

1. Background

Siem Reap District, the center of Siem Reap Province is the seat of Angkor, a world heritage.

It has a great potential for development. A rapidly increasing number of tourists, both international and domestic, visit the Angkor cultural heritage that is the prime tourism asset of the country. The number of visitors was 750,000 in 2004. With a rapid increase in the number of tourists, many new hotels, restaurants and other tourism facilities are being built in Siem Reap/ Angkor Town in a disorganized manner. At the same time, the district experiences a rapid population increase. It had a population of about 30,000 in 1979, 85,000 in 1993 and 139,000 in 2004.

The consequent demand expansion for public services is now observed to exceed existing capacity of the public facilities such as water supply, drainage, power and road. Shortage in the provision of such public services is already at a conspicuous stage especially in environment-related facilities including drainage and solid waste disposal. Steady supply and proper maintenance of such public facilities require an appropriate institutional framework and a managerial capacity.

It is in this regard that the Royal Government of Cambodia (RGC) and Japan International Cooperation Agency (JICA) have recognized a great need for an integrated plan to develop economy, to build necessary infrastructures, and, to maintain the quality of the tourism resources and environment in Siem Reap/ Angkor Town from a long-term viewpoint.

RGC and JICA agreed on the Scope of Work for the Study on Integrated Master Plan for Sustainable Development of Siem Reap/ Angkor Town in the Kingdom of Cambodia on July 21, 2004.

JICA has assigned this study to be undertaken by a team organized by International Development Center of Japan (IDCJ), Nippon Koei Co. Ltd. (NK) and, Kokusai Kogyo Co., Ltd (KKC).

The Study Team launched the study in November 2004. It has completed the study in March 2006. This Final Report (FR) has proposed the master plan and the priority projects.

1.1 The Objectives of the Study

The Study objectives are:

- (1) To prepare an integrated master plan for sustainable development of Siem Reap/ Angkor Town in a long run with a view to achieving a reasonable balance among tourism industry, urban environment, and institutional capacity;
- (2) To propose a package of measures with a view to promoting and diversifying local economy based on tourism development; and
- (3) To promote technical transfer to the Cambodian counterpart to strengthen institutional capacity of the government organizations at the local level and communities.

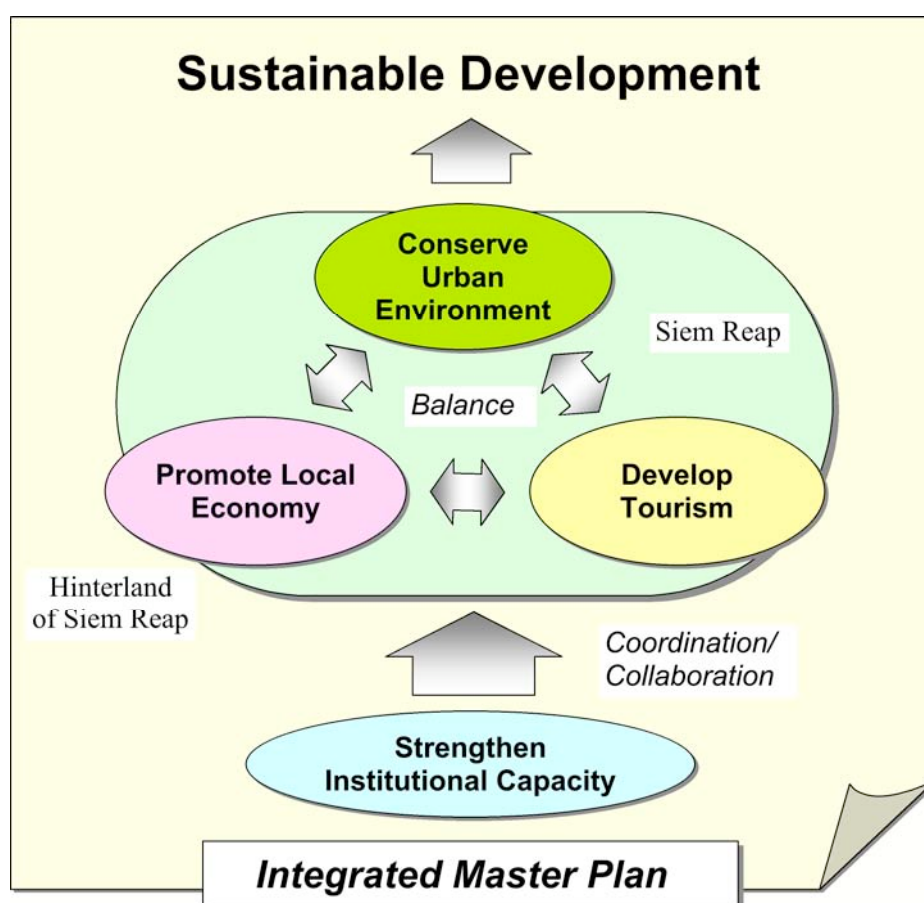


Figure II.1.1 Objectives of the Study

1.2 The Study Area

The study area covers Siem Reap District with focus on urban area, while it is extended to the hinterland of Siem Reap District for the study of local economy.

1.3 Process of the Study

(1) Organizational Set-up

The Siem Reap Province and APSARA Authority are the counterpart agencies for this JICA Study. Thirteen counterpart members have been nominated from among the staff members of Siem Riep Province and APSARA to participate in a team to work closely with JICA Study Team. They are focal points of the department/divisions concerned.

A series of meetings have been held for smooth implementation of and better outcomes from the study. An inter-ministerial meeting and a steering committee have been organized for the study. In addition, stakeholder meetings have been held for exchanging ideas with stakeholders including those in civil societies, private sector, and NGOs.

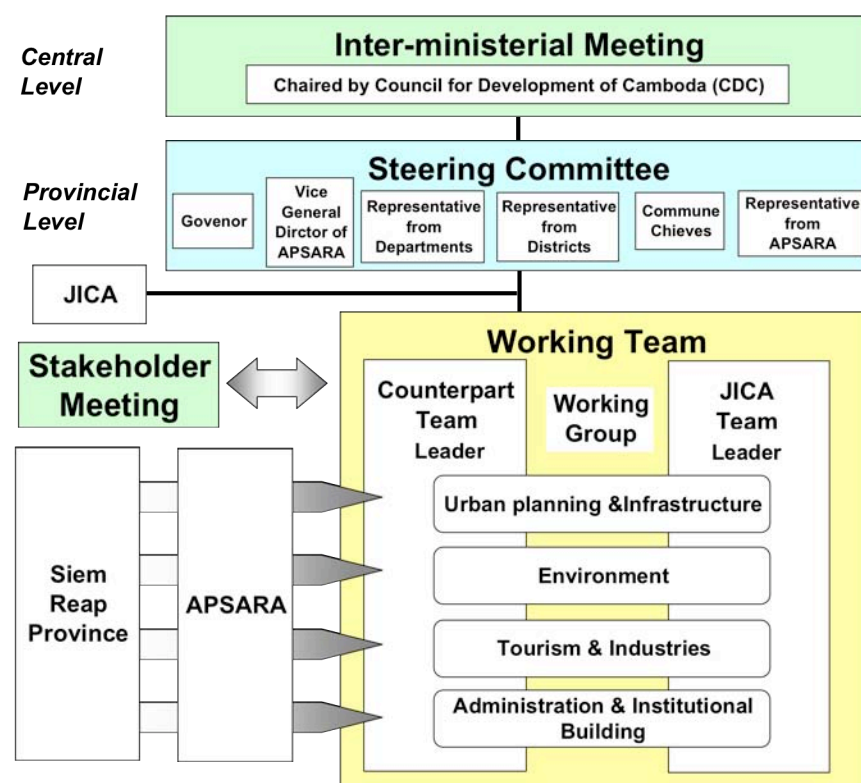


Figure II.1.2 Organizational Set-up

(2) Coordination Mechanism for the Study

Inter-ministerial meeting at state level was set up for sharing information and coordination among ministries concerned. Steering committee at the provincial level was established for consultation with the Study Team, securing smooth implementation, and effective use of the Study results.

