

# Chapter 4-1

## Flowchart Approach to Industrial Cluster Policy in Phnom Penh and Sihanouk Ville

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## Chapter 4-1

### FLOWCHART APPROACH TO INDUSTRIAL CLUSTER POLICY IN PHNOM PENH AND SIHANOUK VILLE

*Sau Sisovanna*

#### Abstract

The poor development status of infrastructure is the main hindrance to the Cambodia's participation in the production and distribution networks in East Asia in spite of its abundant, reasonably well-educated and low-wage labor. Results of interviews shows high power costs and poor road infrastructure are serious problems. Besides weak physical infrastructure, issues such as high fuel prices exist in Phnom Penh and Sihanouk Ville.

Interviews using the flowchart approach sought to identify the poor development status of Cambodia's infrastructure today. This is the main hindrance to the country's participation in the production and distribution networks in East Asia in spite of its abundant, reasonably well-educated and low-wage labor.

A survey was carried out on the industrial cluster policy of Phnom Penh and Sihanouk Ville to determine whether the problems confronting it could be solved using the flowchart approach. Ten professionals per each site were interviewed based on prepared questionnaire. (The results are presented in Tables 1.and 2.) The respondents were asked to give their opinions on whether the existing industrial zones and infrastructure are adequate. Most of the respondents found these facilities generally sufficient in Phnom Penh and Sihanouk Ville while pointing out that water, electricity, roads, ports, transport, public institutions, human resources, and living condition were inadequate.

Here are some of the specific outcomes of the survey:

*Industrial zones.* Some respondent expressed concern about the effectiveness and efficiency of existing industrial and special economic zones.

*Water infrastructure.* While the Phnom Penh Water Supply Authority (PPWSA), a public enterprise, has been providing water since 1996, Sihanouk Ville is the only exception as Sihanouk Ville Water Supply Authority is supplying water to the city but in rural areas, people mostly depend on groundwater, river water and/or rainwater.

The Government's National Water Supply and Sanitation Policy affirms that every Cambodian, including the rural folk, shall have access to safe water and sanitation by 2015.

*Electricity.* Although the supply of electricity by Electricite Du Cambodge (EDC) has been significantly improved, there still are some issues discouraging existing and potential investors. These include the high power costs supplied by EDC and independent power producers and the lack of electricity infrastructure linking major strategic areas of Cambodia. Although it is expected that most of these issues will be addressed by 2010 according to the government's development plans, more effective measures should be taken to hasten such developments.

*Telecommunications.* Although significant improvements are evident in these infrastructure, there has been a continuous shortage of fixed-line services. Compared to other ASEAN countries, Cambodian telephone density remains low and international call tariffs remain high.

*Roads.* The Road Density (km/km<sup>2</sup>) is comparable to other ASEAN countries but very inferior in terms of paved road density. Due to the severe floods in Cambodia in 2000, serious damage to Cambodian roads occurred. Since road transport plays a very important role in Cambodia, not only for passengers but also for cargo transport, immediate measures should be taken to hasten the renovation and rehabilitation programs.

*Aviation.* Cambodia has ten airports, including Phnom Penh International Airport (Pochentong Airport), Siem Reap Airport, the gateway to Angkor Wat; and Kang Keng airport in Sihanouk Ville, which provides international flights. However, the two railway lines in operation in Cambodia need to be improved. The average speed of rail transport is less than 30km/hour. Many sections of track lack bolts for rails, and there are no traffic signals along railways.

*Sea port.* Cambodia has only one deep seawater port in Sihanouk Ville. Constructed in the 1950's and 1960's, Sihanouk Ville is the main deep water sea port.

This port is expected to have international capacity and be utilized by zone investors operating in the planned SEZ in the Sihanouk Ville area.

The Phnom Penh Port is the international river port for the country's access to the South China Sea through Vietnam via the Mekong River. In 2002, the port shifted to all-container operations, and volumes have been increasing since then. Like Sihanouk Ville, the port lacks modern facilities for expeditious cargo processing.

