4.1 | Sangkat Svay Rieng        | 1 time     | Women affairs department | 1 year | 80    | 80  | -     | 6.15  | -     | 6.15  | 0.7797 |
| 278       | Meeting to stockpile the annual community kindergarten and future direction setting   | 2.1.1 | Provincial level          | 1 time     | Women affairs department | 1 year | 80    | 80  | -     | 10.25 | -     | 10.25 | 0.7094 |
| 279       | Meeting to inspect and assess the parents education works   | 2.1.5 | 34 communes               | 71 times   | Women affairs department | 1 year | 25    | 25  | -     | 6.15  | -     | 6.15  | 0.6091 |
| 280       | Seminar discussion with the gender networks with line department, institution and organization in the province  | 2.4.1 | Provincial level          | 3 times    | Women affairs department | 1 year | 80    | 80  | -     | 6.15  | -     | 6.15  | 0.5523 |
| 281       | Discussion with City and District governors and consultant team leader (men) to seek supporting opinion and to increase commitment to enhance gender equity and to strengthen confidence to women | 2.4.1 | District level            | 2 times    | Women affairs department | 1 year | 180   | 100 | -     | -     | 9.84  | 9.84  | 0.5025 |
| 282       | quarterly discussion related to gender-related works at District level  | 2.4.1 | 6 districts               | 1 time     | Women affairs department | 1 year | 80    | 80  | -     | -     | 12.30 | 12.30 | 0.4548 |
| 283       | quarterly Capacity-building discussion for community kindergarten working groups  | 2.4.1 | 5 districts=31 communes   | 10 courses | Women affairs department | 1 year | 100   | 83  | -     | -     | 28.70 | 28.70 | 0.4052 |
| Sub-Total |   |       |                           |            |                          |        | 1,046 | 902 | 25    | 29    | 51    | 105   | 17     |

| 1                         | 2  | 3     | 4                                      | 5            | 6                                      | 7        | 8      | 9      | 10     | 11      | 12    | 13       | 14       |
|---------------------------|--|-------|--|--------------|--|----------|--------|--------|--------|---------|-------|----------|----------|
| <i>4.2 Plan</i>           |  |       |  |              |  |          |        |        |        |         |       |          |          |
| 284                       | Capacity-building course on the data gathering from the village-community base | 4.1.1 | 2007+5 Sangkats in Bavet City          | 9 courses    | Svay Teap district/Bavet City          | 3 days   | 322    | 17     | 7.20   | -       | -     | 7.20     | 13.8053  |
| 285                       | Maintain District planning office building                                     | 4.1.1 | 7 districts/Cities                     | 7 buildings  | Planning department                    | 1 year   | 38     | 9      | 14.40  |         | -     | 14.40    | 1.6916   |
| 286                       | Equip stationaries on the district and provincial planning office building     | 4.1.1 | 8 districts/Cities                     | 9 sets       | Planning department                    | 1 year   | 38     | 9      | -      | 50.80   | -     | 50.80    | 0.6393   |
| 287                       | Redecorate the building and equip table and stands to store documents          | 4.1.1 | Planning department                    | 1 building   | Planning department                    | 1 year   | 38     | 9      | -      | -       | 50.00 | 50.00    | 0.0812   |
|                           | Sub-Total  |       |  |              |  |          | 436    | 44     | 22     | 51      | 50    | 122      | 16       |
| <i>4.3 Land law</i>       |  |       |  |              |  |          |        |        |        |         |       |          |          |
| 288                       | Construct land management, urban planning and construction office building     | 4.1.1 | Bavet City +Svay Teap district         | 2 buildings  | Land management department             | 1 year   | 6      | -      | 459.20 | -       | -     | 459.20   | 0.0046   |
| <i>4.4 Administration</i> |  |       |  |              |  |          |        |        |        |         |       |          |          |
| 289                       | Inspire parents to register the birth of all their new born                    | 4.1.1 | 5 Sangkats at Bavet City               | 3 times      | Bavet City                             | 1 year   | 31,331 | 16,014 | 1.20   | -       | -     | 1.20     | 550.2459 |
| 290                       | Disseminate about the significance of the benefits of birth registration       | 4.1.1 | 5 Sangkats at Bavet City               | 3 times      | Bavet City                             | 1 year   | 31,331 | 16,014 | 1.20   | -       | -     | 1.20     | 495.2213 |
| 291                       | Strengthen security and guarding   | 4.1.1 | 5 Sangkats at Bavet City               | 144 times    | Bavet City                             | 1 year   | 48,325 | 2,628  | 8.00   | -       | -     | 8.00     | 440.1967 |
| 292                       | Strengthen the temporary residential management (security and administration)  | 4.1.1 | 5 Sangkats at Bavet City               | 3 times      | Bavet City                             | 1 year   | 11,103 | 7,144  | 1.20   | -       | -     | 1.20     | 339.4802 |
| 293                       | Disseminate the drug law   | 4.1.1 | 5 Sangkats at Bavet City               | 3 times      | Bavet City                             | 1 year   | 48,325 | 2,628  | -      | 1.20    | -     | 1.20     | 127.3051 |
| 294                       | Construct the communal administration building and furniture                   | 4.1.1 | 200103/04/05/08/09/10+200402           | 13 buildings | Chantrea district/Romeas Haek district | 1 year   | 27,436 | 14,179 | -      | 500.00  | -     | 500.00   | 94.4669  |
| 295                       | Construct the Sangkat/Commune building   | 4.1.1 | 200603/06/07+200501/02/08 /10/13/14/15 | 10 buildings | Svay Rieng City /Svay Chrum district   | 7 months | 81,771 | 40,722 | -      | 5900.00 | -     | 5,900.00 | 76.7525  |



| 1                         | 2  | 3     | 4   | 5            | 6  | 7        | 8       | 9       | 10       | 11    | 12    | 13       | 14      |
|---------------------------|--|-------|---|--------------|--|----------|---------|---------|----------|-------|-------|----------|---------|
| 296                       | Construct police and village administration station building | 4.1.1 | 200103/05/10  | 3 buildings  | Chantrea district                                    | 3 months | 11,941  | 6,647   | -        | 42.00 | -     | 42.00    | 58.4984 |
| 297                       | Promote safe migration (2011)                                | 4.1.1 | 8 districts/Cities  | 1500 people  | Labor department                                     | 3 years  | 1,500   | -       | -        | -     | 48.00 | 48.00    | 35.7143 |
| 298                       | Strengthen registration works                                | 4.1.1 | 5 Sangkats of Bavet City  | 3 times      | Bavet City   | 1 year   | 31,331  | 16,014  | -        | -     | 1.20  | 1.20     | 15.5156 |
| 299                       | Disseminate the registration works                           | 4.1.1 | 200702/03/04/05/06/07/08/09/10  | 9 courses    | Svay Teap district                                   | 1 day    | 450     | 200     | -        | -     | 2.70  | 2.70     | 5.4810  |
| 300                       | Make/distribute ID card to people for uses                   | 4.1.1 | 200103/04/05/08/09/10   | 3 times      | Chantrea district                                    | 3 months | 5,562   | 2,915   | -        | -     | 17.00 | 17.00    | 4.9738  |
|                           | Sub-Total  |       |   |              |  |          | 330,406 | 125,105 | 12       | 6,443 | 69    | 6,524    | 2,244   |
| <i>4.5 Social affairs</i> |  |       |   |              |  |          |         |         |          |       |       |          |         |
| 301                       | Construct district office building                           | 4.1.1 | Rom Doul district   | 54 m2        | Social affairs department                            | 6 months | 289     | 70      | 50.00    | -     | -     | 50.00    | 1.1400  |
| 302                       | Repair department  | 4.1.1 | Social affairs department   | 100 m2       | Social affairs department                            | 3 months | 45      | 22      | 22.00    | -     | -     | 22.00    | 0.5043  |
| 303                       | National Council for Children                                | 4.1.1 | 8 City -district  | 6 courses    | Social affairs department                            | 1 year   | 350     | 170     | -        | 20.00 | -     | 200.00   | 0.3452  |
| 304                       | Construct veteran residences                                 | 4.1.1 | Svay Chrum district   | 30 m2        | Social affairs department                            | 3 months | 7       | 3       | -        | -     | 30.00 | 30.00    | 0.0345  |
|                           | Sub-Total  |       |   |              |  |          | 691     | 265     | 72       | 20    | 30    | 302      | 2       |
| <i>4.6 Public works</i>   |  |       |   |              |  |          |         |         |          |       |       |          |         |
| 305                       | Equip stationeries and vehicles to implement the works       | 4.1.1 | Chantrea district   | 8 kinds      | Chantrea district                                    | 6 months | 23      | 3       | 6.00     | -     | -     | 6.00     | 0.1166  |
| <i>4.7 Health</i>         |  |       |   |              |  |          |         |         |          |       |       |          |         |
| 306                       | Construct health center                                      | 4.1.1 | Som Lei, Royal department, new+<br>2002/03/07/09/12+200413/14/15+200103/04/10 | 14 buildings | Chantrea district/Romeas Haek/Kampong Rou/Svay Chrum | 1 year   | 92,071  | 61,458  | 7,270.00 | -     |       | 7,270.00 | 9.5916  |

| 1                    | 2  | 3     | 4  | 5                                 | 6   | 7       | 8     | 9     | 10       | 11       | 12       | 13       | 14     |
|----------------------|--|-------|--|-----------------------------------|---|---------|-------|-------|----------|----------|----------|----------|--------|
| <i>2.8 Education</i> |  |       |  |                                   |   |         |       |       |          |          |          |          |        |
| 307                  | Construct school/community kindergarten class                    | 4.1.1 | 200103/04/09/10+200603/05/06/07/+200501/02/03/04/05/0710/12/13/16+200302/04/06/09+200702 | 14 buildings+15 rooms+24 villages | Chantrea district/RomDoul district/Svay Chrum/Svay Teap/Svay Rieng City | 1 year  | 7,375 | 3,633 | 1,332.93 | -        | -        | 1,332.93 | 7.6751 |
| 308                  | Make classroom explanation                                       | 4.1.1 | school   | 18 times                          | Education department  | 3 years | 1,020 | -     | 100.00   | -        | -        | 100.00   | 0.7925 |
| 309                  | Increase classroom inspection                                    | 4.1.1 | school   | 96 times                          | Education department  | 3 years | 3,936 | -     | 300.00   | -        | -        | 300.00   | 0.7136 |
| 310                  | Enhance classroom-based instruction                              | 4.1.1 | school   | 96 times                          | Education department  | 3 years | 3,936 | -     | 300.00   | -        | -        | 300.00   | 0.6626 |
| 311                  | Increase technical meetings                                      | 4.1.1 | school   | 96 times                          | Education department  | 3 years | 2,400 | -     | 300.00   | -        | -        | 300.00   | 0.3730 |
| 312                  | collective inspection  | 4.1.1 | school   | 45 times                          | Education department  | 3 years | 1,125 | -     | 150.00   | -        | -        | 150.00   | 0.3205 |
| 313                  | Strengthen inspection on new instructors                         | 4.1.1 | school   | 99 times                          | Education department  | 3 years | 390   | -     | 270.00   | -        | -        | 270.00   | 0.1684 |
| 314                  | Recruit student athletes and set up sport team                   | 4.1.1 | school   | 9 times                           | Education department  | 3 years | 628   | -     | -        | 490.00   | -        | 490.00   | 0.1295 |
| 315                  | Organize children council  | 4.1.1 | school   | 150 people                        | Education department  | 3 years | 150   | -     | -        | 200.00   | -        | 200.00   | 0.1049 |
| 316                  | 3-good competition movement                                      | 4.1.1 | school   | 150 people                        | Education department  | 3 years | 150   | -     | -        | 200.00   | -        | 200.00   | 0.0991 |
| 317                  | Train the public about sport technicality                        | 4.1.1 | community  | 1176 athletes                     | Education department  | 3 years | 1,176 | -     | -        | 3,750.00 | -        | 3,750.00 | 0.0329 |
| 318                  | Recruit public athletes and set up teams                         | 4.1.1 | community  | 6 times                           | Education department  | 3 years | 120   | -     | -        | 490.00   | -        | 490.00   | 0.0266 |
| 319                  | Train students about sport technicality                          | 4.1.1 | school   | 1176 athletes                     | Education department  | 3 years | 1,176 | -     | -        | 5,250.00 | -        | 5,250.00 | 0.0218 |
| 320                  | Monitor schools that face classroom and class building shortages | 4.1.1 | Education department   | 65 times                          | Education department  | 3 years | 2,400 | -     | -        | 2,057.00 | -        | 2,057.00 | 0.0181 |
| 321                  | Strengthen teaching inspection at secondary schools              | 4.1.1 | school   | 550 people                        | Education department  | 3 years | 495   | -     | -        | -        | 3,608.00 | 3,608.00 | 0.0171 |

|           |   |       |                                     |               |                      |         |        |       |       |        |           |            |        |
|-----------|---|-------|-------------------------------------|---------------|----------------------|---------|--------|-------|-------|--------|-----------|------------|--------|
| 322       | Inspect and strengthen children and youth council               | 4.1.1 | school                              | 12 times      | Education department | 3 years | 30     | -     | -     | -      | 230.00    | 230.00     | 0.0081 |
| 323       | Train officials who are responsible for youth                   | 4.1.1 | Education department                | 300 officials | Education department | 3 years | 300    | -     | -     | -      | 3,780.00  | 3,780.00   | 0.0059 |
| 324       | Decorate school infrastructure                                  | 4.1.1 | school                              | 277           | Education department | 3 years | 331    | -     | -     | -      | 443,563   | 443,563.00 | 0.0002 |
| 325       | Construct buildings for primary schools that lack classrooms    | 4.1.1 | school                              | 9 buildings   | Education department | 3 years | 2,025  | -     | -     | -      | 450,000   | 450,000.00 | 0.0001 |
| 326       | Construct kindergarten building for the 8 Cities /districts     | 4.1.1 | City /District education department | 3 buildings   | Education department | 3 years | 450    | -     | -     | -      | 150,000   | 150,000.00 | 0.0000 |
| 327       | Construction building for secondary school that lack classrooms | 4.1.1 | school                              | 6 buildings   | Education department | 3 years | 1,200  | -     | -     | -      | 300,000   | 300,000.00 | 0.0000 |
| Sub-Total |   |       |                                     |               |                      |         | 30,813 | 3,633 | 2,753 | 12,437 | 1,351,181 | 1,366,371  | 11     |