(3) Process of People's Participation

This study adopted the people's participatory approaches throughout the course of study. Among them, a series of Stakeholder Meetings (SHMs) have been held four times. In each SHM, JICA Study Team presented the idea and content of each report and asked an open discussion to collect feedbacks. The following table summarizes the outline of SHMs.

Table II.1.1 Outline of Stakeholder Meetings

	Date	Report to Discuss	Number of Participants	Participants
First	February 3, 2005	IC/R	194	Officials, NGOs, Private companies, travel agents, donors, and community leaders.
Second	March 10, 2005	PR/R	67	
Third	November 22, 2005	IT/R	100	
Fourth	January 31, 2006	DF/R (Provisional)	200	



Photo First Stakeholder Meeting

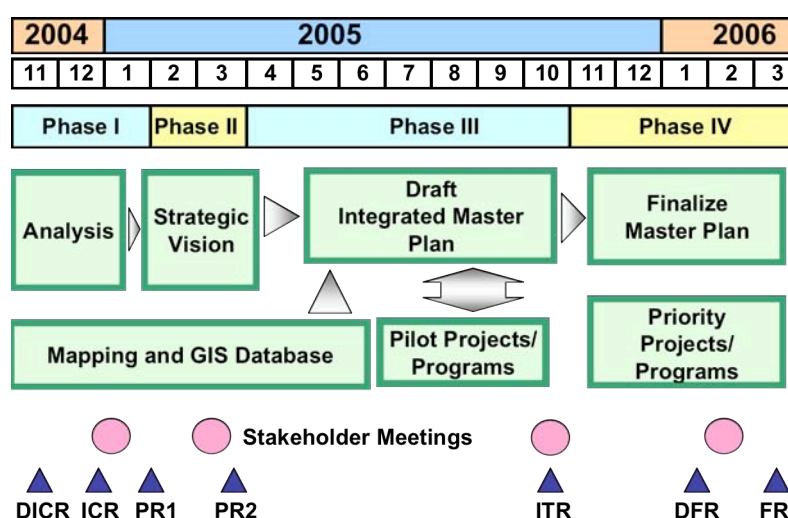


Photo Group Discussion at Second SHM

In addition to SHM, JICA Study Team held a series of Commune and Village workshops time to time to exchange views and opinions with local residents.

(4) Time Frame of the Study

The Study Team undertakes the study during the period from November 2004 to March 2006. The study comprises four phases, as shown in the figure below.



Note: DICR: Draft Inception Report; ICR: Inception Report; PR1: Progress Report 1; PR2: Progress Report 2, ITR: Interim Report; DFR: Draft Final Report; FR: Final Report.

Figure II.1.3 Time frame of the Study

Phase I

A main focus of this phase is the analysis for identifying key issues. The team demonstrates a problem structure and the key issues in the first stakeholder meeting held on February 3rd, 2005 to exchange ideas among different stakeholders. The result of the Phase I has been compiled in the Progress Report 1.

Phase II

A major output from Phase II is a strategic vision for sustainable development of Siem Reap/ Angkor Town.

The second stakeholder meeting was held on 10th of March, 2005. The meeting aimed at explaining two scenarios and the strategic vision proposed by the Study Team, and obtaining feedbacks from various stakeholders.

The team compiled the Progress Report 2 to synthesize outcomes from the Phase II.

Phase III

The Draft Integrated Master Plan was prepared as the output of Phase III. The plan consists of two parts; one is Draft Master Plan and the other Sector Development Plans. The former describes a whole plan of the future development of Siem Reap and the latter details it according to each sector.

Besides, the following two pilot projects were carried out to feed the results back to the Master Plans.

Pilot Project 1: A More Beautiful Siem Reap

Pilot Project 2: Angkor Product Fair

As part of “A More Beautiful Siem Reap”, Environmental Campaign was successfully conducted on September 27th, 2005 with participation of 1000 people lead by the Provincial Governor. Angkor Product Fair was held on 9-11 December 2005 to promote local products and more than 10,000 people in total visited the fair during the whole period.

Phase IV

In the Phase IV, Master Plan has been prepared. The inter-ministerial meeting as a final seminar was held on February 2nd with 150 participants to present the result of Draft Final Report to invite comments. Based on the comments, Final Report was compiled.

1.4 Structure of Final Report

The structure of the reports is as shown in the figures below.

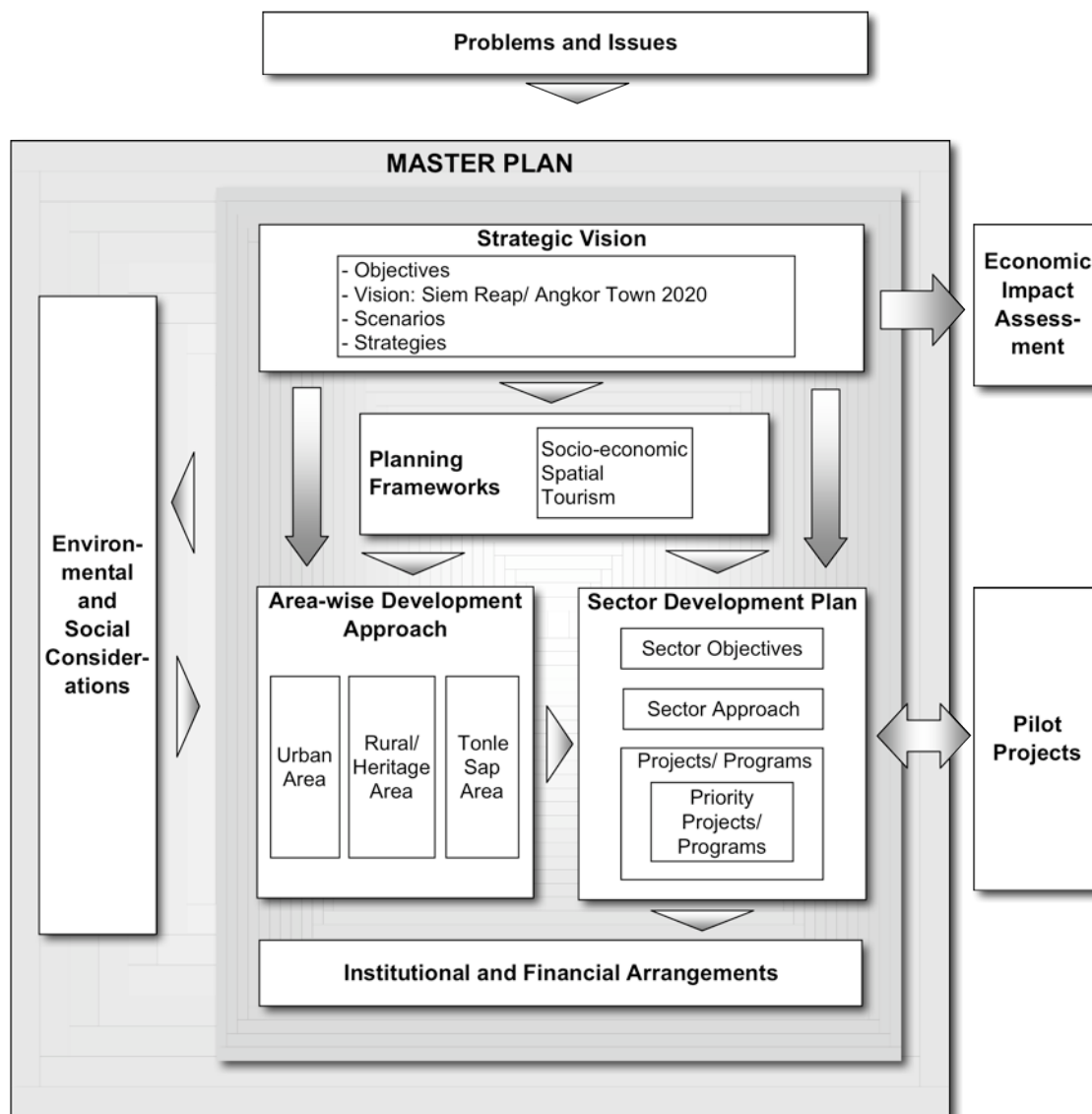


Figure II.1.4 Structure of the Reports (1)