Besides weak physical infrastructure, issues such as high fuel prices, lack of health, life, social and life insurance, pensions, among others, also exist in Phnom Penh and Sihanouk Ville.

Cambodia ranks 114th out of 117 countries in terms of the quality of its public institutions and overall competitiveness. Cambodia's public institutions are no doubt among the world's worst (World Economic Forum (WEF). Corruption is considered pervasive in Cambodia, making it a serious and sensitive issue. Both the Investment Climate of the World Bank (released in August 2004) and Survey on Investment Climate in Cambodia in 2008-09 suggest that corruption is the biggest business problem facing the country.

There is still a large pool of unskilled labor, especially in the rural areas of Phnom Penh, as well as Sihanouk Ville, which is located in a coastal and highland area, far from rural plain areas where many people live. Very few of the 200,000 people entering the job market each year are absorbed by the formal sector.

Lacking in scientists and engineers, Cambodia also suffers from inadequate skilled labor. Overall quality of education is low, which explains the poor quality of Cambodia's human resources. There is thus an urgent need for Cambodia to improve the quality of its educational system, as well as its local business schools, so it can meet business requirements.

Phnom Penh has about ten international schools, two international medical centers, at least ten five- and four-star hotels and serviced departments, and many three-star hotels, which are widely used by business persons and tourists. Sihanouk Ville has no international school and hospitals. Both areas have inadequate shopping centers, movies and other entertainment facilities.

To make Cambodia an attractive place for investment and industrial cluster site, it must develop more infrastructure such as roads, railways, ports and airway networks,

and ensure an adequate and clean water supply, water sewage treatment, and energy power from various sources. The lack of skilled and professional labor is a critical issue that must be solved by enhancing the quality of education while paying attention to technical and vocational training. Higher education at par with international standards and sufficient to meet the country's development needs is also urgently needed. Just as vital are technical and vocational training schools and higher educational institution that can produce a pool of competent technicians and engineers. Strengthening and improving public institutions is also required to ensure good governance, efficient law implementation, better delivery of services, and decreased processing time and costs of transacting business with the government. Achieving these goals also requires sound policies, the formulation of which should include all sectors.