**Table 2.2 Supporting Fund from outside**

| No | Funding Source  | Funding Amount | Project Amount | Implementing Agency                |                |                       |
|----|-----------------|----------------|----------------|------------------------------------|----------------|-----------------------|
|    |                 |                |                | Organization/Agency                | Project Number | Value (Million Riels) |
| 1  | HSSP2           | 2,286.00       | 15             | Health department                  | 15             | 2,286.00              |
| 2  | UNICEF          | 1,642.00       | 4              | Health department                  | 1              | 720.00                |
|    |                 |                |                | Rural Development department       | 3              | 922.00                |
| 3  | GF              | 2,816.40       | 3              | Health department                  | 3              | 2,816.40              |
| 4  | NB/NGO          | 1,600.40       | 2              | Health department                  | 2              | 1,600.40              |
| 5  | IMF             | 13,812.00      | 2              | Water resource department/ministry | 2              | 8,700.00              |
|    |                 |                | 1              | Rural Development department       | 1              | 5,112.00              |
| 6  | National Budget | 802,862.08     | 58             | Health department                  | 1              | 1,800.00              |
|    |                 |                |                | Public Work department             | 14             | 130,586.60            |
|    |                 |                |                | Provincial Office                  | 14             | 535,898.26            |
|    |                 |                |                | Rural Development department       | 7              | 129,738.00            |
|    |                 |                |                | Agriculture department             | 7              | 199.54                |
|    |                 |                |                | Tourism department                 | 3              | 66.00                 |
|    |                 |                |                | Water resource department/ministry | 3              | 4,600.00              |
|    |                 |                |                | Land management department         | 1              | 561                   |
|    |                 |                |                | Labor department                   | 8              | 12.68                 |
| 7  | Ph.A.3          | 73.20          | 3              | Planning department                | 3              | 73                    |
|    | Total           | 825,092.08     | 88.00          |                                    | 88             | 825,692.08            |

| Table 2.4: Action plan to implement the provincial investment plan |   |  |                |                               |                                  |                 |                         |                   |               |                  |                |
|--|---|--|----------------|-------------------------------|----------------------------------|-----------------|-------------------------|-------------------|---------------|------------------|----------------|
| No   | Project Name  | Project Location   | Project Result |                               | Project value (In million Riels) | Source of fund  | Implemented by          | Implementing Date |               | Beneficiary      |                |
|  |   |  | Units          | Amount                        |                                  |                 |                         | Start             | Finish        | Total            | Female         |
| 1  | 2   | 3  | 4              | 5                             | 6                                | 7               | 8                       | 9                 | 10            | 11               | 12             |
| 1. Promised Project  |   |  |                |                               |                                  |                 |                         |                   |               |                  |                |
| <b>1. Economy sector</b>   |   |  |                |                               |                                  |                 |                         |                   |               |                  |                |
| <i>1.1 Public Works</i>  |   |  |                |                               |                                  |                 |                         |                   |               |                  |                |
| 1  | Maintain road #314D paved with mountain sand, by plowing and rolling  | Bro Sot-Kampong Rou  | Km             | 28                            | 266.50                           | National budget | Public works department | January 2012      | December 2012 | 60,000           | 24,000         |
| 2  | Maintain National Road  | Svay Rieng City- Romeas Haek District- Prey Korki commune- Bro Sot-Kampong Rou                           | Km             | 137                           | 2,227.00                         | National budget | Public works department | January 2012      | December 2012 | 500,000          | 200,000        |
| 3  | Repair round drainage on both sides of the road at Svay Rieng City  | Svay Rieng City  | m              | 9,000                         | 12,177.00                        | National budget | Public works department | January 2012      | December 2012 | 30,000           | 12,000         |
| 4  | Repair and asphalt and insert drainages across the road and repair square drainages on both sides of the road | Kampong Trach commune- Prey Korki- Mes Tgok- Samroung- Sangkat Chek-Doun Sor-Chantry-Bro Sot-Kampong Rou | m+ place       | 80,500 m + 90 drainage places | 21,280.33                        | National budget | Public works department | January 2012      | December 2012 | 500,000          | 200,000        |
|  | <b>Sub-Total</b>  |  |                |                               | <b>35,950.83</b>                 |                 |                         |                   |               | <b>1,090,000</b> | <b>436,000</b> |
| <i>1.2 Water Resources</i>   |   |  |                |                               |                                  |                 |                         |                   |               |                  |                |
| 1  | Doun Toy Irrigation system  | Kampong Rou District   | Hectare        | 6354                          | 4,700.00                         | IMF             | Ministry of WRM         | January 2012      | December 2012 | 650              | -              |
| 2  | Kampong Chrey Irrigation system   | Svay Chrum District  | Hectare        | 400                           | 4,000.00                         | IMF             | Ministry of WRM         | January 2012      | December 2012 | 3,390            | -              |
| 3  | Veal Tnach Irrigation system  | Svay Chrum District  | Hectare        | 300                           | 300.00                           | National budget | Ministry of WRM         | January 2012      | December 2012 | 250              | -              |
| 4  | Batu Irrigation system  | Chantrea District  | Hectare        | 300                           | 300.00                           | National budget | Ministry of WRM         | January 2012      | December 2012 | 300              | -              |

| 1                            | 2   | 3   | 4       | 5            | 6         | 7               | 8                      | 9            | 10            | 11      | 12      |
|------------------------------|---|---|---------|--------------|-----------|-----------------|------------------------|--------------|---------------|---------|---------|
| 5                            | Neal Creek restoration  | Chantrea District                               | Hectare | 6354         | 4,000.00  | National budget | Ministry of WRM        | January 2012 | December 2012 | 2,118   | -       |
|                              | Sub-Total   |   |         |              | 13,300.00 |                 |                        |              |               | 6,708   | 0       |
| <i>1.3 Rural Development</i> |   |   |         |              |           |                 |                        |              |               |         |         |
| 1                            | Construct D.B.S.T road at the west of Koy bridge  | Svay Rieng City                                 | 2m      | 10,000m X 6m | 7,140.00  | National budget | Provincial Office      | January 2012 | December 2012 | 9,415   | 7,315   |
| 2                            | construct D.B.S.T road to head into Bavet City  | Bavet City                                      | 2m      | 1000m X 6m   | 714.00    | National budget | Provincial Office      | January 2012 | December 2012 | 9,415   | 7,315   |
| 3                            | Construct MAKADAM type of sealed road on the dam preventing flood at the western                              | Svay Rieng City                                 | 2m      | 1000m X 6m   | 796.00    | National budget | Provincial Office      | January 2012 | December 2012 | 9,415   | 7,315   |
| 4                            | Repair the deteriorated roads and maintain the drainage in the province                                       | Nationwide                                      | 2m      | 2,350        | 93.33     | National budget | Provincial Office      | January 2012 | December 2012 | 390,059 | 161,070 |
|                              | Sub-total   |   |         |              | 8,743.33  |                 |                        |              |               | 418,304 | 183,015 |
| <i>1.4 Industry</i>          |   |   |         |              |           |                 |                        |              |               |         |         |
| 1                            | Build public light pole   | Svay Rieng City                                 | Pole    | 72           | 300.00    | National budget | Provincial Office      |              |               | 260,000 | 139,150 |
|                              | Sub-Total   |   |         |              | 300.00    |                 |                        |              |               | 260,000 | 139,150 |
| <i>1.5 Agriculture</i>       |   |   |         |              |           |                 |                        |              |               |         |         |
| 1                            | Provide high yield rice seed  | 200501-17+200601-07                             | Kg      | 36,800       | 20.80     | National budget | Agriculture department | May 2012     | June 2012     | 102,288 | 54,480  |
| 2                            | Promote the System of Rice Intensification (SRI) in accordance with Natural Principle and Field Demonstration | All Communes in Kampong Rou District, 200601-07 | Course  | 51           | 8.34      | National budget | Agriculture department | January 2012 | December 2012 | 37,437  | 18,130  |
| 3                            | Animal raising technical training course  | Bavet City with 5 Sangkats                      | Course  | 6            | 2.40      | National budget | Agriculture department | January 2012 | May 2012      | 31,331  | 16,014  |
| 4                            | Strengthen the village veterinary   | Bavet City with 5 Sangkats                      | Course  | 3            | 1.20      | National budget | Agriculture department | April 2012   | May 2012      | 31,331  | 16,014  |

| 1                                     | 2  | 3   | 4        | 5       | 6        | 7                          | 8                      | 9            | 10            | 11      | 12      |
|---------------------------------------|--|---|----------|---------|----------|----------------------------|------------------------|--------------|---------------|---------|---------|
| 5                                     | Provide technical uses of chemistry fertilizer and poisonous chemical in agriculture                   | Bavet City with 5 sangkats  | Course   | 6       | 2.40     | National budget            | Agriculture department | May 2012     | December 2012 | 31,331  | 16,014  |
| 6                                     | Vaccinate and treat illness of cattle  | 8 Districts/cities  | Cattle   | 150,000 | 128.40   | National budget            | Agriculture department | January 2012 | December 2012 | 75,000  | -       |
| 7                                     | Construct biogas kilns   | 200605,06,07,200501-17, all Commune of Kampong Rou                          | Kiln     | 1,226   | 36.00    | SNV and National Budget    | Agriculture department | January 2012 | December 2012 | 11,757  | 1,734   |
|                                       | Sub-total  |   |          |         | 199.54   |                            |                        |              |               | 320,475 | 122,386 |
| <b>2. Social affairs sector</b>       |  |   |          |         |          |                            |                        |              |               |         |         |
| <i>2.1 Economy and social affairs</i> |  |   |          |         |          |                            |                        |              |               |         |         |
| 1                                     | Organize slaughterhouse  | City, District  | place    | 8       | 7.33     | National budget            | Provincial Office      | January 2012 | December 2012 | 80      | 48      |
| 2                                     | Organize and repair market stalls in front of Veal Yon Market  | Svay Rieng City   | Stall    | 127     | 600.00   | National budget            | Provincial Office      | January 2012 | December 2012 | 8,967   | 5,814   |
|                                       | Sub-total  |   |          |         | 607.33   |                            |                        |              |               | 9,047   | 5,862   |
| <i>2.2 Rural development</i>          |  |   |          |         |          |                            |                        |              |               |         |         |
| 1                                     | Enhance the clean water supply and rural hygiene infrastructure  | Svay Chrum District-Rom Doule-Romeas Haek                                   | Building | 4,100   | 1,433.00 | IMF                        | Development department | January 2012 | December 2012 | 25,320  | 11,394  |
| 2                                     | Build 870 toilets, 2610 drainages, 870 toilet covers in houses   | Svay Chrum District-Rom Doule-Romeas Haek                                   | Building | 665     | 17.00    | Rural Development Ministry | Development department | January 2012 | December 2012 | 2,220   | 999     |
| 3                                     | Educate about the toilet usage and maintenance, benefits of using toilets, and build toilets at school | 6 Districts -2 Cities-25 communes-59 villages                               | Building | 39      | 14.00    | Rural Development Ministry | Development department | January 2012 | December 2012 | 10,750  | 4,838   |
| 4                                     | Publicize Community-Led Total Sanitation (CLTS)  | Svay Chrum District-Rom Doule-Chantrea-Svay Teap of 25 communes/95 villages | Step     | 10      | 163.00   | Unicef                     | Development department | January 2012 | December 2012 | 21,215  | 9,547   |

| 1                 | 2   | 3   | 4      | 5    | 6        | 7                          | 8                      | 9              | 10             | 11      | 12     |
|-------------------|---|---|--------|------|----------|----------------------------|------------------------|----------------|----------------|---------|--------|
| 5                 | Promote hand cleaning with soap(PHAST)  | District-Svay Chrum-Romdoul-Chantrea-Svay Teap-Kampong Rou of 22 communes-75 villages | Step   | 8    | 130.00   | Unicef                     | Development department | January 2012   | December 2012  | 23,520  | 10,584 |
| 6                 | Clean water and hygiene programs at schools and in communities                                    | District-Svay Chrum-Romdoul-Chantrea-Svay Teap-Kampong Rou of 30 communes-80 villages | Step   | 10   | 115.00   | Unicef                     | Development department | January 2012   | December 2012  | 6,334   | 2,850  |
| 7                 | Encourage the construction of hygiene toilets in houses and educate them on using hygiene toilets | 6 Districts -2 Cities-80 communes-125villages   | Course | 156  | 19.00    | Rural Development Ministry | Development department | January 2012   | December 2012  | 12,567  | 5,655  |
| 8                 | Educate sanitation to clean up houses   | 6 Districts -2 Cities-80 communes-184 villages  | Course | 218  | 29.00    | Rural Development Ministry | Development department | January 2012   | December 2012  | 13,500  | 6,075  |
| 9                 | Eliminate infection of AIDS and Bird Flu (h5n1)   | 6 Districts -2 Cities-80 communes-205 villages  | Course | 274  | 30.00    | Rural Development Ministry | Development department | January 2012   | December 2012  | 16,082  | 7,237  |
| 10                | Propose parents to take their children to get 9-type illness vaccination                          | 6 Districts -2 Cities-80 communes-125 villages  | Course | 200  | 25.00    | Rural Development Ministry | Development department | January 2012   | December 2012  | 13,505  | 6,077  |
|                   | Sub-total   |   |        |      | 1,975.00 |                            |                        |                |                | 145,013 | 65,256 |
| <b>2.3 Health</b> |   |   |        |      |          |                            |                        |                |                |         |        |
| 1                 | Celebration of International AIDS Day   | Bavet City  | 1      | time | 4.80     | HSSP2                      | Health department      | January 2012   | December 2012  | 48,325  | 2,628  |
| 2                 | Tuberculosis Day  | Province/Bavet City and Romeas Haek District  | time   | 3    | 4.00     | GF                         | Health department      | 24th June 2012 | 24th June 2012 | 1,500   | 800    |
| 3                 | Control and eliminate counterfeit medications and illegal health service                          | Bavet City  | 1      | time | 1.20     | HSSP2                      | Health department      | January 2012   | December 2012  | 180     | 100    |
|                   | Sub-total   |   |        |      | 10.00    |                            |                        |                |                | 50,005  | 3,528  |



| 1                    | 2   | 3   | 4        | 5     | 6          | 7                   | 8                    | 9            | 10            | 11     | 12     |
|----------------------|---|---|----------|-------|------------|---------------------|----------------------|--------------|---------------|--------|--------|
| <i>2.4 Education</i> |   |   |          |       |            |                     |                      |              |               |        |        |
| 1                    | Announce and educate parents to understand about the importance of their children's education | 5 Sangkats  | Time     | 3     | 1.20       | Commune counterpart | Education department | January 2012 | December 2012 | 31,331 | 16,014 |
| 2                    | Educate in each house (Mother Group)  | 5 Sangkats  | Time     | 6     | 2.40       | Unicef              | Education department | January 2012 | December 2012 | 31,331 | 16,014 |
| 3                    | Train and support kindergarten teachers, and supply facilities to kindergarten classes        | Prey Angkonh + Chrak Mtes                           | Class    | 5     | 5.00       | Unicef              | Education department | January 2012 | December 2012 | 2,501  | 1,371  |
| 4                    | Collect data on children from the age of 0 to 5 in villages                                   | Community   | Time     | 6     | 9.00       | Commune counterpart | Education department | January 2012 | December 2012 | 3,657  | 730    |
| 5                    | Construct kindergarten classes at elementary schools  | 200301/02/03/05/09                                  | Place    | 4     | 6.00       | Commune counterpart | Education department | January 2012 | December 2012 | 858    | 66     |
| 6                    | support community kindergarten class  | 200702  | Class    | 8     | 4.00       | Commune counterpart | Education department | January 2012 | December 2012 | 210    | 115    |
| 7                    | Sketch the map to study at each house   | Community   | Time     | 3     | 8.00       | Unicef              | Education department | January 2012 | December 2012 | 5,763  | 1,152  |
| 8                    | Construct school buildings  | Chantrea/Svay Chrum/Rom Dou/ Romeas Haek/Svay Rieng | Building | 7     | 1,512.00   | FTI                 | Education department | January 2012 | December 2012 | 3,530  | 1,572  |
| 9                    | Train elementary teachers in Sangkat Svay Rieng   | Sangkat Svay Rieng                                  | Person   | 120   | 1,571.00   | EDU                 | Education department | January 2012 | December 2012 | 120    | 50     |
| 10                   | Train community's kindergarten teachers newly selected  | Education department                                | Person   | 40    | 51.20      | Unicef              | Education department | January 2012 | December 2012 | 40     | 40     |
| 11                   | Reinforce teaching tasks for community's kindergarten teachers                                | Education department                                | Person   | 40    | 51.20      | Unicef              | Education department | January 2012 | December 2012 | 40     | 40     |
| 12                   | Provide scholarship to poor primary student   | Romeas Haek/Svay Chrum/Svay Teap/Kampong Rou        | School   | 165   | 708,710.67 | WFP                 | Education department | January 2012 | December 2012 | 3,598  | 1,870  |
| 13                   | Provide scholarship to poor lower secondary student   | Secondary school                                    | Person   | 2,498 | 449.64     | PB 2012             | Education department | January 2012 | December 2012 | 2,498  | 1,298  |
| 14                   | Open training classes for existing literacy teachers  | Education department                                | Person   | 30    | 41.67      | PB 2012             | Education department | January 2012 | December 2012 | 30     | 10     |