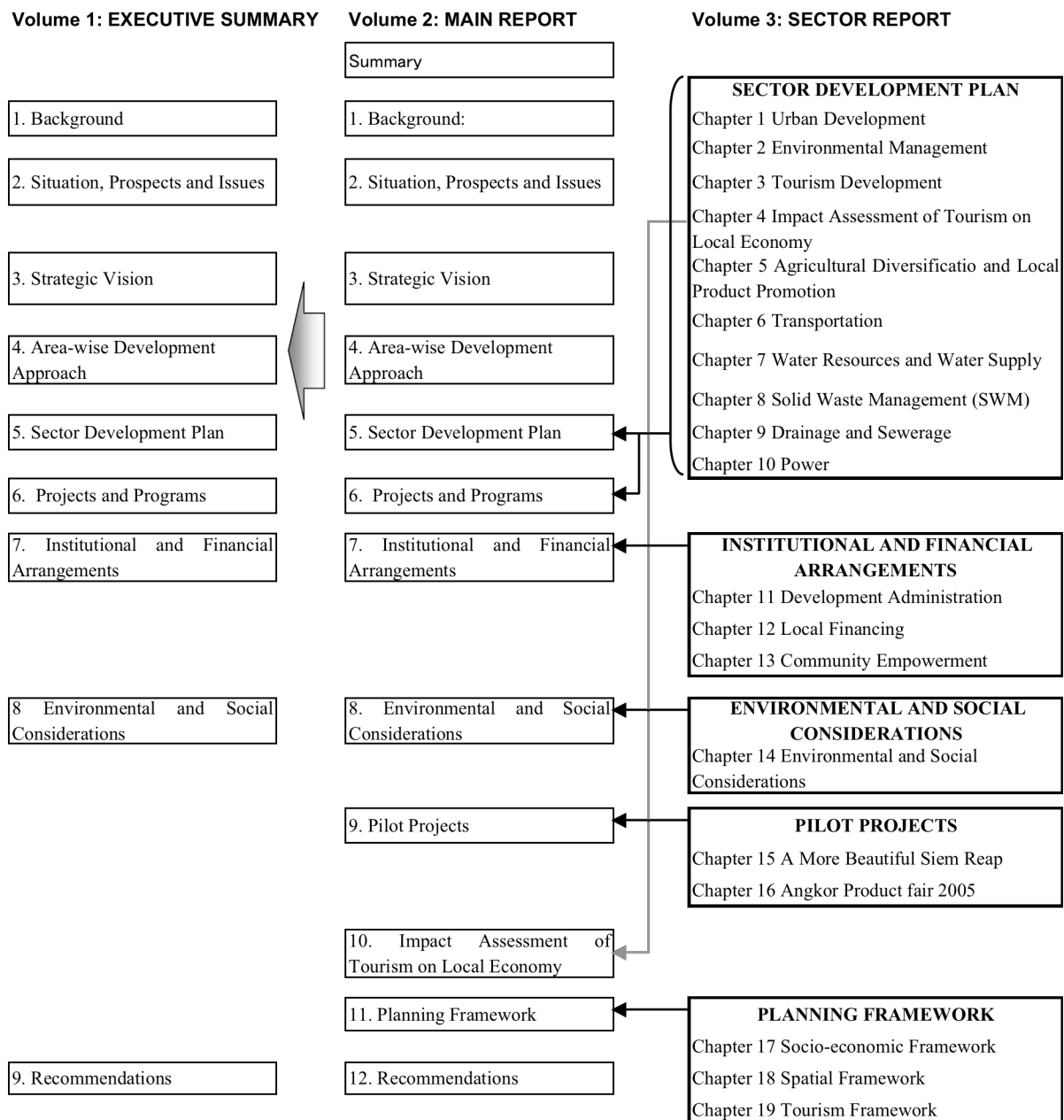


Figure II.1.5 Structure of the Reports (2)

The outline of the Master Plan is as shown in the table below.

Table II.1.2 Outline of the Master Plan

Situation & Issues	Strategic Vision		Sector Development Plan	
	Siem Reap/Angkor Town 2020	Strategies	Sector: Sector Objectives	Projects/Programs
Heavy dependence on mass tourism	<i>A beautiful and unique city based on a harmony of history, arts and nature of Khmer</i>	1. Promoting tourism focused on up-market	Tourism: Quality tourism destination in the context of Angkor history and culture	Khmer heritage tourism network (TO-1) Night market (TO-2) Provincial tourism marketing board (TO-3) Community based eco-/rural tourism (TO-4) Tour guide system improvement (TO-5) Carrying capacity and site management (TO-6)
Limited local economic benefits			2. Maximizing local benefits from tourism	Agricultural Diversification And Local Product Promotion: Angkor Brand to expand local supply
Poor urban environment and amenities		3. Making town more attractive to tourists		Urban Development: Making an attractive city
Uncertain environmental sustainability			4. Making town more sustainable in environment	Environmental Management: Resource saving and reducing environmental loads
Insufficient infrastructure		5. Strengthening infrastructure for tourists and people		Transportation: Sufficient road network
Weak local capacity to manage development			6. Strengthening local administration and finance	Water resources and water supply: Developing water resources, increasing water supply coverage and managing groundwater
				Solid waste management: Making the town LOVELY
			Drainage and Sewerage: Sustainable drainage and sewerage system	Urban Development Project (SD-2) Sewerage and drainage improvement (SD-1, 3-9)
			Power: Supplying reliable electric power with less environmental loads	Urgent installation of diesel generators (P-1) Power supply improvement (P-2-10)
			Local administration: Streamlined with transparency and accountability	(Recommendations) Provincial development committee
			Local financing: Adequate financial resources base	HRD of Province Organizational reform
			Community empowerment: People-government partnership	Streamlined regulation Development fund

2. Situation, Prospects and Issues

2.1 Situation

As well known, Siem Reap was the ancient capital of the Angkorian state for about 650 years from the beginning of 9th to the middle of 15th centuries. It dominated vast stretches of interior Indochina in its golden age. Siem Reap was the hub of ancient roads and waterways toward major towns within and outside Cambodia. The state was prosperous with sophisticated ancient irrigation systems that made use of a tidal range of Tonle Sap water.

As such, Siem Reap represents history and culture of Khmer until today. Increasingly many foreign tourists visit Siem Reap. In addition, international conventions/seminars and senior-level meetings are held hundreds of times a year in this ancient capital.

At the center of Siem Reap Province, Siem Reap District is situated between the Mt. Kulen toward north and Tonle Sap Lake toward south. The Siem Reap River runs through the district from the mountain down to the lake. The district is connected to the east and west through the Route 6, a major national road along a belt of built-up areas and villages at the northern edge of Tonle Sap Lake (See figure II.2.1). Being around the crossroads of the Siem Reap River and the Route 6, the district is the urban center of the province. The district occupies an area of 293 km² or 3% of the area of Siem Reap Province. Population of the district is 139 thousand or 17% of the provincial total in 2004.