## Appendix

**Table 1- Questionnaires on industrial cluster policy: Phnom Penh**

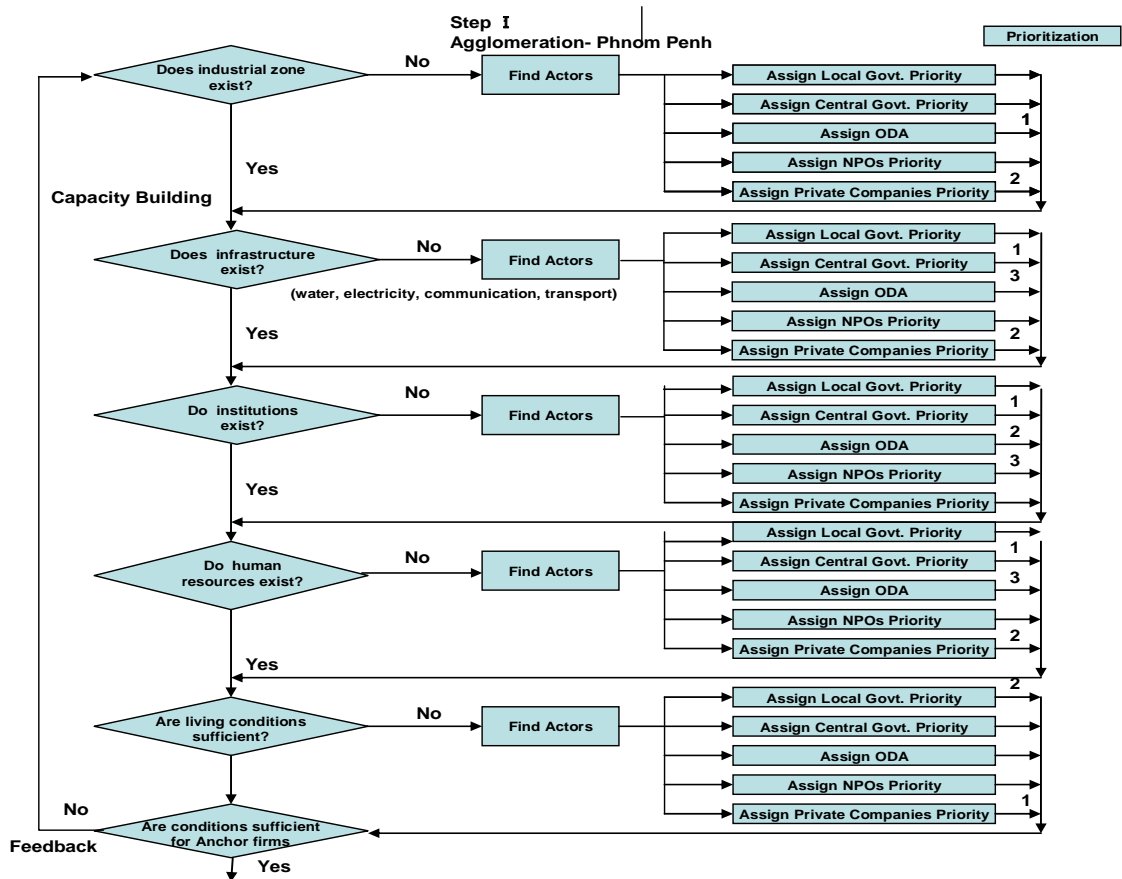
| Questions  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Result | Problem |
|--|---|---|---|---|---|---|---|---|---|----|--------|---------|
| 1. Do industrial zones exist sufficiently?               | o | x | o | o | x | o | x | x | x | o  | 5      |         |
| <b>Capacity building</b>                                 |   |   |   |   |   |   |   |   |   |    |        |         |
| 2. Does water infrastructure exist sufficiently?         | x | x | o | o | o | o | x | x | x | x  | 4      | x       |
| 3. Does electricity infrastructure exist sufficiently?   | x | x | o | x | x | x | x | x | x | x  | 1      | x       |
| 4. Does communication infrastructure exist sufficiently? | x | o | o | o | o | o | x | x | x | x  | 5      |         |
| 5. Does transport infrastructure exist sufficiently?     | x | x | x | x | o | o | x | x | x | x  | 2      | x       |
| 6. Does other infrastructure exist sufficiently?         | x | x | o | x | o | o | x | x | x | x  | 3      |         |
| 7. Do institutions exist sufficiently?                   | x | x | x | x | o | o | x | x | o | o  | 4      | x       |
| <b>Human resources</b>                                   |   |   |   |   |   |   |   |   |   |    |        |         |
| 8. Unskilled labor                                       | o | o | o | o | o | o | o | o | o | o  | 10     |         |
| 9. Skilled labor   | x | x | o | o | x | x | x | x | x | x  | 2      | x       |
| <b>Living conditions</b>                                 |   |   |   |   |   |   |   |   |   |    |        |         |
| 10. Do hospitals exist sufficiently?                     | x | x | x | x | o | o | x | x | x | x  | 2      | x       |
| 11. Do schools exist sufficiently?                       | x | x | x | x | o | o | x | x | x | x  | 2      | x       |
| 12. Do entertainments exist sufficiently?                | x | x | x | x | o | o | x | x | x | x  | 2      | x       |