| 1   | 2  | 3                    | 4             | 5                    | 6          | 7               | 8                        | 9              | 10            | 11     | 12     |
|---|--|----------------------|---------------|----------------------|------------|-----------------|--------------------------|----------------|---------------|--------|--------|
| 15  | Strengthen qualification of literacy teachers  | Education department | Time          | 3 times (52 persons) | 1,320.00   | PB 2012         | Education department     | January 2012   | December 2012 | 52     | 25     |
|   | Sub-total  |                      |               |                      | 713,742.98 |                 |                          |                |               | 85,559 | 40,367 |
| <b>2.5 Planning</b>   |  |                      |               |                      |            |                 |                          |                |               |        |        |
| 1   | Prepare and create documents supporting DIW process  | All Districts/cities | District/city | 8                    | 10.2       | Ph.A3           | Planning department      | September 2012 | October 2012  | 570    | 100    |
| 2   | Collect, key in and create documents of basic data for commune/Sangkat                                       | all villages         | Village       | 690                  | 54         | Ph.A3           | Planning department      | October 2012   | November 2012 | 860    | 172    |
| 3   | Qualification training course for organizing 3-Year Gradual Investment Program                               | All District/cities  | District/city | 8                    | 9          | Ph.A3           | Planning department      | July 2012      | November 2012 | 30     | 9      |
|   | Sub-Total  |                      |               |                      | 73.20      |                 |                          |                |               | 1,460  | 281    |
| <b>3. Land, National Resource, Environmental, Natural Disaster, and Climate Change Management</b> |  |                      |               |                      |            |                 |                          |                |               |        |        |
| <b>3.1 Environment</b>  |  |                      |               |                      |            |                 |                          |                |               |        |        |
| 1   | The celebration of National-International Environmental Day 5 June   | District and City    | Time          | 1                    | 4.00       | National budget | Environmental departemnt | 5/6/2012       | 5/6/2012      | 500    | 250    |
|   | Sub-total  |                      |               |                      | 4.00       |                 |                          |                |               | 500    | 250    |
| <b>3.2 Rural development</b>  |  |                      |               |                      |            |                 |                          |                |               |        |        |
| 1   | Install 0.60m diameter of drainages on the both sides of road to the south of Chipphu Market and 60 manholes | Bavet City           | m             | 1,500                | 460.00     | National budget | Provincial Office        | January 2012   | December 2012 | 19,867 | 9,058  |
| 2   | Install 0.60m diameter of drainages along the road #212 and 16 manholes                                      | Svay Rieng City      | m             | 415                  | 120.00     | National budget | Provincial Office        | January 2012   | December 2012 | 29,678 | 18,750 |
| 3   | Install 1m diameter of drainages on the both sides of National Road #1 and 320 manholes                      | Bavet City           | m             | 8,000                | 5,241.60   | National budget | Provincial Office        | January 2012   | December 2012 | 29,678 | 18,750 |
|   | Sub-total  |                      |               |                      | 5,821.60   |                 |                          |                |               | 79,223 | 46,558 |

| 1                       | 2   | 3                   | 4           | 5          | 6        | 7               | 8                          | 9            | 10            | 11        | 12      |
|-------------------------|---|---------------------|-------------|------------|----------|-----------------|----------------------------|--------------|---------------|-----------|---------|
| <i>3.3 Environment</i>  |   |                     |             |            |          |                 |                            |              |               |           |         |
| 1                       | Build level 1 referential hospital in Bavet Health Center | Bavet City          | Building    | 1          | 600.00   | National budget | Health Ministry            | January 2012 | December 2012 | 48,325    | 2,628   |
|                         | Sub-total   |                     |             |            | 600.00   |                 |                            |              |               | 48,325    | 2,628   |
| <i>3.4 Public Works</i> |   |                     |             |            |          |                 |                            |              |               |           |         |
| 1                       | Build dike along eastern bank of Veiko River              | Svay Rieng City     | M2          | 1000m x 6m | 180.00   | National budget | Provincial Office          | January 2012 | December 2012 | 59,313    | 21,313  |
| 2                       | Announce road traffic law                                 | Nationwide          | Course      | 10         | 8.00     | National budget | Public works department    | January 2012 | December 2012 | 15,000    | 4,000   |
| 3                       | Teach and test motor driving                              | Nationwide          | Course      | 40         | 8.33     | National budget | Public works department    | January 2012 | December 2012 | 3,000     | 1,000   |
| 4                       | Install new traffic signs                                 | Nationwide          | Place       | 10         | 13.66    | National budget | Public works department    | January 2012 | December 2012 | 500,000   | 200,000 |
| 5                       | Repair traffic sign                                       | Nationwide          | Place       | 5          | 3,280.00 | National budget | Public works department    | January 2012 | December 2012 | 500,000   | 200,000 |
| 6                       | Enhance garages   | Nationwide          | Time        | 4          | 1,640.00 | National budget | Public works department    | January 2012 | December 2012 | 100,000   | 40,000  |
| 7                       | Enhance driving schools                                   | Nationwide          | Time        | 3          | 615.00   | National budget | Public works department    | January 2012 | December 2012 | 5,000     | 2,000   |
|                         | Sub-total   |                     |             |            | 5,744.99 |                 |                            |              |               | 1,182,313 | 468,313 |
| <i>3.4 Land</i>         |   |                     |             |            |          |                 |                            |              |               |           |         |
| 1                       | Systematic land titling                                   | Svay Chrum District | Certificate | 20000      | 561.00   | National budget | Land Management department | January 2012 | December 2012 | 16,002    | 8,368   |
|                         | Sub-total   |                     |             |            | 561.00   |                 |                            |              |               | 16,002    | 8,368   |

| 1   | 2   | 3                              | 4              | 5         | 6        | 7               | 8                        | 9        | 10       | 11     | 12     |
|---|---|--------------------------------|----------------|-----------|----------|-----------------|--------------------------|----------|----------|--------|--------|
| <b>4. Administration, Security and Public Order</b> |   |                                |                |           |          |                 |                          |          |          |        |        |
| <i>4.1 Administration</i>                           |   |                                |                |           |          |                 |                          |          |          |        |        |
| 1   | To maintain parks and lay carpet tiles in line of parks   | Svay Rieng City                | m <sup>2</sup> | 1,000     | 60.00    | National budget | Provincial Office        | Jan 2012 | Dec 2012 | 59,313 | 21,313 |
| 2   | To maintain provincial offices, district offices and city hall                                    | Province, district, city       | place          | 8         | 103.33   | National budget | Provincial Office        | Jan 2012 | Dec 2012 | 319    | 98     |
| 3   | Construct meeting building and sitting room of Eo+E1  | Provincial Office              | m              | 12x24m    | 250.00   | National budget | Provincial Office        | Jan 2012 | Dec 2012 | 350    | 45     |
| 4   | Build health centers and provincial hospitals   | Province                       | HCs            | 7HCs      | 600.00   | NB/NGO          | Public Health Department | Jan 2012 | Dec 2012 | -      | -      |
| 4   | Sub total   |                                |                |           | 1,013.33 |                 |                          |          |          | 59,982 | 21,456 |
| <b>Promised Project (External project)</b>          |   |                                |                |           |          |                 |                          |          |          |        |        |
| 1   | Control and eliminate counterfeit medicines and illegal healthcare services                       | Romeas Haek district           | time           | 1         | 3.40     | HSSP2           | Public Health Department | Jan 2012 | Dec 2012 | 450    | 300    |
| 2   | Celebrate World Breastfeeding Week  | Romeas Haek district           | time           | 1         | 2.60     | HSSP3           | Public Health Department | Aug 2012 | Dec 2012 | 400    | 350    |
| 3   | Promote Children Education Program and increase number of school children between 3-5 years old   | Provincial Education Institute | time           | 3         | 380.00   | UNICEF          | Education Department     | Jan 2012 | Dec 2012 | 5,763  | 1,152  |
| 4   | Take action in recording the number of disable children at 257 schools                            | 257 primary schools            | time/year      | once/year | 30.84    | UNICEF          | Education Department     | Jan 2012 | Dec 2012 | 805    | 360    |
| 5   | Educate vulnerable orphans  | 7districts/cities              | time           | 28        | 26.67    | UNICEF          | Cult Department          | Jan 2012 | Dec 2012 | 210    | 96     |
| 6   | Gather people living with AIDS to meditate  | 7 districts /cities            | time           | 28        | 26.67    | UNICEF          | Cult Department          | Jan 2012 | Dec 2012 | 245    | 133    |
| 7   | Sponsor all patient's families  | 7 districts/cities             | time           | 28        | 26.67    | UNICEF          | Cult Department          | Jan 2012 | Dec 2012 | 420    | 415    |
| 8   | Provide education about AIDS and reproductive health to women working at the entertainment places | Svay Rieng City / Bavet City   | Sangkat        | 4         | 79.92    | USAID           | RHAC NGO                 | Jan 2012 | Dec 2012 | 3      | 2      |

| 1  | 2  | 3                           | 4              | 5     | 6      | 7                   | 8                      | 9        | 10       | 11     | 12     |
|----|--|-----------------------------|----------------|-------|--------|---------------------|------------------------|----------|----------|--------|--------|
| 9  | Take care of people living with AIDS in communities                        | Svay Rieng City/ Bavet City | Kom/ Sangkat   | 33    | 131.98 | GFR9                | RHAC NGO               | Jan 2012 | Dec 2012 | 5      | 2      |
| 10 | Bird Flu Prevention Program  | Districts/ Cities           | District/ City | 8     | 211.32 | WB                  | Agriculture Department | Jan 2012 | Dec 2012 | 587    | 58     |
| 11 | Build leisure booths   | Prey Basak Resort           | place          | 6     | 10.00  | National budget     | Tourism Department     | Jan 2012 | Dec 2012 | 18,740 | 4,628  |
| 12 | Build restaurants  | Prey Basak Resort           | place          | 1     | 24.00  | National budget     | Tourism Department     | Jan 2012 | Dec 2012 | 18,740 | 4,628  |
| 13 | Construct entrance and exit  | Prey Basak Resort           | place          | 1     | 32.00  | National budget     | Tourism Department     | Jan 2012 | Dec 2012 | 18,740 | 4,628  |
| 14 | Find labor market for people   | Companies in province       | person         | 4200  | 5.60   | Department of Labor | Labor Office           | Jan 2012 | Dec 2012 | 4,200  | 3,780  |
| 15 | Carry out work inspection  | Companies in province       | time           | 150   | 2.36   | Department of Labor | Labor Office           | Jan 2012 | Jan 2012 | 296    | -      |
| 16 | Carry out work, health and safety inspection                               | Companies in province       | time           | 36    | 0.57   | Department of Labor | Labor Office           | Jan 2012 | Jan 2012 | 72     | -      |
| 17 | Broadcast and educate about the safety migration                           | All districts/cities        | person         | 1000  | 32.00  | Finding aid         | Labor Office           | Jan 2012 | Jan 2012 | 1,000  | 760    |
| 18 | Carry out child labour inspection  | Companies in province       | time           | 12    | 0.19   | Department of Labor | Labor Office           | Jan 2012 | Jan 2012 | 24     | -      |
| 19 | Inspect on operations of companies dispatching workers to foreign counties | All districts/cities        | time           | 36    | 0.57   | Department of Labor | Labor Office           | Jan 2012 | Jan 2012 | 72     | -      |
| 20 | Examine health of workers and employees                                    | Companies in province       | person         | 21000 | 84.00  | Companies           | Labor Office           | Jan 2012 | Jan 2012 | 21,000 | 18,480 |
| 21 | Create work books for Khmer employees                                      | Companies in province       | person         | 7500  | 6.25   | Companies           | Labor Office           | Jan 2012 | Dec 2012 | 7,500  | 6,600  |

| 1  | 2  | 3                            | 4      | 5    | 6      | 7                   | 8                            | 9        | 10         | 11    | 12    |
|----|--|------------------------------|--------|------|--------|---------------------|------------------------------|----------|------------|-------|-------|
| 22 | Create work books for foreign employees                                    | Companies in province        | person | 1600 | 240.00 | Companies           | Labor Office                 | Jan 2012 | Dec 2012   | 1,600 | 544   |
| 23 | Inspect on apprentices training work                                       | Companies in province        | time   | 72   | 1.15   | Department of Labor | Professional Training Office | Jan 2012 | Jan 2012   | 144   | 72    |
| 24 | Train apprentices  | Companies in province        | person | 3300 | 30.80  | Companies           | Professional Training Office | Jan 2012 | Mar 2012   | 3,300 | 2,805 |
| 25 | Collect information from all private training institutes and organizations | Private Training Institutes  | time   | 15   | 0.24   | Department of Labor | Professional Training Office | Jan 2012 | Jan 2012   | 30    | 12    |
| 26 | Train teaching methodologies to teachers                                   | Professional Training Center | course | 3    | 4.00   | Ministry of Labor   | Center                       | Jan 2012 | Jan 2012   | 60    | 20    |
| 27 | Train work inspection and settlement procedure of labor dispute            | Department of Labor          | course | 3    | 2.00   | Department of Labor | Department of Labor          | Jan 2012 | Jan 2012   | 30    | 12    |
| 28 | Research jobs and training requirement                                     | 6districts+2cities           | MLVT   | 31   | 5.76   | Ministry of Labor   | Vocational Training Office   | Jan 2012 | Jan 2012   | 3,100 | 1,600 |
| 29 | Train tailor skills  | Center                       | course | 5    | 16.00  | Ministry of Labor   | Vocational Training Office   | Jan 2012 | April 2012 | 100   | 100   |
| 30 | Train wedding salon skill  | Center                       | course | 2    | 8.00   | Ministry of Labor   | Vocational Training Office   | Jan 2012 | April 2012 | 40    | 40    |
| 31 | Train utility skill  | Center                       | course | 2    | 8.00   | Ministry of Labor   | Vocational Training Office   | Jan 2012 | April 2012 | 40    | -     |
| 32 | Train motor repairing skill  | Center                       | course | 6    | 16.00  | Ministry of Labor   | Vocational Training Office   | Jan 2012 | April 2012 | 120   | 120   |

| 1  | 2                                     | 3           | 4      | 5  | 6     | 7                 | 8                          | 9        | 10         | 11    | 12    |
|----|---------------------------------------|-------------|--------|----|-------|-------------------|----------------------------|----------|------------|-------|-------|
| 33 | Train automobile repairing skill      | Center      | course | 2  | 8.00  | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 40    | -     |
| 34 | Train electronic skill                | Center      | course | 1  | 8.00  | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 20    | -     |
| 35 | Train Air conditioner repairing skill | Center      | course | 3  | 8.00  | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 60    | -     |
| 36 | Train hairdresser skill               | Center      | course | 3  | 8.00  | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 60    | -     |
| 37 | Train computer skill                  | Center      | course | 7  | 16.00 | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 140   | 78    |
| 38 | Train veterinarian skill              | Center      | course | 6  | 16.00 | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 120   | 6     |
| 39 | Train building skill                  | Center      | course | 1  | 8.00  | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 20    | -     |
| 40 | Train welding and soldering skill     | Center      | course | 1  | 8.00  | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 20    | -     |
| 41 | Train pigs raising skill              | 6 districts | course | 68 | 46.00 | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 2,040 | 1,300 |
| 42 | Train fish hatchery skill             | 6 districts | course | 21 | 14.00 | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 630   | 280   |
| 43 | Train poultry raising                 | 6 districts | course | 69 | 48.00 | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 2,070 | 850   |

| 1  | 2  | 3                                  | 4       | 5     | 6         | 7                 | 8                          | 9        | 10         | 11     | 12     |
|----|--|------------------------------------|---------|-------|-----------|-------------------|----------------------------|----------|------------|--------|--------|
| 44 | Train vegetable planting skill                         | 6districts                         | course  | 21    | 14.00     | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 630    | 280    |
| 45 | Train rice intensification (Transplant 1 rice seed)    | 6districts                         | course  | 21    | 14.00     | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 630    | 280    |
| 46 | Train composing fertilizer producing skill             | 6districts                         | course  | 16    | 14.00     | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 480    | 210    |
| 47 | Train mushrooms planting skill                         | 6districts                         | course  | 59    | 54.00     | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 1,770  | 680    |
| 48 | Train in local communities                             | 6districts                         | MLVT    | 27    | 324.00    | Ministry of Labor | Vocational Training Office | Jan 2012 | Jan 2012   | 4,860  | 2,100  |
| 49 | Train all enterprises                                  | 6districts                         | MLVT    | 27    | 266.40    | Ministry of Labor | Vocational Training Office | Jan 2012 | April 2012 | 111    | 29     |
| 50 | Organize and establish Village Development Committee   | 8cities/<br>districts              | Village | 150   | 60,000.00 | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 1,050  | 420    |
| 51 | Strengthen capability of Village Development Committee | 8cities/district<br>s              | course  | 80    | 40,000.00 | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 2,400  | 960    |
| 52 | To Maintain roads in cycle time                        | From Mok Da<br>to Ta Menh          | km      | 21,80 | 1,042.00  | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 28,709 | 10,135 |
| 53 | To Maintain roads in cycle time                        | Kraol kou                          | km      | 11,50 | 549.00    | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 15,956 | 8,705  |
| 54 | To Maintain roads in cycle time                        | From Mok Da<br>to Kampong<br>Trach | km      | 9     | 511.00    | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 8,668  | 4,879  |
| 55 | To Maintain roads in cycle time                        | Bavet                              | km      | 6,64  | 317.00    | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 5,750  | 2,891  |
| 56 | To Maintain roads daily                                | Kampong<br>Trach                   | km      | 24,40 | 110.00    | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 32,145 | 17,058 |
| 57 | To Maintain roads daily                                | Preah Ponlea                       | km      | 16,70 | 82.00     | National budget   | Vocational Training Office | Jan 2012 | Dec 2012   | 11,159 | 8,035  |