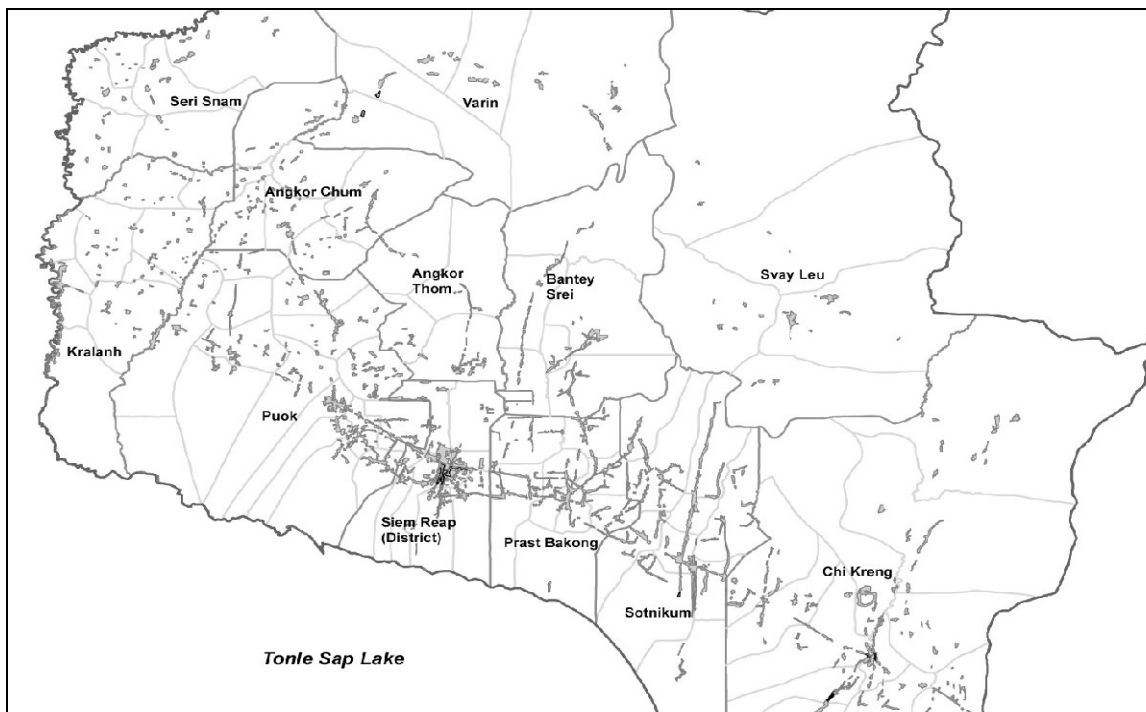


Figure II.2.1 Distribution of Built-up Areas and Villages in Siem Reap Province
Source: APSARA GIS data. Preliminary output

Main industry of Siem Reap District is tourism. It leads the economy of the district as well as of the whole province. It attracts investment and creates employment. We estimate the tourism to generate about 30 thousand employment in 2004. The size of employment is estimated to reach about 55 thousand when indirect multiplier effects are taken into account.

Tourism of the district is important not only for itself but also for the country as its most promising sector to earn foreign exchange and generate employment. The amount of service balance of tourism accounts for 74% of the net national oil & gas import in 2003. Since Siem Reap District is presumed to attract nearly half of the foreign tourists to the country, no other regions than Siem Reap can offer the tourism industry as contributes to the national foreign exchange.

With tourism concentration, the district is a fast growing city. It is the largest population absorber in the province, and the province is the fourth largest population absorber of the country after Phnom Penh, Kompong Cham and Banteay Meanchay. The fast growth is reflected in a large proportion of temporary population, which is made up mostly of construction workers. Increase in the temporary population, accounts for 63% of the total increase in the district while it accounts for only 17% in the whole province. Investments have been very rapid. As long as observing many buildings under construction, investments in the city should be much more intensive than elsewhere in the country except for Phnom Penh. Land prices have been rising for these several years.

The district is not self-contained. It depends on the rest of the province in natural environment, labor supply and possibly tourism network. The district will potentially be a major center of an area, the northern Tonle Sap area so to speak, at the north of the lake covering the provinces of Banteay Mean Chey, Siem Reap and Kampong Thum along the Route 6 as well as those of Otdar Mean Chey and Preah Vihear on the northern mountain range. Khmer monuments scattered about this area. The area will be a new gateway from Siem Reap to Thailand through planned highways of the Route 67 and the Route 69.

In a bird's-eye view, Siem-Reap used to form a triangle with Kampong Thom and Preah Vihear in the northern Tonle Sap area during ancient days (see Figure II.2.2). It will be an important tourism-based international city to potentially form a new economic triangle with the capital city Phnom Penh and the industrial/gateway city of Sihanoukville in the growing Mekong Sub-region.



Figure II.2.2 Siem Reap in a Bird's-eye View

2.2 Prospects

Siem Reap District has distinct strengths as compared with other parts of the country.

First, the monuments of Angkor are the most important cultural heritage of the country. It is a world heritage as well. With the heritage of the Angkorian culture, Siem Reap District has been attracting international tourists. Their number has reached over 400 thousand accounting for about 46% of visitors to the country in 2004. The incoming tourists have rapidly created employment opportunities in the district. Population has also increased from 118 thousand to 127 thousand at an annual growth rate of 5.2% during the period from 2001 to 2004. This is mainly due to in-migration from within the Siem Reap Province.

Second, the district has good accessibilities. Except Phnom Penh, no other districts have both international and domestic access through air transportation. The district is situated between Phnom Penh and Bangkok. It takes only about four hours to Phnom Penh by car, and would take about five hours to Bangkok upon full improvement of the Route 6. In addition, improvement of the Route 67 and Route 69 would ensure a direct access to the northeastern part of Thailand.

Third, because of these strengths above, Siem Reap District has received favorable policy support from the national government. APSARA Authority is a strong arm of the national government to protect the monuments of Angkor and provide technical

support for the urban and regional development. No other districts or provinces can make use of area-specific national authority such as APSARA.

The open sky policy is another national support. It is definitely favorable to Siem Reap. Thanks to this policy, foreign visitors have been shifting their port of entry/departure from Phnom Penh to Siem Reap. In 2005, Siem Reap will exceed Phnom Penh in the number of international arrivals at the airport. Especially, direct scheduled flights from 11 Asian cities contribute to a rapid tourist increase from Asian countries. In 2005, the number of Korean visitors is believed to exceed the number of Japanese visitors, which used to be the largest international tourists.

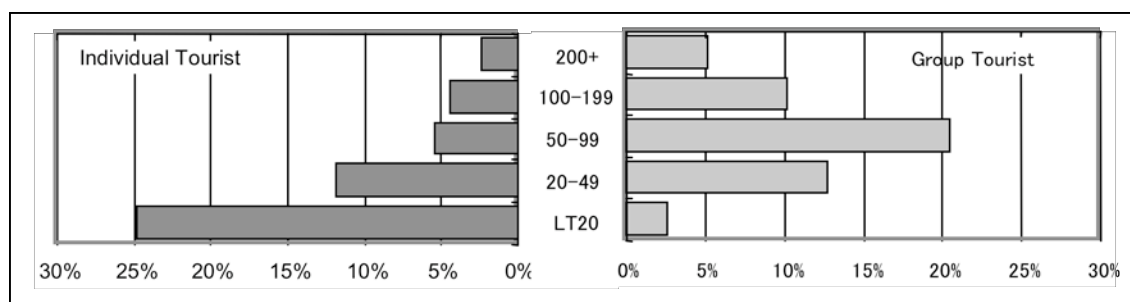
With these strengths, Siem Reap District is enjoying a growing tourism market. Tourism has been expanding in Indochina Region at a growth rate of 8% per year during the period from 1998 to 2004. A remarkable trend during this period is that tourism destinations have been diversifying within the region. Thailand absorbed almost 80% of the foreign tourists to Indochina countries in 1998. But it kept losing its magnitude to reach 70% in 2004, while the other countries comprising Cambodia, Laos and Vietnam increasingly absorbed foreign tourists. It is Cambodia that increased foreign tourists the most among these countries. In 1998, Cambodia accounted for about 10% of the foreign tourists to the Indochina countries other than Thailand and it did 20% in 2004. This is partly because the tourism market of Thailand is saturated and partly because the tourism related industries of Thailand are increasingly active in expanding their market toward the countries around Thailand.

Cambodia increasingly attracted Asian tourists, including Chinese, Korean and Japanese. The Asian tourists account for 55% of the international tourists to Cambodia in 2004. This trend will continue as the Asian economy will keep growing.

2.3 Issues

(1) Heavy Dependence on Mass Tourism

The mid-class group tourists and back packers are two major groups among tourists in Siem Reap as shown the figure below. Many tourists visit Siem Reap mostly in groups for a couple of days only. They rush to Siem Reap during a limited period in the dry season for having a look at the real monuments of Angkor. They do not visit wide spread excellent monuments away from Siem Reap. Most of them never visit here again. This is a typical mass tourism.