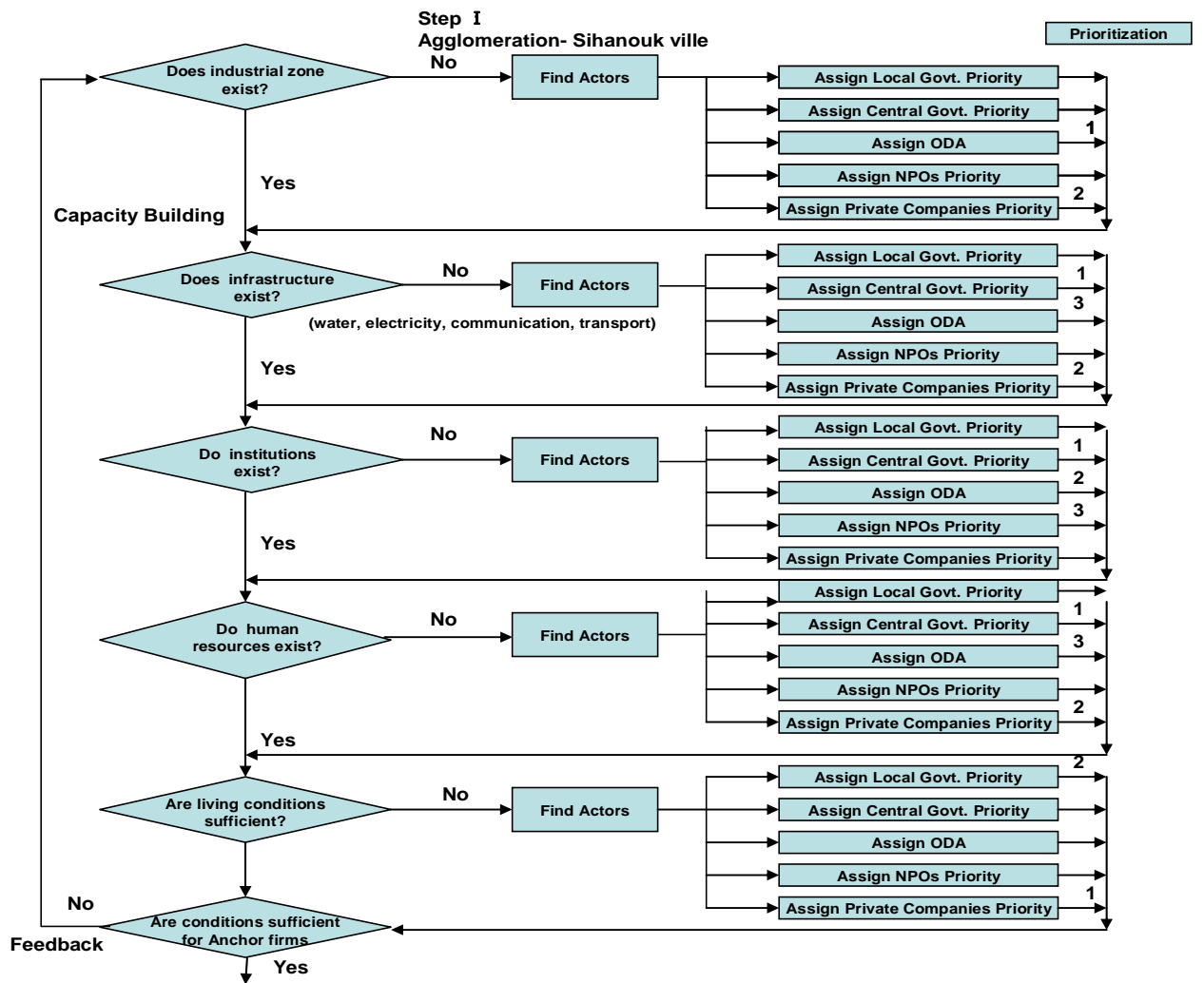
Source: Sau Sisovanna (interviews in Phnom Penh, 8-12/12/2008.)