| 1  | 2   | 3                              | 4         | 5         | 6        | 7               | 8                       | 9        | 10       | 11     | 12     |
|----|---|--------------------------------|-----------|-----------|----------|-----------------|-------------------------|----------|----------|--------|--------|
| 58 | To Maintain roads daily   | Svay Chrum to Boeung Rai       | km        | 13        | 64.00    | National budget | Development Department  | Jan 2012 | Dec 2012 | 7,557  | 3,879  |
| 59 | To Maintain roads daily   | Prey Pdao to Chres             | km        | 12        | 94.00    | National budget | Development Department  | Jan 2012 | Dec 2012 | 11,625 | 6,128  |
| 60 | To Maintain roads daily   | Svay Ta Yean to Khseth         | km        | 13,20     | 65.00    | National budget | Development Department  | Jan 2012 | Dec 2012 | 28,816 | 14,921 |
| 61 | Establish committee of banking in cash, animals and rice                          | Romeas Haek district           | course    | 15        | 4.00     | National budget | Development Department  | Jan 2012 | Dec 2012 | 750    | 150    |
| 62 | Establish Committee of Cash Credit  | Ro.Haek/ Svay Chrum/ Kamp. Rou | course    | 15        | 2.00     | National budget | Development Department  | Jan 2012 | Dec 2012 | 250    | 80     |
| 63 | Stimulate rural economic development ideas  | Romeas Haek district           | course    | 15        | 4.00     | National budget | Development Department  | Jan 2012 | Dec 2012 | 750    | 150    |
| 64 | Evaluate Credit Action  | Ro.Haek/ Svay Chrum/ Kamp.Rou  | course    | 30        | 4.00     | National budget | Development Department  | Jan 2012 | Dec 2012 | 500    | 160    |
| 65 | Train motor-repairing skill   | Center                         | course    | 2         | 23.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 35     | -      |
| 66 | Train agriculture machinery skill   | Center                         | course    | 2         | 22.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 36     | -      |
| 67 | Train electronic skill  | Center                         | course    | 2         | 20.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 36     | -      |
| 68 | Train tailor skill  | Center                         | course    | 2         | 22.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 27     | 20     |
| 69 | Train hairdressing and beauty surgery skill                                       | Center                         | course    | 2         | 22.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 34     | -      |
| 70 | Train bamboo furniture manufacturing skill  | Center                         | course    | 2         | 20.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 22     | -      |
| 71 | Train English language using skill  | Center                         | course    | 2         | 15.00    | National budget | Development Department  | Feb 2012 | Dec 2012 | 67     | 42     |
| 72 | Repair and enlarge DBST of Kampong Spean road separating from boundary poles #171 | Sangkat Bavet                  | 4km x 4m  | 4km x 4m  | 5,211.00 | National budget | Public Works Department | Feb 2012 | Dec 2012 | 37,032 | 18,936 |
| 73 | Repair and seal road #314C with DBST and Reseal DBST type                         | Svay Rieng City                | 150m x 6m | 150m x 6m | 95.00    | National budget | Public Works Department | Feb 2012 | Dec 2012 | 45,020 | 23,547 |

| 1  | 2   | 3               | 4 | 5    | 6          | 7               | 8                          | 9        | 10       | 11      | 12      |
|----|---|-----------------|---|------|------------|-----------------|----------------------------|----------|----------|---------|---------|
| 74 | Repair and seal road #119-206<br>1660m long<br>6m and 8m wide | Svay Rieng City | m | 1660 | 804.00     | National budget | Public Works<br>Department | Feb 2012 | Dec 2012 | 45,020  | 23,547  |
| 75 | Repair and seal road #208 with<br>DBST type<br>440mx6m long   | Svay Rieng City | m | 440  | 195.00     | National budget | Public Works<br>Department | Feb 2012 | Dec 2012 | 45,020  | 23,547  |
| 75 | Sub-total   |                 |   |      | 105,315.96 |                 |                            |          |          | 277,879 | 136,403 |

## **Appendix (2)**

# **3-Year Gradual Investment Program in Bavet City 2012-2014**

❧❧❧❧❧❧❧

**Svay Rieng Province**  
**Bavet Municipality**  
**No: 05 SSR**

## Decision On Enforcement of 3-Year Gradual Investment Program

- Having seen Royal Kram No. NS/RKM/0508/017, dated 22 May 2008, promulgating the Law on Administrative Management in Capital, Province, City, District, and Sangkat
- Having seen Royal Kram No. NS/RKM/0508/018, dated 24 May 2008, promulgating the Law on Election and Selection of Capital, Provincial, City, District and Sangkat Council
- Referring to Sub Decree No. 216 ANKr.BK, dated 14 December 2009, on Position, Duties and Working Relationship of the Council of Provincial Governance, the Council of Municipal Governance and the Council of District Governance
- Referring to Sub Decree No. 219 ANKr.BK, dated 14 December 2009, on the Establishment of the Development Plan and 3-Year Gradual Investment Program in Capital, Province, City, District and Sangkat
- Referring to Sub Decree No. 152 ANKr.BK, dated 06 December 2009, on Revised Article 12 in the Sub Decree on the Establishment of the Development Plan and 3-Year Gradual Investment Program in Capital, Province, City, District and Commune
- Referring to Inter-Ministry Prakas No. 2417 BrK, dated 27 December 2010, on the Establishment of Development Plan and 3-Year Gradual Investment Program in Capital, Province, City, District and Sangkat
- Referring to the Minute of the 7<sup>th</sup> Extraordinary Meeting of Bavet Municipal Council on 28 December 2012

## Decide

## Article 1

To enforce in Bavet City the 3-Year Gradual Investment Program for 2013 – 2015 which was adopted by the Bavet Municipal Council during the 7<sup>th</sup> extraordinary Meeting on 28 December 2012.

## Article 2

Municipal governor in Bavet City shall promote this 3-Year Gradual Investment Program to people and any related parties within the jurisdiction of Bavet City administration.

Municipal governor shall prepare, facilitate and gather resources for this 3-Year Gradual Investment Program with transparency, accountability and effectiveness.

### **Article 3**

Municipal governor shall formulate mechanisms and systems to control and evaluate the implementation of this 3-Year Gradual Investment Program with participation from any related parties so as to increase the effectiveness of the implementation of the 3-Year Gradual Investment Program.

Municipal governor shall prepare reports on the outcome of the control and evaluation of the implementation of this 3-Year Gradual Investment Program and report this to the meeting of Bavet Municipal Council on the progress of the implementation of this 3-Year Gradual Investment Program at specified date.

Municipal governor shall prepare and send the annual report on the implementation of this 3-Year Gradual Investment Program to the Municipal Council.

### **Article 4**

Municipal governor shall evaluate the implementation of this 3-Year Gradual Investment Program at the mid of their mandate and the end of Municipal Council's mandate so as to evaluate the achieved outcome in comparison with the target and objectives set in the 3-Year Gradual Investment Program.

### **Article 5**

The Board of Governor, office and all related institutions in Bavet City shall follow this Decision effective from the signing date.

Bavet, 31 December 2012  
Head of Bavet City Council  
(Signature)

Copy to:

- Svay Rieng Provincial Hall
- Provincial Planning Department
- Same to Article 4  
Chronology

## **PREFACE**

This is the third year that Bavet Municipal Council has prepared this 3-Year Gradual Investment Program, which provides opportunities to specialized offices around the City, offices under the Municipality, Sangkat Council, social civil organizations, private sector, citizen, representative group of interests, especially to youth groups and children, and to any related parties for participating directly in the process of preparing this 3-Year Gradual Investment Program. This 3-Year Gradual Investment Program has been established to provide guidelines in relation to policies and city development frameworks in order to direct the Municipal administration toward economic development for the local and to promote service quality which contribute to poverty reduction and promote living standard and welfare of people in the City. This 3-Year Gradual Investment Program has also been established to be used as an essential base to make decision on city development and establishment of the 3-Year Gradual Investment Program, intermediate-term expenditures framework (3 years) and Municipal annual budget.

On behalf of the first mandate of the Bavet Municipal Council, I would like to give my appreciation to Municipal governor, Municipal Technical Facilitation Committee, Municipal Women and Children Consultation Committee, other Committees of Municipal Council, specialized Offices around the city, Offices under the Municipality, social civil organization, private sector, Sangkat Council, citizen, representative group of interests, especially youth groups and children, and any other related parties which have actively participated in the process of establishing the 3-Year Gradual Investment Program. Meanwhile, I would also like to express my profound thanks to the Municipal Governance and the working group who established the development plan and the 3-Year Gradual Investment Program by heading and facilitating the process of preparing the 3-Year Gradual Investment Program until it is now achieved.

On behalf of the Municipal Council, I would like to appeal to and expect that provincial administration, specialized organizations, private sector, social civil organization, development partners and other generous donors support activity frameworks and any privileged services which respond to the Municipal intermediate-term (3 years) of expenditure framework which is set within this 3-Year Gradual Investment Program.

Bavet, 31 December 2012

Head of the Bavet Municipal Council

(Signature)

## INTRODUCTION

Bavet City is one of the 8 cities and districts in Svay Rieng Province and bordered:

- to the North by Svay Teab District, Svay Rieng Province, Cambodia, and BenKov District, Tay Ninh Province, Viet Nam
- to the South by Chantrea District and Kompong Rou District
- to the West by Svay Teab District and Kompong Rou District
- to the East by BenKov District, Tra Pang District, Tay Ninh Province and Doeuk Vey District, Long An Province, Viet Nam

Bavet City is divided into 5 sangkats and 35 villages with total land area of 206.69 km<sup>2</sup> and with a population of 37,897, of which 19,125 are women and has density of 183people/km<sup>2</sup>. Approximately 66.12% of the population is farmers who live by depending on agriculture which is a main sector in supporting people's living in Bavet City. Aside from agricultural sector which is the core and the main sector, there are also other sectors such as industrial sector and private investment companies which basically create jobs for people.

In May 2009, the election for Capital, Provincial, Municipal, District and Sangkat Council was successfully carried out under the Law on Administrative Management in the Capital, Province, City, District and Sangkat. Municipal Council together with Municipal Governor has performed their duties for good governance and basic economic development in accordance with the decentralization and deconcentration policies, and any rules and regulations.

The first mandate of Bavet Municipal Council has established the 3-Year Gradual Investment Program for 2013 – 2015 in accordance with Article 38 and Article 39 of Law on Administrative Management in the Capital, Province, Municipality, District and Commune; Sub Decree No.219 ANKr.BK, dated 14 December 2009, on the Establishment of Development Plan and 3-Year Gradual Investment Program for Capital, Province, City, District and Sangkat; and Sub Decree No.152 ANKr.BK, dated 06 December 2009, on the Revised Article 12 of Sub Decree on the Establishment of Development Plan and 3-Year Gradual Investment Program for Capital, Province, City, District and Sangkat.

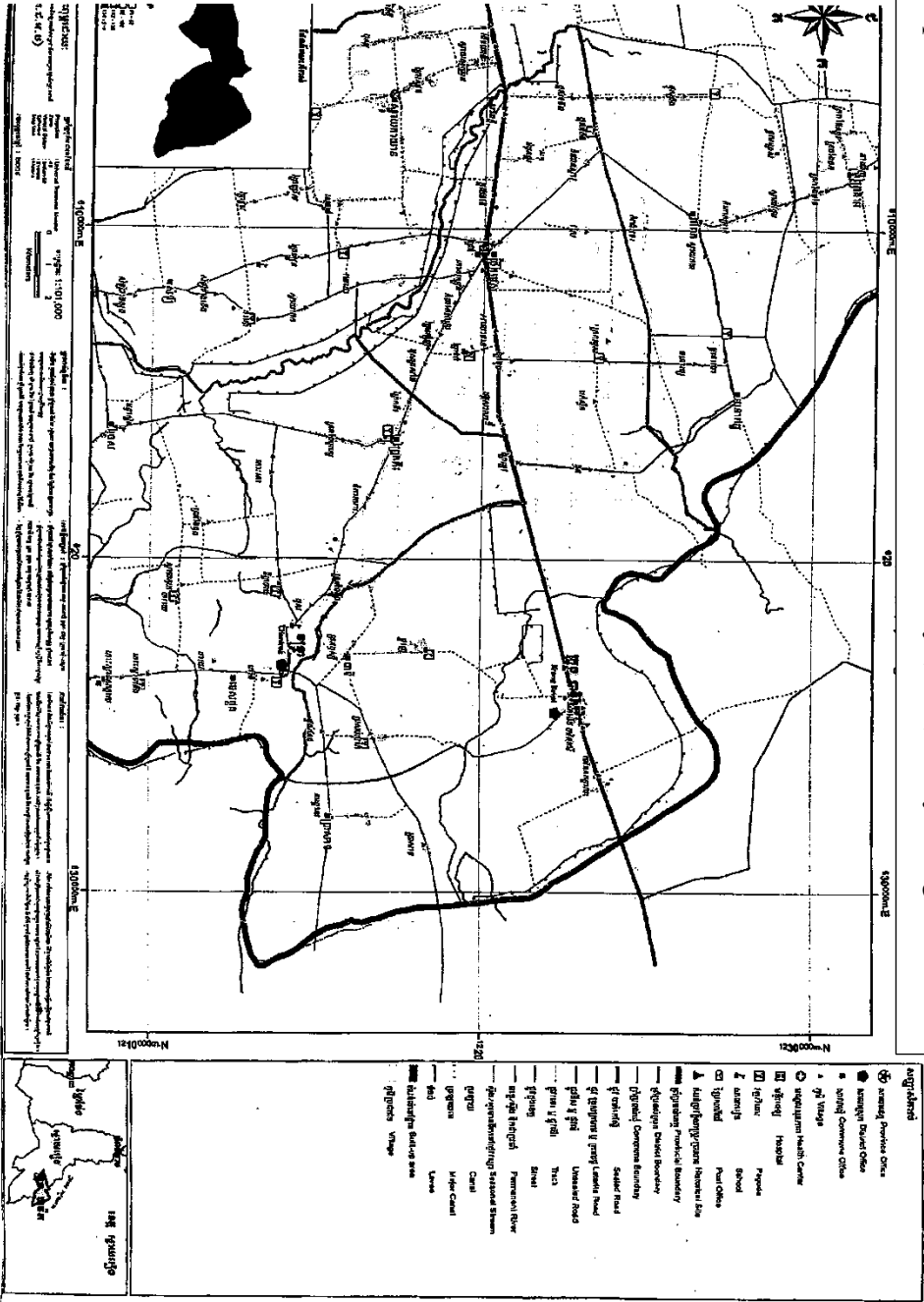
The 3-Year Gradual Investment Program of Bavet City has been established according to guidelines by participating and discussing with people, local communities, representative group of interests, especially youth groups and children, Sangkat Councils, specialized offices around the City, offices under the Municipality, social civil organizations, private sector and any related parties within the jurisdiction of the City in analyzing the situation, potentiality, facing problems and any requirements.

The 3-Year Gradual Investment Program of Bavet City has been set with specific visions, targets, objectives, indicators and strategies based on which decisions are made to employ the resources and other potentiality to develop the economy and promote service quality so as to respond to people's needs and to contribute to poverty reduction.

The 3-Year Gradual Investment Program of Bavet City consists of two chapters; Chapter 1 describes the economic and social situation, Chapter 2 the plan for the next three years of the 3-Year Gradual Investment Program.