Source: JST estimates.

Figure. II.2.3 Share of Tourists by Hotel Price Range in 2004

The characteristics of tourism in Siem Reap, especially mass tourism, tend to impose excessive pressures on local infrastructures and environment. Moreover, the boom of such mass tourism does not last for many years and tends to end up with recession and unemployment. Number of tourists increased at a very high rate of 25 % per year during the period from 2000 to 2004. Number of hotel rooms increased at an even higher rate of 33% per year with a result that occupancy rate of hotels has been declining from 60% to 43% on seasonal average during the period from 2002 to 2004, according to our survey.

Away from the Siem Reap District, there are a number of excellent monuments and natural parks such as Banteay Srey, Roluos Group, Tonle Sap Lake, Mt. Kulen, Kbal Spean, and Beng Melea (see figure II.2.4). Tonle Sap Area is also potential tourist destination of eco-tourism providing ideas what has nurtured Khmer culture. But some of them are neither easy to go nor well known to average international tourists. This is because information boards and all weather access roads are not adequate. Distant monuments are generally maintained but their surroundings have not been well taken care for tourists. There may be a possibility that over-concentration of tourists on a few popular monuments may cause physical damage on the monuments, as worried by some.

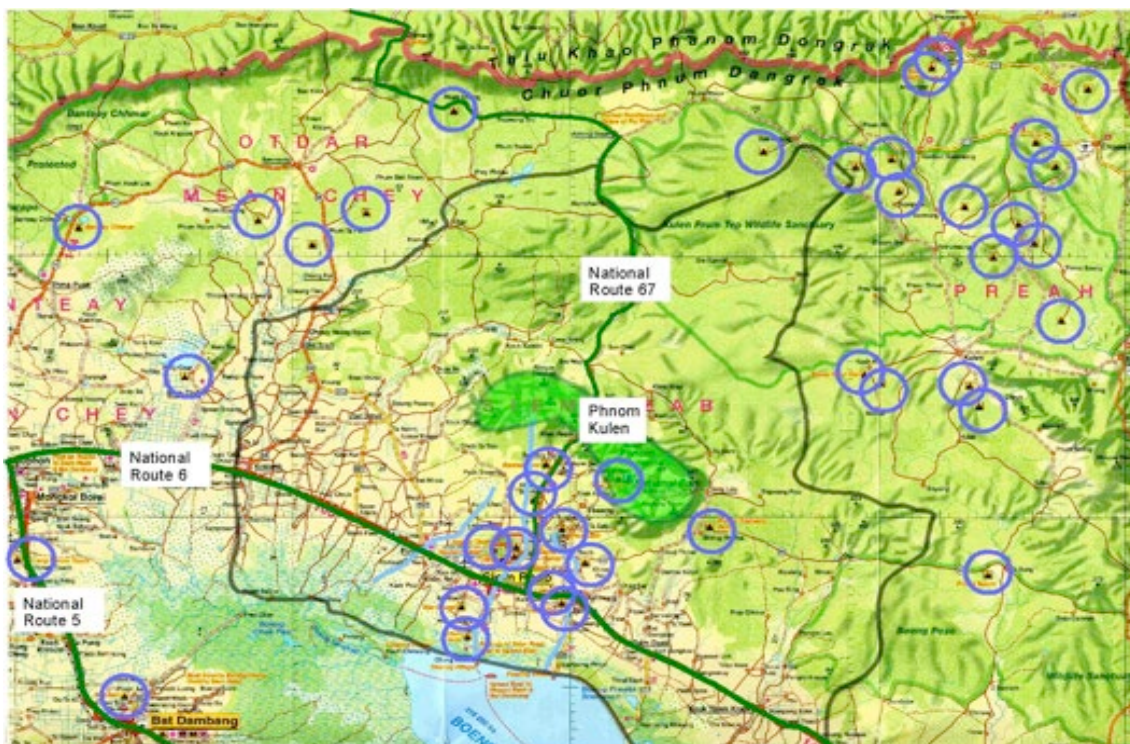


Figure II.2.4 Angkor Monuments in and around Siem Reap District

Source: JICA Study Team

During the bottom period in rainy season, the number of tourists drops to one-third of that during the peak period in dry season. There are a few attractions such as Apsara traditional dancing, shadow puppet show, Angkor night and Nuis d'Angkor dance performance. However, these are not enough to enable tourists to enjoy all year round.

Some of traditional industries such as hand-woven silks and potteries are quite excellent as a tourism asset. But their collective presence has still been weak to be a tourism attraction as well as to be a regional industry. Bad road conditions are another constraint in rainy season.

One of the major reasons of these characters of Siem Reap tourism is the limited attractiveness only to Angkor monuments. There have been limited efforts to develop Siem Reap as a tourist destination to attract various tourists including individuals and those in up-market. These efforts include developing wide spread potential destinations; incorporating these destinations into the context of history and culture of Angkor getting tourists exposed; and developing tourism routes of these destinations. These efforts may diversify tourism destination and season as well as deepen a tourism value. Siem Reap town itself is also not attractive, clean, convenient or safe for individual tourists.

(2) Limited Local Economic Benefits

The characteristics of tourism in Siem Reap/ Angkor Town mentioned above tend to provide limited local benefits. According to our estimates, the expenditures by international tourists amount to US \$97 million in 2004, of which 70% is estimated to be retained in the province. This figure does not include the entrance fee of Angkor monuments being US\$ 13.3 million in 2004. The expenditures retained in the province are estimated to induce additional local consumptions of US\$ 38 million. These are estimated to generate a total employment of 44 thousand. Compared to other sectors such as manufacturing, tourism gives quite a large impact over local economy.

However the local economic benefits are still limited for two reasons:

First reason is that a large part of international tourists are those in the group tours and those in the down-market, who stay for a shorter period and spend less locally. The group tourists represent about half of the total international tourists and those staying the hotels at lower than US\$ 50 per night, or those who are supposed to belong to the down-market represent also half of them. The group tourists stay 2 days on average and spend US\$ 160 per trip, while the individual tourists stay 3.5 days on average and spend US\$ 190 per trip. Likewise, those in the down market stay 3.1 days and spend US\$ 94, while those in the up-market or those staying in the hotels at US\$ 50 and higher per night, stay 2.5 days and spend US\$ 283 (see Figure II.2.5).

If tourist mix is changed from the current mix that is dependent on mid-class group tourists and individual back packers into diversified one including a larger number of up-market tourists, local benefits from tourism will be increased. However, there is a gap between the taste and preferences of up-market tourists and what Siem Reap/ Angkor Town provides to attract up-market tourists. The town itself is not perceived by tourists safe enough to go around for shopping and eating individually, except those back packers who stay for a long time in low cost guest houses.