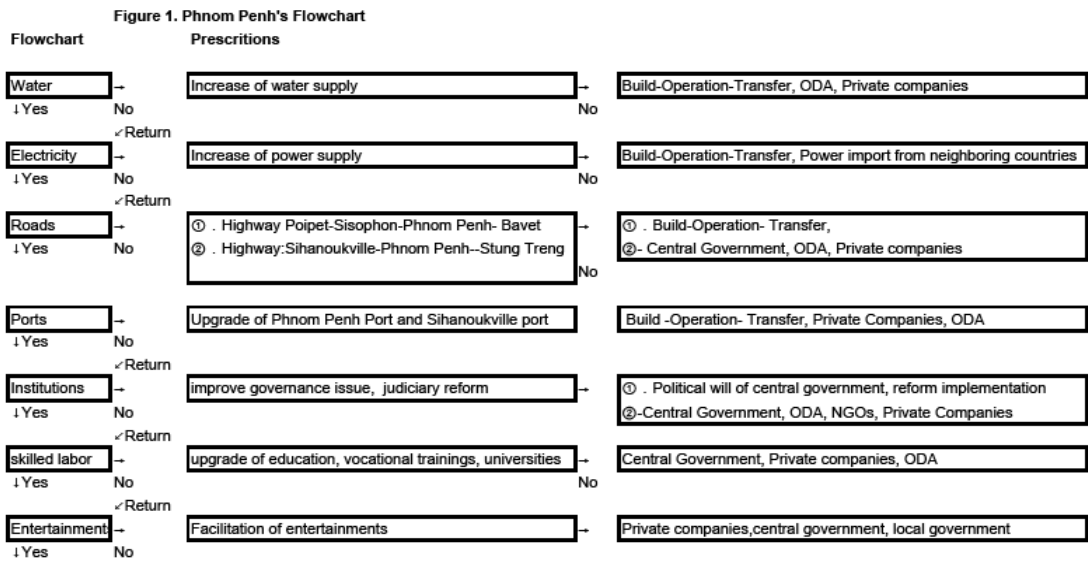
**Table 2- Questionnaires on industrial cluster policy: Sihanouk Ville**

| Questions  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Result | Problem |
|--|---|---|---|---|---|---|---|---|---|----|--------|---------|
| 1. Do industrial zones exist sufficiently?               | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○  | 8      |         |
| <b>Capacity building</b>                                 |   |   |   |   |   |   |   |   |   |    |        |         |
| 2. Does water infrastructure exist sufficiently?         | ○ | × | ○ | × | × | × | × | × | × | ×  | 2      | ×       |
| 3. Does electricity infrastructure exist sufficiently?   | ○ | × | ○ | × | × | × | × | × | ○ | ×  | 3      | ×       |
| 4. Does communication infrastructure exist sufficiently? | ○ | ○ | ○ | ○ | × | × | × | ○ | ○ | ○  | 7      |         |
| 5. Does transport infrastructure exist sufficiently?     | ○ | × | ○ | × | × | × | × | × | ○ | ×  | 3      | ×       |
| 6. Does other infrastructure exist sufficiently?         | ○ | × | ○ | × | × | × | × | × | × | ×  | 2      |         |
| 7. Do institutions exist sufficiently?                   | ○ | × | ○ | × | × | × | ○ | ○ | ○ | ×  | 5      | ×       |
| <b>Human resources</b>                                   |   |   |   |   |   |   |   |   |   |    |        |         |
| 8. Unskilled labor                                       | ○ | ○ | × | × | × | × | ○ | ○ | × | ○  | 5      |         |
| 9. Skilled labor   | ○ | × | × | × | × | × | ○ | × | × | ×  | 2      | ×       |
| <b>Living conditions</b>                                 |   |   |   |   |   |   |   |   |   |    |        |         |
| 10. Do hospitals exist sufficiently?                     | ○ | × | × | × | × | × | × | × | × | ×  | 2      | ×       |
| 11. Do schools exist sufficiently?                       | ○ | × | × | × | × | × | × | × | × | ×  | 1      | ×       |
| 12. Do entertainments exist sufficiently?                | ○ | × | × | × | × | × | × | × | × | ×  | 1      | ×       |

Source: Sau Sisovanna (interviews in Sihanouk Ville, December. 25-29/12/2008.)







**Figure: Sihanoukville's Flowchart**