Map, administration and infrastructure of Bavet City (2008), Svay Rieng Province



## Land Use and Natural Resources of Bavel Town (2008), Svay Rieng Province 127



# **Chapter 1**

## **Economic and Social Situation**



## CHAPTER 1

### Economic and Social Situation

#### 1.1 Summary Data of Economy and Society

##### Key Information in Bavet City

| Description   | Unit            | Year 2012 |
|---|-----------------|-----------|
| City land area  | km <sup>2</sup> | 206.69    |
| Number of sangkat   | Sangkat         | 05        |
| Number of villages  | Village         | 35        |
| Total population  | Person          | 37,897    |
| Total number of women   | Person          | 19,125    |
| Yearly population growth  | %               | 2         |
| Total number of families  | Family          | 8,562     |
| Rate of women being the head of the family                            | %               | 12.88     |
| Rate of people being from 18 years old and having a main job          | %               | 74.05     |
| Rate of families having a main job as a service provider              | %               | 6.36      |
| Rate of children aging between 6-11 years old who not going to school | %               | 3.65      |
| Rate of illiterates aging between 15-45 years old                     | %               | 3.77      |
| Rate of illiterate women aging between 15-45 years old                | %               | 2.02      |
| Total number of women giving birth of babies                          | Person          | 495       |
| Rate of women giving birth of babies with a traditional midwife       | %               | 8.08      |
| Maternal death among 100,000 births after giving birth from 0-1 month | Person          | 00        |
| Rate of families using water running through a clean water system     | %               | 12.12     |
| Rate of families using the pumping wells or mixed wells               | %               | 86.42     |
| Proportion of families having hygiene toilets                         | %               | 52.18     |

#### 1.2 Current Situation and Problems

##### 1.2.1 Economic Situation

##### 1.2.1.1 Agriculture

Bavet City has a total population of 37,897 being equal to 8,562 families, of which 66.12% of people are mainly farmers particularly in rice cultivation. The City has land area of 11,435 hectares to grow rice, of which land area for dry-season rice covers 741 hectares which

can only produce approximately 71.30% due to drought, irrigation system being shallow and dry, lacking of production means, and all of those areas depending mainly on rain water. For rice yields, they can produce approximately 1.91 tons per hectare because most of the farmers do farming based on natural conditions and also because the farmers use local seeds that need longer time to grow. Collectively, one person receives rice produce of 310.50 kg/person in a year, which can support the population in the City. Aside from rice crop, people in the City grow some combination of plants such as yam, sugarcane, vegetables and so on, but the yields still cannot be able to fulfill the demands of family consumption and of the market yet.

There are 258 families being equal to 3.01% who raise cows; 412 families being equal to 4.81% who raise buffaloes; 428 families being equal to 5% who raise pigs; 827 families being equal to 9.66% who raise chickens; 650 families being equal to 5.42% who raise ducks, whereas 8 families being equal to only 0.09% who raise fish. Raising these animals is an important contribution to ensure food security and increase family revenues and those animals also serve as a force for pulling things.

However, products from these animals still cannot be able to fulfill people's and market demands yet because some animals are infected by viruses due to lacking of sufficient vaccination, care, feeding and animal raising techniques. All the problems above require supports from organizing partners, specialized institutions and the Royal Government.

#### **1.2.1.2 Transport**

Bavet City has National Road #1 running through the middle of the City totaling 22 km, an asphalt road from the downtown of ChiPhu Market to Chantrea District totaling 6 km, and another two sealed roads linking from National Road #1 to Viet Nam border totaling 5,300 m; there are also many small unsealed roads, bridges and drainages such as roads paved with sand from mountains totaling 59,565 m, roads with white sand totaling 26,797 m, 105 places of all kinds of drainages, and two concrete bridges.

In addition to the potential above, people in Bavet City still face with difficulty in travelling because some small tracks in the City have been damaged. Reasons for the damage of the roads are that the roads are low; they are flooded during rainy seasons; land on both sides is filled higher than the road; vehicles overload; they haven't been reconstructed; and they are lacking of care from the locals.

#### **1.2.1.3 Industry, Business and Handicraft**

Bavet City is a city which covers two special economic zones and two companies which are Manhattan Special Economic Zone in which there are 22 factories, of which 17 are being operated, and there are 9,881 employees and workers, of which 7,417 are women. Tai Seng Special Economic Zone has 16 factories, of which 8 are being operated and there are 5,353 employees and workers, of which 3,562 are women. Beside from two Special Economic Zones, there are two more factories which are Svay Rieng Garment Factory employing 1,361 employees, of which 1,035 are women, and Nissin Lotus Garment Factory employing 184 employees, of which 136 are women. There are also 15 casino hotels, 13 of which are being operated and employing 4,955 employees and workers, of which 2,460 are women. There are 9 guesthouses and 1,561 big and small business enterprises, and 5 private security companies employing 183 employees and workers, of which 32 are women. The City is proud of these businesses because

they help promoting the living standard of the local people to a better level and gradually help reducing poverty.

### **1.2.2 Social Situation**

Institution capacity and individual capability have been strengthened by focusing on education and health development. Social affairs have been significantly developed.

#### **1.2.2.1 Education Sector**

In Bavet City, there are two primary schools that have kindergarten in which there are two rooms being equal to two classes, two teachers in total, both of which are female, and a total of 83 pupils enroll, 52 of which are female. There are 16 primary schools with 144 rooms being equal to 131 classes taught by 141 teachers in total, 15 of which are women, a total of 4,742 pupils enroll, and 2,245 of them are female. There are two secondary high schools with 10 rooms being equal to 5 classes taught by 15 teachers in total, one of which is woman, a total of 157 pupils enroll and 69 of them are female. High school is open at two places with 42 rooms being equal to 48 classrooms taught by 108 teachers in total, 12 of which are women, a total of 2,120 pupils enroll and 816 of them are female.

Although the City has such great potential, there are still some problems in this sector, such as currently lacking of 4 school buildings being equal to 32 classrooms. There are 22 children on average being equal to 1.88% who are at the age of 6 and cannot go to school. Children between 6 and 11 years old who cannot go to school is average to 153 people being equal 3.65%, among which Sangkat Bati has the highest rate which is 57% and Sangkat Prey Angkunh has 11%. The number of illiterates who are between the age of 12 and 14 and don't go to school is 86 being equal to 3.50%, among which Sangkat Bati has the highest rate 54%, while the number of illiterates who are between the age of 15 and 45 is 755 being equal to 3.77%, among which Sangkat Prasat has 213 people, Sangkat Bati has 198 people and Sangkat Prey Angkunh has 146 people, Sangkat Bavet has 123 people, and Sangkat Chrok Mtes has 75 people.

#### **1.2.2.2 Health Sector**

Currently health service for people in the entire Bavet City is having good condition, for there is one referral hospital and two health centers as well as two hospitals where patients can hospitalize.

The City has organized the Health Management Committee and Health Village Agency to promote health hygiene and receive feedbacks.

Although the City has such potential, this sector still encounters some problems such as 40 of the total number of women being equal to 8.08% giving birth with a traditional doctor. Even though there are ChiPhu referral hospital and health center located in Sangkat Prey Angkunh next to Sangkat Chrok Mtes, rate of giving birth with a traditional doctor within these two Sangkats is still high. In Sangkat Prey Angkunh, there are 29 women, 5 in Sangkat Chrok Mtes, 3 in Sangkat Bavet and 3 in Sangkat Prasat. On the other hand, there are 53 children between the age of 9 and 12 who haven't had fully vaccinations, and this equals to 15.10%; 20 of them in Sangkat Bavet, 17 in Sangkat Prey Angkunh, 8 in Sangkat Bati and 8 in Sangkat Prasat.

The number of families who use water from unprotected wells is 0.6%, of which Sangkat Prey Angkunh has 2.1%, Sangkat Bati has 1.1%, Sangkat Prasat has 0.5% and Sangkat Chrok Mtes has 0.2%. Meanwhile, only 51.33% being equal to 4,395 families who have a habit of drinking boiled water.

The number of families who are carrying or have been infected by AIDS is 27, of which Sangkat Bati has 9 families, Sangkat Prey Angkunh has 8 families, Sangkat Bavet has 7 families, Sangkat Chrok Mtes has 2 families and Sangkat Prasat has 1 family. There are 22 orphans under 18 years old who don't have parents or whose parents have died due to infection of AIDS. There are 44 disabled people who cannot earn their own living, of which Sangkat Prey Angkunh has 17 people, Sangkat Bavet has 17 people, Sangkat Chrok Mtes has 7 people, and Sangkat Prasat has 3 people. Regarding the elderly people without family support, there are 13 people, of whom Sangkat Bavet has 10 people, Sangkat Bati has 2 people, and Sangkat Chrok Mtes has one.

### **1.2.2.3 Cult and Religion Sector**

There are 18 pagodas throughout the City and 133 monks, of whom 58 are venerable and 75 are novices. 99% of the citizens believe in Buddha and there are 5 Buddhist primary schools. There are 8 pagodas where Seima for Preah Vihear have already been built and another 10 Preah Vihears are in the process. Some pagodas don't have protection fence, monk's residence is not sufficient, and there are increasing constructions being carried out within the pagoda area.

### **1.2.2.4 Gender Sector**

To achieve Cambodia's Millennium Development Goals, the City has increased the number of women to serve decision-making and leadership positions in institutions, organizations, social civil organizations, companies and factories. Developing women to be leaders is to increase education for women and girls, and to promote health care for women and girls, and to organize integrate gender into the process of preparing, controlling and evaluating policies regarding social activities. Because some women still don't have enough capabilities to take their responsibility or duties responding to institutions' needs yet. There are lacking of education and advertisement for preventing violent activities in families, women and children trafficking, which are obstacles to women can using their potentialities fully in order to contribute to economic and social development.

## **1.2.3 Situation of Land Use, Natural Resource and Environment Management**

### **1.2.3.1 Land Use**

Bavet City has a total land area of 20,669 hectares. Land area for building houses is 8,413.85 hectares, 11,435 hectares for growing plantations, 404 hectares for natural forest and 416.15 hectares for other uses. These pieces of land area allow people in the City to build houses and to grow plants in good conditions; nevertheless, due to high increase in population every year, some people in the City face problems such as lacking of land to grow plants and to build houses. Because of lacking of land to grow plants and to build houses, some people have invaded public land such as lakes, creeks, canals, roads, hills and forest land and use them as individual's possession.

### **1.2.3.1 Natural Resources**

Currently, the City has total land area of approximately 819.15 hectares covering forest, lakes, creeks, canals and hills from which people in the City can obtain produce and by-products to support their living. However, until today, 85% of those lakes, creeks, canals and streams are



gradually becoming narrower and shallower. Meanwhile, a small number of people have invaded some area of these lakes and creeks to use as their own possession. Today some of the natural resources are going down which is concerning. This decrease has been caused by many factors such as continuous growth of population every year, deforestation and the act of anarchically obtaining produce and by-products from natural resources. Lakes, creeks and canals have become narrower and shallower, and illegal fishing has resulted with decreasing fish yields from year to year.

#### **1.2.3.2 Environment**

Currently, the City's environment is in good condition, but according to population growth, economic boom and technology advancement are factors to increase use of materials and disposal of waste disorderly which damage the beauty of the City. Waste collection service is still slow both public and private companies while the City is having increasing multi-economic activities especially casinos, factories, enterprises and handicraft works that produce incredible amount of waste.

57.58% of the families grow plants by using chemical fertilizers. There are three communes whose rate is higher than 80%; Sangkat Prey Angkunh has 57.7% and Sangkat Bati has 11.1%. Meanwhile, 46.53% of the families use pesticides. The Sangkat that has the highest rate is Sangkat Prasat which is 97.4%, Sangkat Bati has 72.8%, Sangkat Chrok Mtes has 61.5% and Sangkat Prey Angkunh has 60.2%.

### **1.2.4 Situation of Disaster Management and Climate Change**

#### **1.2.4.3 Disaster Management**

Within the last five years, there have been 2 cases of typhoon which destroyed houses of five families. There were 35 people severely affected by the typhoons; 11 hectares of rice fields were ruined; and 3,100 metres of the roads were damaged by the flood.

#### **1.2.4.4 Climate Change**

Global climate change results some effects on Bavet City such as raining in the wrong season and climate change from temperature of 35 to 40°C. All these changes affect people's living in Bavet; for example, lakes, creeks, and canals are dry during the dry season, and some paddies and other plants are also facing with the problem of insufficient watering during the dry season.

### **1.2.5 Situation of Administration, Security and Public Order**

#### **1.2.5.1 Good Governance**

Good governance in accordance with national reform specifically administration reform, public, legal reform, and arm force reform are strengthened to ensure that every process is transparent and accountable to the Board of Governors and Council, and the council is accountable to the Royal Government and the citizen. After election of the first mandate of District/Municipal Council, the Municipality has organized a new administrative management structure and has already allocated employees to this new structure. The Council, the Board of Governors and all Municipal officials have actively performed their duties and responsibilities in



providing service and solving problems for people in the City. Regarding this matter, the City is still facing with some problems such that officials have limited capability which requires training developments; working office and supplies necessary to carry out work duties are still not appropriate and sufficient; and some officials are still not able to perform the current workloads.

#### **1.2.5.2 Land Management**

Bavet City consists of 5 Sangkats and 35 villages. It is bordered to the North by Svay Teab District, Svay Rieng Province, Cambodia, and Ben Kov District, Tay Ninh Province; to the South by Chantrea District and Kompong Rou District; to the West by Svay Teab District and Kompong Rou District; to the East by Ben Kov District, Tra Pang District, Tay Ninh Province, and Doeuk Vey District, Long An Province, Viet Nam. In land management, the City has encountered some problems; for example, some people have built small houses to sell things on public land; land dispute has always been an issue due to unclear land boundary and the people's unawareness of Law on Land.

#### **1.2.5.3 Statistic Management**

The City has put together statistics of people of the entire city and updates them every year. Regarding population registration, after circulating the importance of all kinds of the population registration letters, most of the locals have been aware of it and came to register in due course. However, a small number of people are late to register for birth certificates; according to data in 2012, of the entire City, only 89.78% of newly born babies have been registered for birth certificates and only 28.76% of couples have registered for marriage certificates. These numbers are not yet sufficient and satisfied by the local authority because some parents still have less consideration of registering birth certificate for their children and don't understand the significance of population registration letters.

#### **1.2.5.4 Security Work and Public Order**

Regarding security and public order, Municipal administration guarantees good security control within the City by putting police stations in 18 locations within the 35 villages, 209 creating citizen protection groups which have 965 members and having guarding shifts in 3 big groups and 6 small groups totaling 67 members which patrol around every night. To implement the Safety Village/Commune Policy, the three arm forces have to cooperate well particularly in monitoring all targets, people who go in and out and temporary stay so that security and public order can be maintained satisfactorily.

In addition to the strengths above, there have also been some issues such as one case of murder and kidnapping, 5 cases of stealing, and 34 cases of other conflicts. There have been 22 cases of traffic accidents caused by drivers not obeying the law, drunk driving, many deteriorated roads and some of the roads not having clear traffic signs and some vehicles being not technically acceptable.