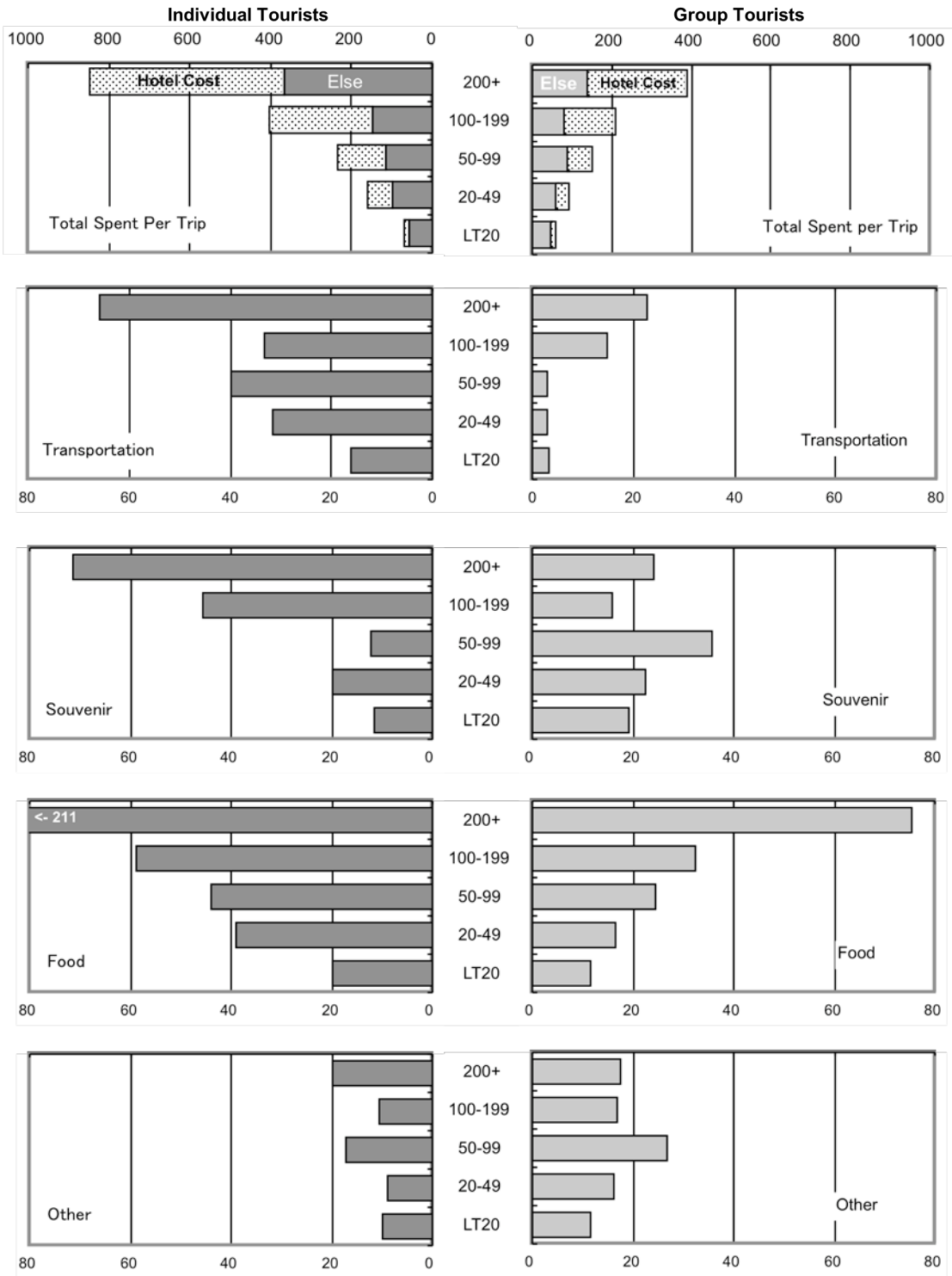


Figure II.2.5 Estimated Structure of Tourist Expenditure per Day per Trip
 Source: JICA Study Team

Second, while the tourism sector gives a large impact especially on the commercial and service sector employment, it does not contribute much to the rural areas which still absorbs a majority of labor force. The most conspicuous trend is observed in agriculture. Hotels purchase agricultural products a little from the province but from Thailand and Vietnam, except for chicken, egg and mushroom. This is caused by

national policy matters such as marketing, credit and tariff, in addition to given constraints such as poor soil and limited water.

Local benefits from tourism can be increased by a larger total spending of tourists through diversified tourist mix, expanding local products supply to the tourism markets, and a larger local utilization of the entry fees to the Angkor monuments.

(3) Poor Urban Environment and Amenities

Main streets are not perceived safe enough to walk around for ordinary individual tourists. Particularly, up-market tourists are unsatisfactory about safety and cleanliness of the town, according to our tourist survey. A large gap exists between magnificent Angkor monuments and shabby town. Because of this large gap, tourists tend to simply stay hotels after the sightseeing. Quality tourism could not be sustained without quality urban space that shall not spoil the atmosphere of the Angkor monuments. Tourists coming to Siem Reap expect to see the unveiled Angkor monuments in the deep of forests, to experience the interaction with Khmer culture and people, and to taste a touch of magnificent Angkor atmosphere after the sightseeing.

As the tourism grows, people have been migrating in the district and form new urban settlements rapidly. They will bring about additional burden on urban environment and local infrastructures. In fact, the expansion of urban settlements is faster than the speed of the road development. Sometimes, it is too late to develop roads in rapidly urbanizing areas. One can hardly realize a clean and attractive tourism town without making the whole district, including these new settlements, clean and sanitary. Settlements at the lakeside of Tonle Sap are not an exception. Traffic congestions caused by commuting local residents are an emerging obstacle to the tourists as well.

(4) Uncertain Environmental Sustainability

First, a central part of the city where hotels concentrate suffers from chronic flood, rubbish on the public space and wastewater. A private service of solid waste collection is available but only for those who can afford. Wastewater may pollute groundwater as a major potable water source. These are major obstacles to sustaining the tourism.

Second, the sustainability of natural resources base becomes uncertain. Residents, tourists, and businesses of Siem Reap District are all dependent on the natural environment of the Siem Reap Province, water and watershed, in particular. Without major rivers in the province, the use of surface water is limited for agricultural and urban activities (see figure II.2.6 on the available surface water resources). West Baray, a reservoir being developed about 1000 years ago is in fact a major source of agricultural water even at present. Siem Reap River is also man-made. As such, the volume of its water flow cannot be as large as ordinary natural rivers.

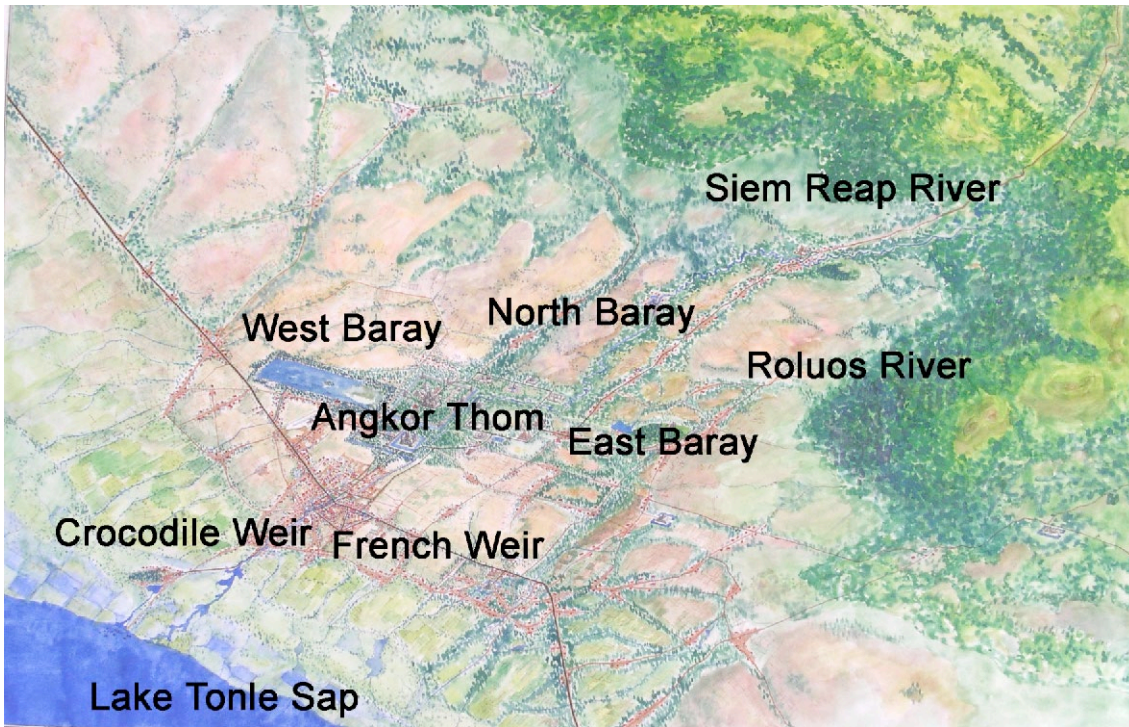


Figure II.2.6 Surface Water Resources in Siem Reap

Source: JICA Study Team

Consequently, people and industries, especially tourism industries, in the district have been dependent on the use of groundwater, though the groundwater is limited. Some people suppose that a more systematic and efficient intake of the groundwater would make it possible for Siem Reap to keep using the groundwater. Meanwhile, the other people and experts do not but worry that rapid increase in the uncontrolled use of groundwater would endanger the sustainability of groundwater supply and might eventually undermine monuments of Angkor due to land subsidence. It should also be noted that groundwater is more easily contaminated by toxic substance than surface water, and those dependence on the groundwater is consequently more susceptible to the pollution.

The area of natural forest is limited almost only to the Mt. Kulen. The forests on the flat lands of the district have disappeared rapidly in the past two decades due to farmland expansion, fire wood production and the real estate development for possible urban use in the future. The deforestation is rapid also in the Angkor Park (Zone1 and Zone2). In the mountain ranges, large-scale forestry business continues to encroach forests. Efforts have been made to develop community forests in many places around the Kulen mountain ranges, but in much slower pace than deforestation.

As a result, reservoirs and rivers have increasingly been silted to cause frequent flood in town and drought in agricultural areas. In consequence, this will reduce the volume of water in rivers and reservoirs, and prevent the land soil from keeping the level of groundwater at a sustainable level.

(5) Insufficient Infrastructures

A rapid increase of tourists has been imposing heavy burdens on the existing local

infrastructures. The tourists consume and discharge water and materials much more intensively than ordinary residential people. Especially in peak periods, heavy pressures are given by the tourist demand on the existing capacity of infrastructures. About half of the tourists visit Siem Reap during a four-month period from November to February (see figure II.2.7). In the peak period, heavy pressures are given by the tourist demand on the existing capacity of infrastructures and environment.

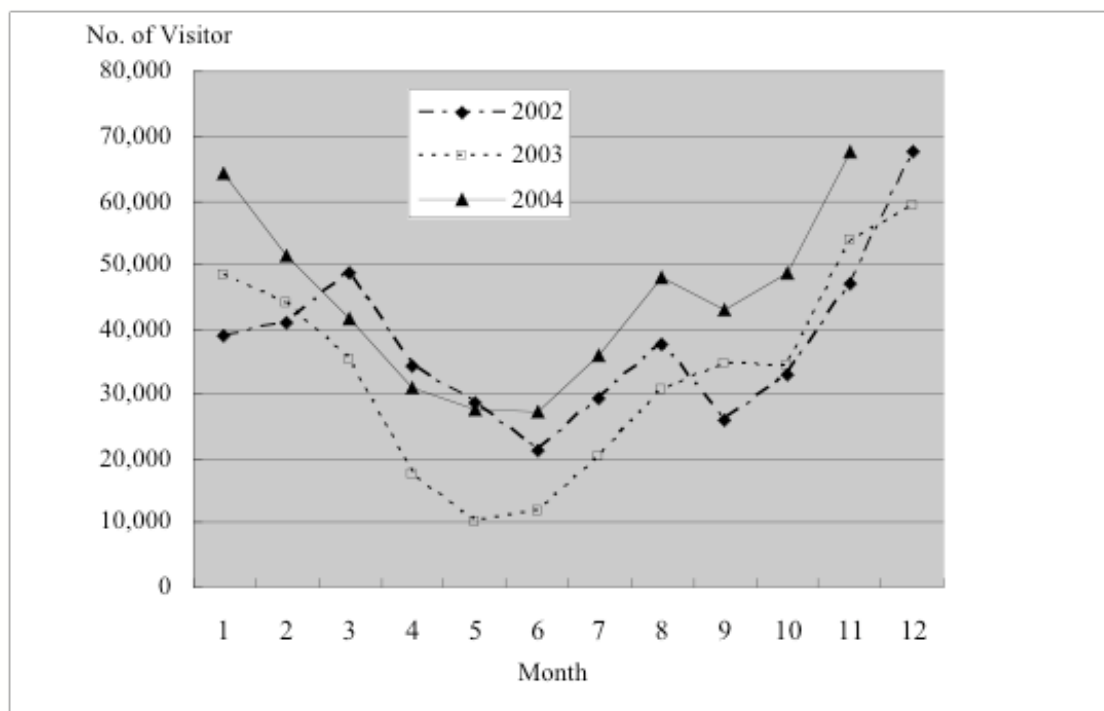


Figure II.2.7 Seasonal Fluctuation of Visitors to Siem Reap

Water supply capacity will substantially be expanded upon completion of a new system in 2006 with a capacity of 8000 tons per day. Water demand will still exceed the total distribution capacity then by about 60% and the backlog will keep being dependent on the individual intake of groundwater in and vicinity of the urban area, in spite of the prevailing anxiety over a negative impact being beyond recall by any chance.

Basically, the land of the district is not well drained because it is a little higher than 10 meters above sea level and the water level of Tonle Sap Lake is as high as 9 meters above sea level. In addition drainage systems are not well maintained and often clogged. Wastewater is discharged to the Siem Reap River, rice fields and Tonle Sap Lake, all without treatment, with an exception of treated wastewater discharge from a few hotels. Sewers are often encroached by house and hotel construction, overflow and cause public health hazard. Water quality has already been much lower than WHO standard in Siem Reap river as shown in Figure II.2.8. Some part of the waste water enter into groundwater polluting the only source of drinking water, while some other part mix with flooded rain water.

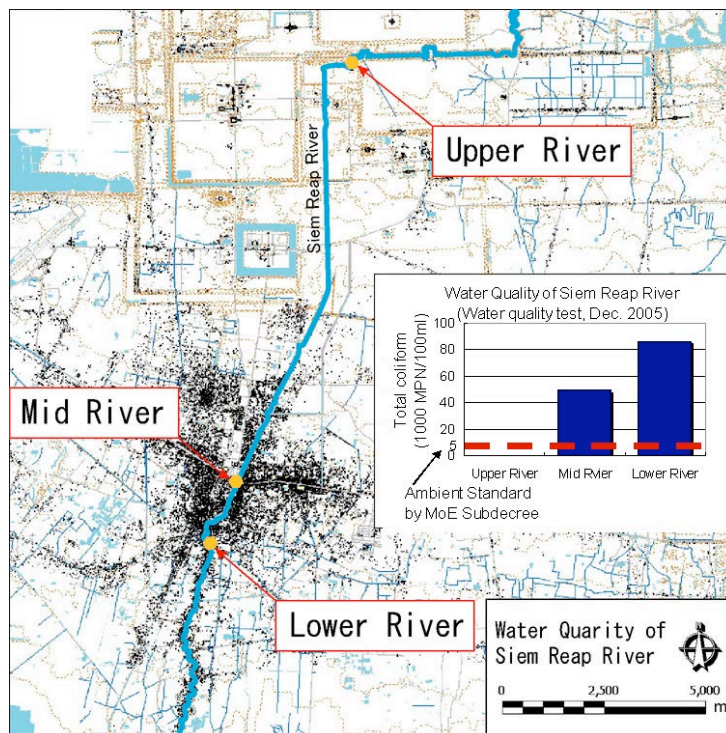


Figure II.2.8 Water Quality in the Siem Reap River

Roads are insufficient both in and out side the urban area. Consequently, the crossroads of Route 6 and Sivatha Boulevard is congested every evening by a mix of tourism, local and inter-city traffics (see figure II.2.9).