## **Chapter 2**

### **The Projects of the 3-Year Gradual Investment Program**

**Table 2.1 The 3-Year Gradual Investment Projects of the Bavet City**

| Ongoing Projects          |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
|---------------------------|---|---|------------------|------------------|---------------|-----------------------|-------------|--------|--------------------------------------|------|------|-------|----------------|
| No.                       | Project Name  | Participate in achieving the objectives | Project location | Projected Result | Proposed by   | Implementation Period | Beneficiary |        | Investment Budget (in million Riels) |      |      |       | Effective Rate |
|                           |   |   |                  |                  |               |                       | Total       | Female | 2013                                 | 2014 | 2015 | Total |                |
| I. Economic Sector        |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| 1.1                       | Public Work   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| 1                         | Concrete roads  |   | Bavet City       | 100 m            | Municipality  | 1 year                |             |        | 44                                   |      |      | 44    |                |
|                           |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| Promised Projects         |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| No.                       | Project Name  | Participate in achieving the objectives | Project location | Projected Result | Proposed by   | Implementation Period | Beneficiary |        | Investment Budget (in million Riels) |      |      |       | Effective Rate |
|                           |   |   |                  |                  |               |                       | Total       | Female | 2013                                 | 2014 | 2015 | Total |                |
| I. Economic Sector        |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
|                           |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| II. Social Affairs Sector |   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| 2.1                       | Education   |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| 2                         | Inspection on schools                                     |   | Bavet City       | 20 times         | Education     | 1 year                | 200         | 60     | 1.3                                  |      |      | 1.3   |                |
| 3                         | Inspection on newly trained teachers                      |   | Bavet City       | 5 times          | Education     | 1 year                | 15          | 2      | 0.945                                |      |      | 0.945 |                |
| 4                         | Facilitation of technical groups                          |   | Bavet City       | 4 times          | Education     | 1 year                | 80          | 24     | 1.26                                 |      |      | 1.26  |                |
| 5                         | Facilitation of technical groups in demonstration classes |   | Bavet City       | 4 times          | Education     | 1 year                | 80          | 24     | 1.26                                 |      |      | 1.26  |                |
| 6                         | Sub-total   |   |                  |                  |               |                       |             |        | 4.756                                |      |      | 4.756 |                |
| 2.2                       | Women affair  |   |                  |                  |               |                       |             |        |                                      |      |      |       |                |
| 7                         | Strengthen women's competence to be leaders               |   | Bavet City       | 1 time           | Women affairs | 1 year                | 25          | 25     | 0.2                                  |      |      | 0.2   |                |

| 8   | Promote anti-trafficking of women and children                              |   | Bavet City                | 1 time           | Women affairs       | 1 year                | 50          | 25     | 0.2                                  |       |      | 0.2   |                |
|---|---|---|---------------------------|------------------|---------------------|-----------------------|-------------|--------|--------------------------------------|-------|------|-------|----------------|
|   | Sub-total   |   |                           |                  |                     |                       |             |        | 0.40                                 |       |      | 0.40  |                |
| <b>III. Land, Natural Resources, Environment, Disasters and Climate Change Management</b> |   |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
|   |   |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
| <b>IV. Administration, Security and Public Order</b>                                      |   |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
|   |   |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
| <b>Not Promised Project</b>   |   |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
| No.   | Project Name  | Participate in achieving the objectives | Project location          | Projected Result | Proposed by         | Implementation Period | Beneficiary |        | Investment Budget (in million Riels) |       |      |       | Effective Rate |
|   |   |   |                           |                  |                     |                       | Total       | Female | 2013                                 | 2014  | 2015 | Total |                |
| 1   | 2   | 3                                       | 4                         | 5                | 6                   | 7                     | 8           | 9      | 10                                   | 11    | 12   | 13    | 14             |
| <b>I. Economic Sector</b>   |   |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
| 1.1   | <i>Agriculture</i>  |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
| 1   | Training on techniques of mixing fertilizers                                | 1.2.2                                   | 5 sangkats                | 15 courses       | Agriculture         | 1 year                | 450         | 105    | 5.40                                 | -     | -    | 5.40  | 2,301.8945     |
| 2   | Forming an animal raising community   | 1.2.2                                   | 5 sangkats                | 10 groups        | Agriculture         | 1 year                | 31,697      | 208    | 5.00                                 | -     | -    | 5.00  | 1,162.1193     |
| 3   | Training on techniques of growing plants and raising animals                | 1.2.2                                   | 5 sangkats                | 10 courses       | Agriculture         | 1 year                | 302         | 175    | 4.00                                 |       |      | 4.00  | 1,160.1342     |
| 4   | Provide vaccinations to prevent the animals from being affected by diseases | 1.2.3                                   | 5 sangkats                | 06 courses       | Agriculture         | 1 year                | 21,600      | 11,200 | -                                    | 20.00 | -    | 20    | 1,163.5423     |
|   | Sub-total   |   |                           |                  |                     |                       | 54,049      | 11,688 | 14.40                                | 20.00 | -    | 34.40 | 5,787.69       |
| 1.2   | <i>Water Resources</i>  |   |                           |                  |                     |                       |             |        |                                      |       |      |       |                |
| 5   | Restore canals in Chiphu downtown (Chrak Mtes, Prey Angkunnh)               | 1.3.3                                   | Prey Ang Kunh, Chrok Mtes | 5,300 m          | Sangkat, Bavet City | 1 year                | 2,776       | 1,435  | 1.00                                 | -     | -    | 1.00  | 1,747.0000     |

|     |   |       |                                    |              |                     |          |        |        |         |        |          |         |            |
|-----|---|-------|------------------------------------|--------------|---------------------|----------|--------|--------|---------|--------|----------|---------|------------|
| 6   | Build drainages to free water from the roads  | 1.4.3 | Sangkat Bavet                      | 55 locations | Sangkat             | 1 year   | 7,060  | 3,742  | 220.79  | -      | -        | 220.79  | 101.9611   |
| 7   | Rebuild old ditches   | 1.3.1 | 5 Sangkats                         | 9,000 m      | Sangkat             | 3 months | 9,273  | 2,656  | -       | 800.00 | -        | 800.00  | 25.5271    |
|     | Sub-total   |       |                                    |              |                     |          | 19,109 | 7,833  | 222     | 800    |          | 1,021.8 | 1,874.4882 |
| 1.3 | <i>Public Work</i>  |       |                                    |              |                     |          |        |        |         |        |          |         |            |
| 8   | Repair and widen unsealed roads and paved with mountain sand  | 1.5.1 | Sangkat Bati                       | 9,500 m      | Bavet City          | 1 year   | 3,556  | 1,764  | 1.60    | -      | -        | 2       | 838.0822   |
| 9   | Refine unsealed roads paved with mountain sand  | 1.5.1 | 5 Sangkats                         | 42,490 m     | Sangkat, Bavet City | 1 year   | 5,681  | 294    | 15,758  | -      | -        | 15,758  | 838.0822   |
| 10  | Repair unsealed white sand roads and repave them  | 1.5.1 | Bati, Prasat                       | 5,000 m      | Sangkat             | 1 year   | 9,068  | 4,454  | 15,758  | -      | -        | 15,758  | 65.9299    |
| 11  | Repair unsealed roads paved with mountain sand and install drainages to free the water  | 1.5.1 | Sangkat Prasat                     | 6,000 m      | Bavet City          | 1 year   | 1,215  | 603    | -       | -      | 1,000.00 | 1,000   | 0.5319     |
| 12  | Pave the existing roads with concrete   | 1.5.1 | Sangkat Bavet                      | 600 m        | Bavet City          | 1 year   | 2,108  | 1,012  | 69.00   | 69.00  | -        | 138     | 1.6421     |
| 13  | Build sealed roads with Macadam's method and build drainages on both sides of the roads in Bavet downtown                               | 1.5.1 | Sangkat Bati                       | 4 km         | Bavet City          | 1 year   | 7,005  | 1,511  | -       | 10320  | -        | 10,320  | 3.1292     |
| 14  | Repair and widen back roads by paving with asphalt  | 1.5.1 | Bavet City                         | 9.7 km       | Bavet City          | 1 year   | 11.777 | 5.929  | 5,000   | 5,405  |          | 10,405  | 2.1435     |
| 15  | Build new dry ports   | 1.5.1 | Bavet City                         | 1 location   | Bavet City          | 1 year   | 11.777 | 5.929  | 40,000  |        |          | 40,000  | 11.2341    |
| 16  | Repair and widen National Road #1, build gardens, install light poles, and build drainages for water to flow on both sides of the roads | 1.5.1 | Sangkat Bavet, Bati and Chrok Mtes | 10 km        | Bavet City          | 1 year   | 5,232  | 2,673  | 49,200  | -      |          | 49,200  | 0.6993     |
|     | Sub-total   |       |                                    |              |                     |          | 33,889 | 12,323 | 125,787 | 15,794 | 1,000    | 142,581 | 1,761.4744 |
| 1.4 | <i>Industry and Service</i>   |       |                                    |              |                     |          |        |        |         |        |          |         |            |
| 17  | Prepare to extend distribution of state-generated electricity power to all families   | 1.4.1 | 3 Sangkats                         | 2,993 houses | Sangkat Bavet City  | 1 year   | 8,038  | 4,130  | 25.00   | -      | -        | 25.00   | 61.8285    |

|                                  |   |       |               |             |                     |          |         |        |       |       |       |         |            |
|----------------------------------|---|-------|---------------|-------------|---------------------|----------|---------|--------|-------|-------|-------|---------|------------|
|                                  | <i>Sub-total</i>  |       |               |             |                     |          | 8,038   | 4,130  | 25    | -     | -     | 25      | 62         |
|                                  | Total for economic sector   |       |               |             |                     |          |         |        |       |       |       | 143,662 |            |
| <b>II. Social Affairs Sector</b> |   |       |               |             |                     |          |         |        |       |       |       |         |            |
| 2.1                              | <i>Education</i>  |       |               |             |                     |          |         |        |       |       |       |         |            |
| 18                               | Create food programs for children at primary schools                  | 2.1.1 | 5 Sangkats    | 15 schools  | Sangkats and Cities | 1 year   | 25,386  | 14,333 | 138   | -     | -     | 138     | 1.6453     |
| 19                               | Build schools and increase the number of kindergarten teachers        | 2.1.1 | Prey Ang Kunh | 2 buildings | Bavet City          | 1 year   | 657     | 657    | -     | 500   | -     | 500     | 0.5374     |
|                                  | <i>Sub-total</i>  |       |               |             |                     |          | 657     | 657    | 138   | 500   |       | 638     | 0.5374     |
| 2.2                              | <i>Health</i>   |       |               |             |                     |          |         |        |       |       |       |         |            |
| 20                               | Provide Vitamin A and anti-intestine worms medicine to children       | 2.2.2 | 5 Sangkats    | 6 times     | Health, Sangkat     | 6 months | 25,386  | 14,333 | 1.20  | -     | -     | 1.20    | 5,261.9424 |
| 21                               | Inspect on selling and distribution of salt without iodine            | 2.2.2 | 5 Sangkats    | 6 times     | Health, Sangkat     | 1 year   | 48,325  | 2,628  | 1.20  | -     | -     | 1.20    | 2,546.1012 |
| 22                               | Control and eliminate counterfeit medicine and illegal health service | 2.2.3 | 5 Sangkats    | 12 times    | Bavet City, Health  | 1 year   | 48,325  | 2,628  | 2.40  | -     | -     | 2.40    | 2,291.4910 |
| 23                               | Promote the awareness and prevention of epidemics                     | 2.2.2 | 5 Sangkats    | 12 times    | Health, Sangkat     | 1 year   | 48,325  | 2,628  | 2.40  | -     | -     | 2.40    | 976.0054   |
| 24                               | Provide all kinds of vaccinations to children                         | 2.2.7 | 5 Sangkats    | 12 times    | Health, Sangkat     | 1 year   | 48,325  | 2,628  | 2.40  | -     | -     | 2.40    | 373.4282   |
| 25                               | Provide nourishment to children                                       | 2.2.2 | 5 Sangkats    | 12 times    | Health              | 1 year   | 4,573   | 225    | 2.40  | -     | -     | 2.40    | 232.9066   |
| 26                               | Promote awareness of dangers to pregnant women                        | 2.2.8 | 5 Sangkats    | 12 times    | Health, Sangkat     | 1 year   | 4,573   | 225    | 2.40  | -     | -     | 2.40    | 224.8753   |
| 27                               | Promote awareness of AIDS   | 2.2.5 | Sangkat Bavet | 1 time      | Health              | 3 years  | 40      | 40     | 10.00 | 10.00 | 10.00 | 30.00   | 96.9231    |
| 28                               | Campaign of providing iron supplements to women at reproductive age   | 2.2.3 | 5 Sangkats    | 12 times    | Health, Sangkat     | 1 year   | 2,628   | 2,628  | 2.40  | 2.40  | 2.40  | 7.20    | 87.6923    |
|                                  | <i>Sub-total</i>  |       |               |             |                     |          | 230,500 | 27,963 | 26.80 | 12.40 | 12.40 | 51.60   | 12,091.365 |

|   |   |       |                        |           |                            |        |         |        |        |      |      |        |            |
|---|---|-------|------------------------|-----------|----------------------------|--------|---------|--------|--------|------|------|--------|------------|
| 2.3   | Plan  |       |                        |           |                            |        |         |        |        |      |      |        |            |
| 29  | Collect statistical data of paralyzed children, handicapped children and orphan, poor families in all villages and advise them to send the kids to school | 2.1.1 | 5 Sangkats             | 3 times   | Women's affairs            | 1 year | 234     | 95     | 1.20   | 1.20 | 1.20 | 3.60   | 578.2508   |
| 30  | Build people's competence in planning works and investment projects   | 2.4.1 | 5 Sangkats             | 3 courses | Plan                       | 1 year | 46      | 12     | 1.20   | 1.20 | 1.20 | 3.60   | 3.8961     |
|   | <i>Sub-total</i>  |       |                        |           |                            |        | 280     | 107    | 2.40   | 2.40 | 2.40 | 7.20   | 582        |
| 2.4   | Women Affairs   |       |                        |           |                            |        |         |        |        |      |      |        |            |
| 31  | Organize the International Women's Day, 08th of March   | 2.4.3 | Bavet City             | 3 times   | Women affairs              | 1 year | 2,160   | 1,080  | 1.65   | 1.65 | 1.65 | 4.95   | 70.5932    |
| 32  | Promote Law on Domestic Violence  | 2.4.3 | 5 Sangkats             | 5 times   | Women affairs              | 1 year | 451     | 294    | 2.00   | -    | -    | 2.00   | 26.3158    |
|   | <i>Sub-total</i>  |       |                        |           |                            |        | 2,611   | 1,374  | 3.65   | 1.65 | 1.65 | 6.95   | 97         |
| 2.5   | Rural Development   |       |                        |           |                            |        |         |        |        |      |      |        |            |
| 33  | Promote people's awareness of the benefits of consuming clean water   | 2.3.4 | 5 Sangkats             | 3 times   | Rural Development          | 1 year | 31,331  | 16,014 | 1.20   | -    | -    | 1.20   | 336.8852   |
| 34  | Advise people to use the hygiene toilets  | 2.3.3 | 5 Sangkats, Bavet City | 12 times  | Rural Development          | 1 year | 48,325  | 2,628  | 2.40   | -    | -    | 2.40   | 2,885.5813 |
| 35  | Promote the awareness of washing hands with soap  | 2.3.5 | 5 Sangkats             | 15 times  | Rural Development          | 1 week | 31,331  | 16,014 | 6.00   | -    | -    | 6.00   | 1,430.6393 |
| 36  | Promote to the people to build hygiene toilets  | 2.3.3 | 5 Sangkats, Bavet City | 12 times  | Rural Development, Sangkat | 1 year | 48,325  | 2,628  | 9.80   | -    | -    | 9.80   | 1,086.3365 |
| 37  | Promote the education of hygiene health   | 2.3.3 | Bavet City             | 17 times  | Rural Development          | 1 year | 7,195   | 3,238  | 7.00   | -    | -    | 7.00   | 122.6329   |
| 38  | Build hygiene toilets   | 2.3.3 | 5 Sangkats             | 1590      | Sangkats                   | 1 year | 12,195  | 3,238  | 859.00 | -    | -    | 859.00 | 23.3063    |
|   | <i>Sub-total</i>  |       |                        |           |                            |        | 178,702 | 43,760 | 885    |      |      | 885.40 | 5,885      |
|   | Total for social affairs  |       |                        |           |                            |        |         |        |        |      |      |        | 1,589.15   |
| <b>III. Land, Water Resources, Environment, Disasters and Climate Change Management</b> |   |       |                        |           |                            |        |         |        |        |      |      |        |            |
| 3.1   | Environment   |       |                        |           |                            |        |         |        |        |      |      |        |            |

|     |   |       |                          |                 |             |          |         |        |        |          |       |          |            |
|-----|---|-------|--------------------------|-----------------|-------------|----------|---------|--------|--------|----------|-------|----------|------------|
| 39  | Make dustbins and place them in public areas  | 3.1.2 | Bavet City               | 65 bins         | Bavet City  | 3 years  | 45,088  | 23,595 | 12.30  | -        | -     | 12.30    | 7,253.9769 |
| 40  | Make notice boards promoting public hygiene   | 3.1.2 | Bavet City               | 40 boards       | Bavet City  | 3 years  | 30,000  | 12,000 | 32.80  | -        | -     | 32.80    | 2,680.2466 |
| 41  | Publicize and educate those who scatter rubbish   | 3.1.2 | 5 Sangkats               | 9 times         | Bavet City  | 1 year   | 217,890 | 1,059  |        | 3.60     | -     | 3.60     | 770.2559   |
| 42  | Promote Law on Environment  | 3.1.2 | Bavet City               | 24 courses      | Bavet City  | 6 months | 48,325  | 2,628  |        | 5.70     | -     | 5.70     | 678.9603   |
| 43  | Organize waste disposal areas and recycle solid wastes  | 3.1.2 | Bavet City               | 1 location      | Bavet City  | 1 year   | 120     | 66     |        | -        | 60.0  | 60.0     | 6.7476     |
|     | <i>Sub-total</i>  |       |                          |                 |             |          | 341,423 | 39,348 | 45.10  | 9.30     | 60.00 | 114.40   | 11,390     |
| 3.2 | <i>Agriculture</i>  |       |                          |                 |             |          |         |        |        |          |       |          |            |
| 44  | Publicize the Law on Fishery  | 1.2.3 | Bavet City               | 2 times         | Sangkat     | 1 month  | 90      | 15     | 0.80   | -        | -     | 0.80     | 2,691.2879 |
|     | <i>Sub-total</i>  |       |                          |                 |             |          | 90      | 15     | 0.8    | -        | -     | 0.8      | 2,691      |
| 3.3 | <i>Water Resources</i>  |       |                          |                 |             |          |         |        |        |          |       |          |            |
| 45  | Build drainages to free the water on both sides of National Road #1 with diameter of 1 meter                                      | 2.3.2 | Chrok Mtes/Prey Ang Kunh | 1,000 m         | Public Work | 1 year   | 2,776   | 14,335 | 160.00 | -        | -     | 160.00   | 787.7371   |
| 46  | Build the main ditch to free dirty water and a pool to filter out the dirty water and build roads on both sides of the main ditch | 2.3.2 | Bavet City               | 2,733 m         | Bavet City  | 1 year   | 11,961  | 5,119  | -      | 8,800.00 | -     | 8,800.00 | 1.3193     |
|     | <i>Sub-total</i>  |       |                          |                 |             |          | 14,737  | 19,454 | 160.0  | 8,800    | 0     | 8,960.0  | 789        |
| 3.4 | <i>Land</i>   |       |                          |                 |             |          |         |        |        |          |       |          |            |
| 47  | Publicize the Law on Land   | 3.1.1 | 5 Sangkats               | 2 courses/times | Sangkat     | 1 year   | 90      | 15     | 0.80   | -        | -     | 0.80     | 2,580.7878 |
|     | <i>Sub-total</i>  |       |                          |                 |             |          | 90      | 15     | 0.80   | -        | -     | 0.80     |            |
|     | <b>Total Water Resources</b>  |       |                          |                 |             |          |         |        |        |          |       |          | 9,076.0    |



| IV. Administration, Security and Public Order |  |       |            |           |                    |        |        |        |         |        |       |         |          |
|---|--|-------|------------|-----------|--------------------|--------|--------|--------|---------|--------|-------|---------|----------|
| 4.1   | <i>Administration</i>  |       |            |           |                    |        |        |        |         |        |       |         |          |
| 48  | Build communal offices   | 4.1.1 | Prasat     | 2 offices | Sangkat            | 1 year | 27,436 | 14,179 | -       | 360    | -     | 360     | 94.4669  |
| 49  | Promote the significance of the benefits regarding to population registration  | 4.1.1 | Bavet City | 3 times   | Sangkat Bavet City | 7 days | 15     | 3      | 1.20    | -      | -     | 1.20    | 495.2215 |
| 50  | Encourage the parents to register all of their new-born babies                 | 4.1.1 | Bavet City | 3 times   | Sangkat Bavet City | 3 days | 15     | 3      | 1.20    | -      | -     | 1.2     | 550.2459 |
| 51  | settlement procedure of conflict resolutions out of court                      | 4.1.1 | 5 Sangkats | 5 courses | Sangkat            | 1 year | 150    | 70     | 2.40    | 2.40   | 2.40  | 7.2     | 4.4379   |
|   | <i>Sub-total</i>   |       |            |           |                    |        | 27,466 | 14,185 | 2.40    | 360    | -     | 362.4   | 1,140    |
| 4.2   | Plans  |       |            |           |                    |        |        |        |         |        |       |         |          |
| 52  | Trainings to build the competence to gather local statistical data in villages | 1.1.1 | 5 Sangkats | 1 course  | Planning           | 1 day  | 49     | -      | 0.40    | -      | -     | 0.4     | 2.8932   |
|   | <i>Sub-total</i>   |       |            |           |                    |        | 49     | -      | 0.40    | -      | -     | 0.40    | 3        |
|   | Total for Administration   |       |            |           |                    |        |        |        |         |        |       | 362.80  |          |
|   | Total  |       |            |           |                    |        |        |        | 254,615 | 52,582 | 2,155 | 464.042 |          |

**Table 2.2 Supporting Funds From Outside**

| Sources of fund     | Amount           | Number of Projects | Implementing Agent         |                    |                  |
|---------------------|------------------|--------------------|----------------------------|--------------------|------------------|
|                     |                  |                    | Organization or Agent      | Number of Projects | Value            |
| Conditional funds   | 5,165,000 Riels  | 6 projects         | Education Department       | 4 projects         | 4,765,000 Riels  |
|                     |                  |                    | Women's Affairs Department | 2 projects         | 400,000 Riels    |
|                     |                  |                    |                            |                    |                  |
| Unconditional funds | 69,000,000 Riels | 1 project          | City Development           | 1 project          | 69,000,000 Riels |
|                     |                  |                    |                            |                    |                  |
|                     |                  |                    |                            |                    |                  |
| Total               |                  |                    |                            |                    |                  |

**Table 2.4 Action Plans for Implementing the 1<sup>st</sup> Year City Investment Plan**

| No                               | Project Name  | Project Location | Projected Result |        | Project Value<br>(in million<br>Riels) | Sources of fund      | Implemented<br>by | Implementing date |     | Beneficiary |        |
|----------------------------------|---|------------------|------------------|--------|--|----------------------|-------------------|-------------------|-----|-------------|--------|
|                                  |   |                  | Unit             | Number |  |                      |                   | Start             | End | Total       | Female |
| 1                                | 2   | 3                | 4                | 5      | 6                                      | 7                    | 8                 | 9                 | 10  | 11          | 12     |
| <b>I. Economic Sector</b>        |   |                  |                  |        |  |                      |                   |                   |     |             |        |
| <b>1</b>                         | <b>Public Work</b>  |                  |                  |        |  |                      |                   |                   |     |             |        |
| i.                               | Build concrete roads  | Sangkat Bavet    | m                | 200    | 65                                     | Municipality<br>fund | Municipality      |                   |     | 8374        | 1167   |
| <b>II. Social Affairs Sector</b> |   |                  |                  |        |  |                      |                   |                   |     |             |        |
| <b>1</b>                         | <b>Education</b>  |                  |                  |        |  |                      |                   |                   |     |             |        |
| i.                               | Inspection on schools   | Bavet City       | time             | 20     | 1.3                                    | Government           | Education         |                   |     | 200         | 60     |
| ii.                              | Inspection on newly trained<br>teachers   | Bavet City       | time             | 5      | 0.945                                  | Government           | Education         |                   |     | 15          | 2      |
| iii.                             | Facilitation of technical groups  | Bavet City       | time             | 4      | 1.26                                   | Government           | Education         |                   |     | 80          | 24     |
| iv.                              | Facilitation of technical groups<br>in demonstration classes                          | Bavet City       | time             | 4      | 1.26                                   | Government           | Education         |                   |     | 80          | 24     |
| Sub-total                        |   |                  |                  |        | 4.765                                  |                      |                   |                   |     |             |        |
| <b>2</b>                         | <b>Women Affairs</b>  |                  |                  |        |  |                      |                   |                   |     |             |        |
| i.                               | Strengthen women's competence<br>to be leaders  | Bavet City       | time             | 1      | 0.2                                    | Government           | Women Affairs     |                   |     | 25          | 25     |
| ii.                              | Promote anti-trafficking of<br>women and children                                     | Bavet City       | time             | 1      | 0.2                                    | Government           | Women Affairs     |                   |     | 50          | 25     |
| Sub-total                        |   |                  |                  |        | 0.4                                    |                      |                   |                   |     |             |        |
| <b>3</b>                         | <b>Land, Water Resources, Disasters and Climate Change Management (Not Available)</b> |                  |                  |        |  |                      |                   |                   |     |             |        |
|                                  |   |                  |                  |        |  |                      |                   |                   |     |             |        |
| <b>4</b>                         | <b>Administration, Security and Public Order (Not Available)</b>                      |                  |                  |        |  |                      |                   |                   |     |             |        |
|                                  |   |                  |                  |        |  |                      |                   |                   |     |             |        |

# Annex

**Kingdom of Cambodia**  
**Nation-Religion-King**



Svay Rieng Province  
Bavet Municipality  
No: .....SSR

**Decision**  
**On**  
**Political Guideline for Creating Development Plan and 3-Year Gradual Investment Program**

**Council of Bavet City**

- Having seen the Royal Kram No. N.S/RKM/0508/017, dated 22 May 2008, promulgating the Law on Administrative Management in Capital, Province, City, District, and Sangkat
- Having seen Royal Kram No. N.S/RKM/0508/018, dated 24 May 2008, promulgating the Law on Election and Selection of Capital, Provincial, City, District and Sangkat Council
- Sub decree No. 218 ANKr.BK, dated 14 December 2009, on creating, organizing and progressing of the Technical Facilitating Committee of Provincial Council, Technical Facilitating Committee of City Council and Technical Facilitating Committee of District Council
- Declaration No. 4275 Br.K, dated 30 December 2009, on organizing and progressing of the Women and Children Consultation Committee in the Capital, Province, City, District and Sangkat Council
- Guidance No. 036 SNhN, dated 28 December 2010, by the Ministry of Interior on the practice of positional duties and the disciplines of the Technical Facilitating Committee of the Provincial and District Council
- Inter-Ministries declaration No. 2417 Br.K, dated 27 December 2010, on creating development plan and 3-Year Gradual Investment Program of the Capital, Province, City, District, and Sangkat of the Ministry of Interior and the Ministry of Planning
- Having seen Guidance No. 003 SNhN/KkChAB, on making up working group who established development plan and 3-Year Gradual Investment Program for Capital, Province, City, District, and Sangkat
- Referring to the Minute of the 7<sup>th</sup> Extraordinary Meeting of Bavet Municipal Council on 28 December 2012

**Decide**

**Article 1:**

In order to obtain brotherliness with prior goal of the Royal Government determined in the second phase of the rectangular strategy, the first mandate of city council is interested in:

1. Reassurance of the forever peace, political stability, security and social order so as to enhance the state of laws, protect human right and dignity, and pluralistic democracy
2. Strengthen and increase the agricultural productivity
3. Strengthen and increase the development of visual infrastructure

4. Be mindful of human resource development
5. Enhance the electricity supply, handcraft development, and small and medium business
6. Be mindful of enhancing clean water and hygiene
7. Promote and encourage private investment
8. Female's power strengthen and decision making
9. Reassure to reduce the poverty rate for more than 2% per year and rehabilitate key indicators in social affairs sector especially, education, health and gender equality
10. Reassurance of increase effectiveness and quality of public services, reform it according to the good governance policy especially, strengthen law enforcement
11. Natural resources conservation, reassures the forever good environment, prevent and save all bad impacts of disasters.

**Article 2:**

Political Guidelines of Bavet city council in the first mandate for the 5-Year City Development Goal 2010-2015 are considered the Intermediate-Term Vision in accordance with the strategic plan of Cambodia Millennium Development Plan, Nation Development, laws of administrative management of Capital, Province, City, District, and Sangkat, certificates of standard justice, and ways leading to forever development and effectiveness.

**Article 3:**

Working group who established development plan and annual 3-Year Gradual Investment Program must create municipal planning in accordance with Political Guidelines determined and practiced with talent and accountability.

**Article 4:**

Municipal board of governors, chief of administration, offices under the control municipal hall, related organizations must fully cooperate and practice with brotherliness of this Political Guideline after the signing date afterward.

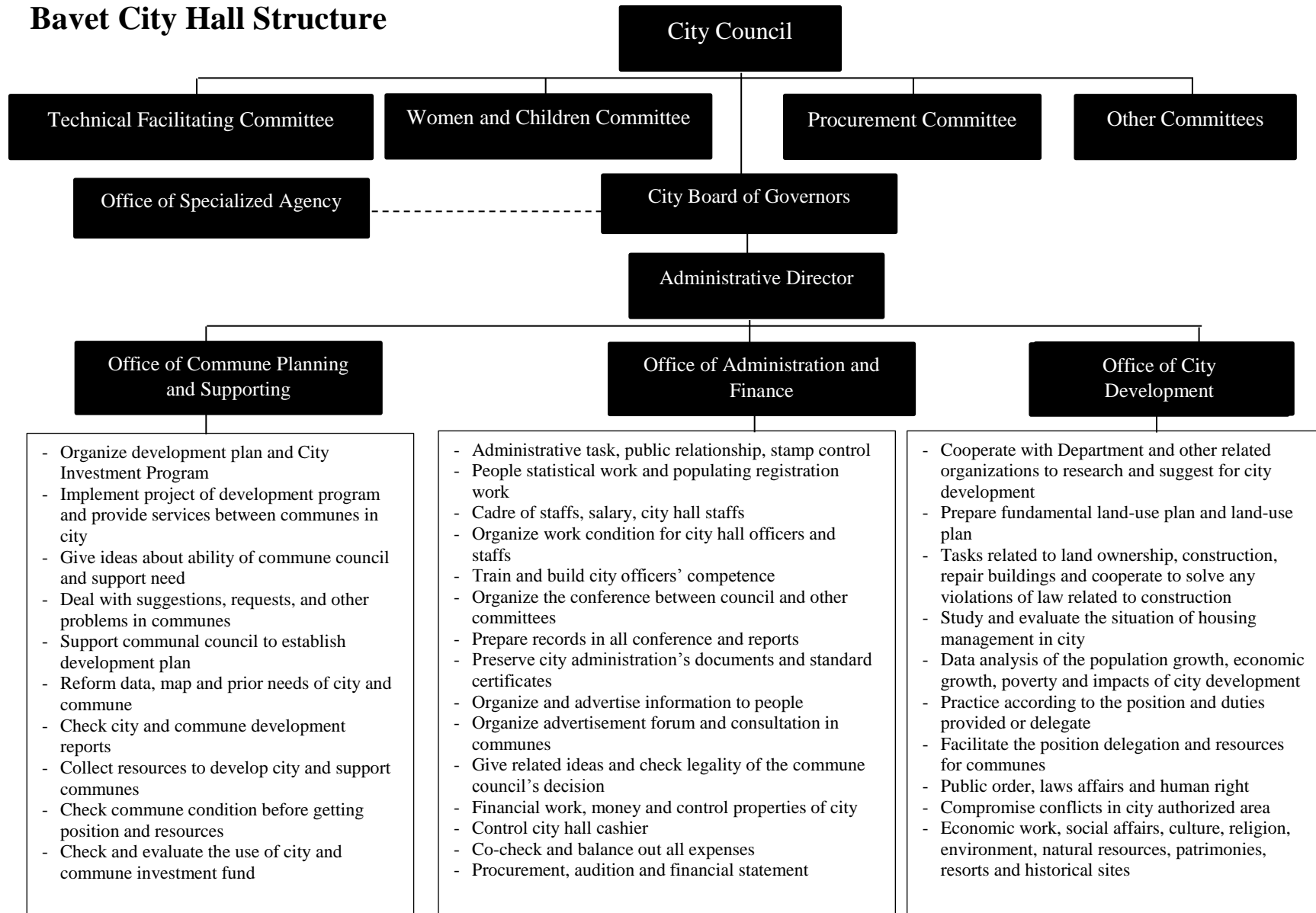
Bavet, 31 December 2012  
**Head of Bavet City Council**

(Signature)

Copy for:

- Svay Rieng Municipal Hall
- Provincial Department of Plan
- Same to article 4
- Chronicle document

## Bavet City Hall Structure



#### 1.4. List of Prior Project of Bavet City

| No.        | Project Name  | Participate in achieving the projects | Project Location          | Projected Result | Proposed by         | Implementation period | Beneficiary |        | Project Cost (million riel) | Effective Rate |
|------------|---|---------------------------------------|---------------------------|------------------|---------------------|-----------------------|-------------|--------|-----------------------------|----------------|
|            |   |                                       |                           |                  |                     |                       | Total       | Female |                             |                |
| 1          | 2   | 3                                     | 4                         | 5                | 6                   | 7                     | 8           | 9      | 10                          | 11             |
| <b>1</b>   | <b>Economic Sector</b>  |                                       |                           |                  |                     |                       |             |        |                             |                |
| <b>1.1</b> | <b>Agriculture</b>  |                                       |                           |                  |                     |                       |             |        |                             |                |
| 1          | Training on techniques of making compost fertilizers                        | 1.2.2                                 | 5 sangkats                | 15 courses       | Agriculture         | 1 year                | 450         | 105    | 5.40                        | 2,301.8945     |
| 2          | Forming an animal raising community   | 1.2.2                                 | 5 sangkats                | 10 teams         | Agriculture         | 1 year                | 200         | 65     | 5.00                        | 1,162.1193     |
| 3          | Training on techniques of growing plants and raising animals                | 1.2.2                                 | 5 sangkats                | 10 courses       | Agriculture         | 1 year                | 302         | 175    | 4.00                        | 1,160.1342     |
| 4          | Provide vaccinations to prevent the animals from being affected by diseases | 1.2.3                                 | 5 sangkats                | 06 courses       | Agriculture         | 1 year                | 21,600      | 11,200 |                             | 1,135.1200     |
|            | Sub-total   |                                       |                           |                  |                     |                       | 22,552      | 11,545 | 14.40                       | 5,759.27       |
| <b>1.2</b> | <b>Water Resources</b>  |                                       |                           |                  |                     |                       |             |        |                             |                |
| 5          | Restore canals in Chiphu downtown (Chrak Mtes, Prey Angkunh)                | 1.3.3                                 | Prey Ang Kunh, Chrok Mtes | 5,300m           | Sangkat, Bavet City | 1 year                | 2,776       | 1,435  | 4,211.00                    | 1,747.0000     |
| 6          | Build drainages to free water from the roads                                | 1.4.3                                 | Sangkat Bavet             | 55 places        | Sangkat             | 1 year                | 141,407     | 3,295  | 144,702.00                  | 101.9611       |
| 7          | Rebuild old ditches   | 1.3.1                                 | 5 sangkats                | 9,000m           | sangkat             | 3 months              | 46,355      | 23,486 | 69,841.00                   | 25.5271        |
|            | Sub-total   |                                       |                           |                  |                     |                       | 190,538     | 28,216 | 218,754.0                   | 1,874.4882     |
| <b>1.3</b> | <b>Public Work</b>  |                                       |                           |                  |                     |                       |             |        |                             |                |



|            |   |       |                                 |             |                         |        |         |         |         |              |
|------------|---|-------|---------------------------------|-------------|-------------------------|--------|---------|---------|---------|--------------|
| 8          | Repair and widen unsealed roads and paved with mountain sand  | 1.5.1 | Sangkat Bati                    | 9,500m      | Bavet City              | 1 year | 3,556   | 1,764   | 5,320   | 838.0822     |
| 9          | Refine unsealed roads paved with mountain sand  | 1.5.1 | 5 sangkats                      | 42,490m     | Sangkat, Bavet City     | 1 year | 5,681   | 294     | 5,975   | 838.0822     |
| 10         | Repair unsealed white sand roads and repave them  | 1.5.1 | Bati, Prasat                    | 5,000m      | Sangkat                 | 1 year | 134,537 | 32,964  | 167,501 | 65.9299      |
| 11         | Repair unsealed roads paved with mountain sand and install drainages to free the water  | 1.5.1 | Sangkat Prasat                  | 6,000m      | Bavet City              | 1 year | 20,035  | 603     | 20,638  | 0.5319       |
| 12         | Pave the existing roads with concrete   | 1.5.1 | Sangkate Bavet                  | 600m        | Bavet City              | 1 year | 2,108   | 1,012   | 3,120   | 1.6421       |
| 13         | Build sealed roads with Macadam's method and build drainages on both sides of the roads in Bavet downtown                               | 1.5.1 | Sangkat Bati                    | 4km         | Bavet City              | 1 year | 79,865  | 37,506  | 117,371 | 3.1292       |
| 14         | Repair and widen back roads by paving with asphalt  | 1.5.1 | Bavet City                      | 9.7km       | Bavet City, Public Work | 1 year | 11.777  | 5.929   | 18      | 2.1435       |
| 15         | Build new dry port  | 1.5.1 | Bavet City                      | 1 place     | Bavet City              | 1 year | 11.777  | 5.929   | 18      | 11.2341      |
| 16         | Repair and widen National Road #1, build gardens, install light poles, and build drainages for water to flow on both sides of the roads | 1.5.1 | Sangkat Bavet, Bati, Chrak Mtes | 10km        | Bavet City              | 1 year | 121,893 | 45,593  | 167,486 | 141,407.0000 |
|            | Sub-total   |       |                                 |             |                         |        | 367,699 | 119,748 | 487,446 | 143,167.7751 |
| <b>1.4</b> | <b>Industry and Services</b>  |       |                                 |             |                         |        |         |         |         |              |
| 17         | Prepare to extend distribution of state-generated electricity power to all families   | 1.4.1 | 03 sangkats                     | 2993 houses | Sangkat, Bavet City     | 1 year | 8,038   | 4,130   | 25.00   | 61.8285      |

|            |   |       |               |             |                    |          |         |        |        |            |
|------------|---|-------|---------------|-------------|--------------------|----------|---------|--------|--------|------------|
|            | Sub-total   |       |               |             |                    |          | 8,038   | 4,130  | 25     | 62         |
| <b>2</b>   | <b>Social Affairs Sector</b>  |       |               |             |                    |          |         |        |        |            |
| <b>2.1</b> | <b>Education</b>  |       |               |             |                    |          |         |        |        |            |
| 18         | Create food programs for children at primary schools                  | 2.1.1 | 5 sangkats    | 15 schools  | Sangkat, city      | 1 year   | 25,386  | 14,333 | 39,719 | 1.6453     |
| 19         | Build schools and increase the number of kindergarten teachers        | 2.1.1 | Prey Ang Kunh | 2 buildings | Bavet City         | 1 year   | 333     | 67     | 400    | 0.5374     |
|            | Sub-total   |       |               |             |                    |          | 333     | 67     | 40,119 | 2.1827     |
| <b>2.2</b> | <b>Health</b>   |       |               |             |                    |          |         |        |        |            |
| 20         | Provide Vitamin A and anti-intestine worms medicine to children       | 2.2.2 | 5 sangkats    | 6 times     | Health, sangkat    | 6 months | 25,386  | 14,333 | 1.2    | 5,261.9424 |
| 21         | Inspect on selling and distribution of salt without iodine            | 2.2.2 | 5 sangkats    | 6 times     | Health, sangkat    | 1 year   | 156     | 75     | 1.2    | 2,546.1012 |
| 22         | Control and eliminate counterfeit medicine and illegal health service | 2.2.3 | 5 sangkats    | 12 times    | Bavet City, health | 1 year   | 180,907 | 92,661 | 2.4    | 2,291.4910 |
| 23         | Promote the awareness and prevention of epidemics                     | 2.2.2 | 5 sangkats    | 12 times    | Health, sangkat    | 1 year   | 48,325  | 2,628  | 2.4    | 976.0054   |
| 24         | Provide all kinds of vaccinations to children                         | 2.2.7 | 5 sangkats    | 12 times    | Health, sangkat    | 1 year   | 48,325  | 2,628  | 2.4    | 373.4282   |
| 25         | Provide nourishment to children                                       | 2.2.2 | 5 sangkats    | 12 times    | Health             | 1 year   | 48,325  | 2,628  | 2.4    | 232.9066   |
| 26         | Promote awareness of dangers to pregnant women                        | 2.2.8 | 5 sangkats    | 12 times    | Health, sangkat    | 1 year   | 48,325  | 2,628  | 2.4    | 224.8753   |
| 27         | Promote awareness of AIDS   | 2.2.5 | Sangkat Bavet | 1 time      | Health             | 3 years  | 300     | 300    | 30.0   | 96.9231    |
| 28         | Campaign of providing iron supplements to women at                    | 2.2.3 | 5 sangkats    | 12 times    | Health, sangkat    | 1 year   | 48,325  | 2,628  | 7.2    | 87.6923    |

|            |   |       |                        |           |                    |        |         |         |       |            |
|------------|---|-------|------------------------|-----------|--------------------|--------|---------|---------|-------|------------|
|            | reproductive age  |       |                        |           |                    |        |         |         |       |            |
|            | Sub-total   |       |                        |           |                    |        | 448,374 | 120,509 | 51.60 | 12,091.366 |
| <b>2.3</b> | <b>Plan</b>   |       |                        |           |                    |        |         |         |       |            |
| 29         | Collect statistical data of paralyzed children, handicapped children and orphan, poor families in all villages and advise them to send the kids to school | 2.1.1 | 5 sangkats             | 3 times   | Women affair       | 1 year | 234     | 95      | 3.60  | 578.2508   |
| 30         | Build people's competence in planning works and investment projects   | 2.4.1 | 5 sangkats             | 3 courses | Plan               | 1 year | 860     | 172     | 3.60  | 3.8961     |
|            | Sub-total   |       |                        |           |                    |        | 1,094   | 267     | 7.2   | 582        |
| <b>2.4</b> | <b>Women Affairs</b>  |       |                        |           |                    |        |         |         |       |            |
| 31         | Organize the International Women's Day, 08th of March   | 2.4.3 | Bavet City             | 3 times   | Women affair       | 1 year | 3,000   |         | 4.95  | 70.5932    |
| 32         | Promote Law on Domestic Violence  | 2.4.3 | 5 sangkats             | 5 times   | Women affair       | 1 year | 451     | 294     | 2.00  | 26.3158    |
|            | Sub-total   |       |                        |           |                    |        | 3,451   | 294     | 6.95  | 97         |
| <b>2.5</b> | <b>Rural Development</b>  |       |                        |           |                    |        |         |         |       |            |
| 33         | Promote people's awareness of the benefits of consuming clean water   | 2.3.4 | 5 sangkats             | 3 times   | Rural Development  | 1 year | 31,331  | 16,014  | 1.20  | 336.8852   |
| 34         | Advise people to use the hygiene toilets  | 2.3.3 | 5 sangkats, Bavet City | 12 times  | Rural Development  | 1 year | 48,325  | 2,626   | 2.40  | 2,885.5813 |
| 35         | Promote the awareness of washing hands with soap  | 2.3.5 | 5 sangkats             | 15 times  | Rural Development  | 1 week | 50      | 2       | 6.00  | 1,430.6393 |
| 36         | Promote to the people to build hygiene toilets  | 2.3.3 | 5 sangkats, Bavet city | 12 times  | Rural Development/ | 1 year | 48,325  | 2,628   | 9.80  | 1,086.3365 |

|            |  |       |                               |              |                               |          |         |        |        |            |
|------------|--|-------|-------------------------------|--------------|-------------------------------|----------|---------|--------|--------|------------|
|            |  |       |                               |              | sangkat                       |          |         |        |        |            |
| 37         | Promote the education of hygiene health  | 2.3.3 | Bavet City                    | 17 times     | Rural Development/<br>sangkat | 1 year   | 37,423  | 14,325 | 7.00   | 122.6329   |
| 38         | Build hygiene toilets  | 2.3.3 | 5 sangkats                    | 1590 toilets | sangkat                       | 1 year   | 5,367   | 4,803  | 859.00 | 23.3063    |
|            | Sub-total  |       |                               |              |                               |          | 170,821 | 40,400 | 885.40 | 5,885      |
| <b>3</b>   | <b>Land, Natural Resources, Environment, Disaster and Climate Change Management</b>          |       |                               |              |                               |          |         |        |        |            |
| <b>3.1</b> | <b>Environment</b>   |       |                               |              |                               |          |         |        |        |            |
| 39         | Make dustbins and place them in public areas   | 3.1.2 | Bavet City                    | 65 bins      | Bavet City                    | 3 years  | 30      | 8      | 12.30  | 7,253.9769 |
| 40         | Make notice boards promoting public hygiene  | 3.1.2 | Bavet City                    | 40 courses   | Bavet City                    | 3 years  | 30,000  | 12,000 | 32.80  | 2,680.2466 |
| 41         | Publicize and educate those who scatter rubbish  | 3.1.2 | 5 sangkats                    | 1 time       | Bavet City                    | 1 year   | 45,088  | 23,595 | 3.60   | 770.2559   |
| 42         | Promote Law on Environment   | 3.1.2 | Bavet City                    | 24 courses   | Bavet City                    | 6 months | 30,000  | 12,000 | 5.70   | 678.9603   |
| 43         | Organize waste disposal areas and recycle solid wastes                                       | 3.1.2 | Bavet City                    | 1 place      | Bavet City                    | 1 year   | 120     | 66     | 60.0   | 6.7476     |
|            | Sub-total  |       |                               |              |                               |          | 105,238 | 47,669 | 114.4  | 11,390     |
| <b>3.2</b> | <b>Agriculture</b>   |       |                               |              |                               |          |         |        |        |            |
| 44         | Publicize the Law on Fishery   | 1.2.3 | Bavet City                    | 2 times      | sangkat                       | 1 month  | 90      | 15     | 105.00 | 2,691.2879 |
|            | Sub-total  |       |                               |              |                               |          | 90      | 15     | 105.0  | 2,691      |
| <b>3.3</b> | <b>Water Resources</b>   |       |                               |              |                               |          |         |        |        |            |
| 45         | Build drainages to free the water on both sides of National Road #1 with diameter of 1 meter | 2.3.2 | Chrok Mtes /<br>Prey Ang Kunh | 1,000m       | City Public Work              | 1 year   | 2,776   | 14,335 | 160.0  | 787.7371   |

|            |   |       |               |                 |                     |        |        |        |         |            |
|------------|---|-------|---------------|-----------------|---------------------|--------|--------|--------|---------|------------|
| 46         | Build the main ditch to free dirty water and a pool to filter out the dirty water and build roads on both sides of the main ditch | 2.3.2 | Sangkat Bavet | 2,733m          | Bavet City          | 1 year | 11,961 | 5,119  | 8,800.0 | 1.3193     |
|            | Sub-total   |       |               |                 |                     |        | 14,737 | 19,454 | 8,960.0 | 789        |
| <b>3.4</b> | <b>Land</b>   |       |               |                 |                     |        |        |        |         |            |
| 47         | Publicize the Law on Land   | 3.1.1 | 5 sangkats    | 2 courses /time | sangkat             | 1 year | 90     | 15     | 105.0   | 2,580.7878 |
|            | Sub-total   |       |               |                 |                     |        | 90     | 15     | 105.0   | 2,581      |
| <b>4</b>   | <b>Administration, Security and Public Order</b>  |       |               |                 |                     |        |        |        |         |            |
| <b>4.1</b> | <b>Administration</b>   |       |               |                 |                     |        |        |        |         |            |
| 48         | Build communal offices  | 4.1.1 | Prasat, Bati  | 02 buildings    | sangkat             | 1 year | 27,436 | 14,179 | 360     | 94.4669    |
| 49         | Promote the significance of the benefits regarding to population registration   | 4.1.1 | Bavet City    | 3 times         | sangkat, Bavet City | 7 days | 15     | 3      | 18.0    | 495.2215   |
| 50         | Encourage the parents to register all of their new-born babies  | 4.1.1 | Bavet City    | 5 courses       | sangkat, Bavet City | 3 days | 15     | 3      | 18.0    | 550.2459   |
| 51         | settlement procedure of conflict resolutions out of court   | 4.1.1 | 5 sangkats    | 5 courses       | sangkat             | 1 year | 60     | 50     | 110.0   | 4.4379     |
|            | Sub-total   |       |               |                 |                     |        | 27,466 | 14,185 | 396.0   | 1,140      |
| <b>4.2</b> | <b>Plan</b>   |       |               |                 |                     |        |        |        |         |            |
| 52         | Trainings to build the competence to gather local statistical data in villages  | 1.1.1 | 5 sangkats    | 1 course        | Plan                | 1 day  | 49     |        | 0.4     | 2.8932     |
|            | Sub-total   |       |               |                 |                     |        | 49     |        | 0.4     | 3          |

## **Conclusion**

The previous implementing of the City 3-Year Gradual Investment Program (2012-2014) favorably resulted as shown in the book of this investment program. Even though the program was not succeeded and perfectly responded to people's needs and suggestions, but it showed the improvement and lead to the poverty reduction.

The continuance of peace enhancement, political and social stability, improvement of laws and social order enforcement, and good governance are the dynamic forces which lead to social prosperity. However, many actions with brotherliness and harmonization are required in many sectors. City council expect to get fully cooperation from those who are related, state, private and social civil so as to achieve strategic goal of the second phase of government rectangular especially, in order to reduce poverty quicker, and reassure peace, happiness and prosperity for every citizen.