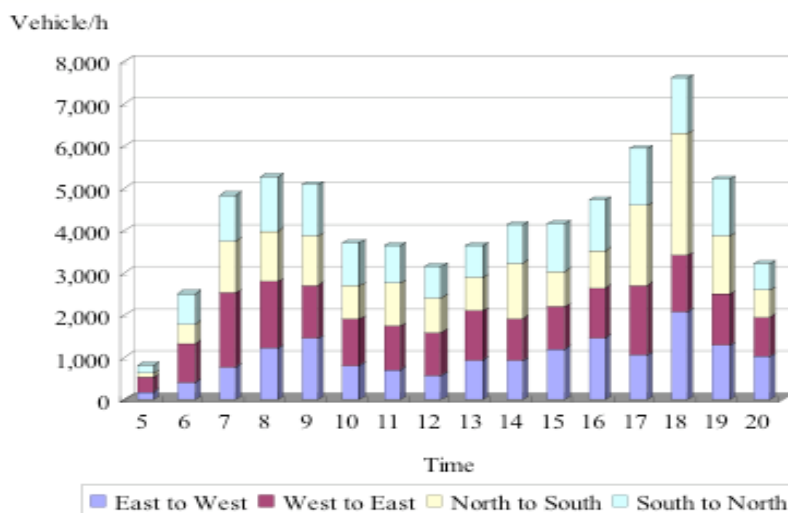


Figure II.2.9 Traffic Congestion on Cross Roads of Route 6 and Sivatha Boulevard

Power is far from sufficient as well. Public power supply meets no more than 30% of an estimated total peak demand, while the existing power plant of EdC is utilized to the very limit of its capacity during the peak hours in peak season. The balance is met by individual generators, which are a major source of air pollution in the urban area.

(6) Weak Local Capacity to Manage Development

The limited capacity for development lies first in the lack of local coordination and local governance. In other words, government organizations for the district are not given enough chance to know one another, to think together and to decide by themselves. Sector specific information and funds are highly centralized to their home offices in Phnom Penh. Therefore, the information on programs and projects is not sufficiently shared among different departments and agencies.

Second, financial base is very weak at the local level. In the first place, the proportion of fiscal revenue in the national economy is much lower in Cambodia than majority of low-income countries. Most of investments are made directly by central ministries, while the provincial government and the provincial offices of line ministries take care mostly of recurrent budget. On the revenue side, in 2004, the provincial government collected 16,342 million Riel, of which 35% are retained, and received 300 million Riel. This level is only one-fourth of that of Phnom Penh Municipality and 80% even compared with Kompong Cham in per capita term, whereas the province substantially contributes to the national economy, especially foreign exchange earning. The total of budget by provincial offices of the national line ministries amounts to about 6 times as much as the revenue of the provincial government. These figures have rapidly been increasing in these several years, but still much smaller than the amount that is necessary even for proper maintenance of existing local infrastructures.

Another factor is a limited utilization of the entry fees to the Angkor monuments for local benefits. APSARA Authority has been collecting the fees at US\$ 20 per day per visitor. The total sales of the fee amounted to US\$ 13.3million in 2004. However, no more than about 20% of that amount is supposed to be utilized for the public investments and services in Siem Reap, assuming that the amount comprises the expense from the account of the APSARA Fund and the expense by APSARA Authority itself for the capital expenditures, the support to various institutions and the contribution to development (see Figure II.2.10). There has been a vicious cycle among the limited local use of the entry fees, the poor local infrastructures and urban environment, a short length of stay of tourists and a limited sales amount of the entry tickets for long stay tourists.

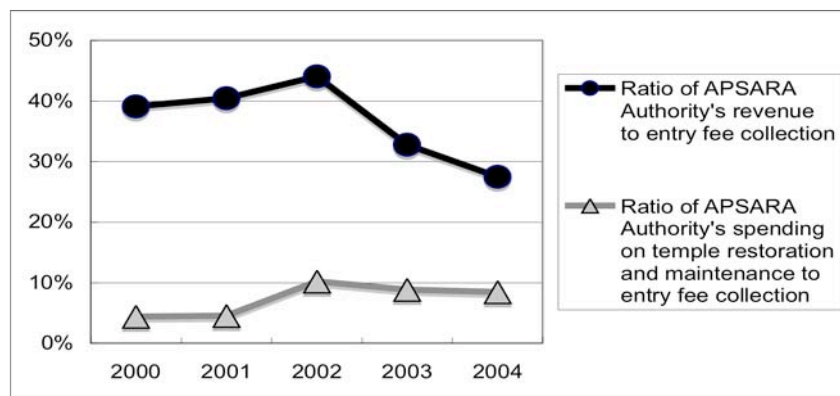


Figure II.2.10 Relative Proportion of APSARA's Spending to Entry Fees Collected

Third, human resource base is also weak at the provincial and district levels especially in terms of management and monitoring of public works project, land management, information systems to support coordination and budget accounting. The training at the provincial and district officials is important, whereas efforts are being made to train officials from the commune level through SEILA Program.

Fourth, rules and regulations have not fully been imposed, though they do exist on paper. Many exceptions discourage people and businesses from keeping the rules and regulations. A typical example is land use control. One can prepare and revise indicative plan for precise land use. It is, however, not realistic to maintain highly specific controls without specific measures, procedures and organizational capacity to enforce them.

Fifth, people's awareness is not as strong as it can be in spite of its significance for development and environment. Fortunately, Siem Reap has been supported by many groups such as District Development Facilitation Committee, Commune Development Committee, about 70 NGOs active in the district, Siem Reap Angkor Hotel and Guest house Association and tour guide associations. In this regard, a much greater awareness could be and should be built among people of Siem Reap, especially in the environmental improvement and the creation of a tourist-friendly community.

The discussion above is summarized as shown in the figure below.

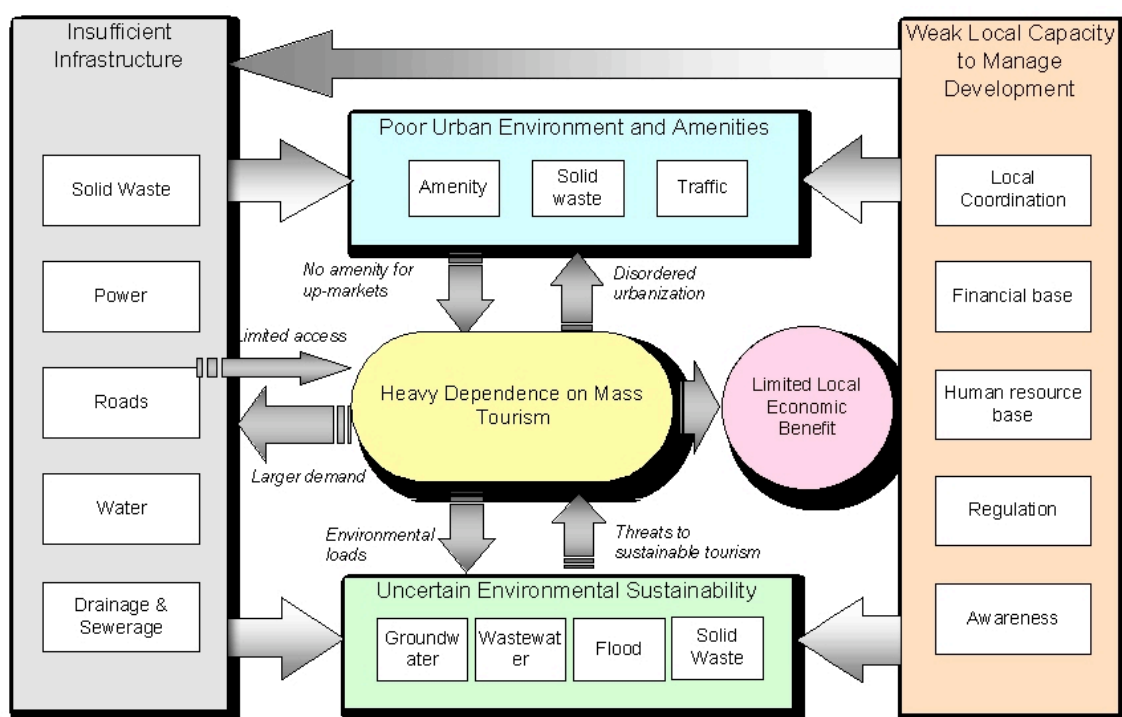


Figure II.211 Problem Structure of Siem Reap

3. Strategic Vision

“Strategic Vision” is a common agenda to be shared by all the stakeholders. It represents the Siem Reap/ Angkor Town in the target year and the path to it. It comprises objectives, scenarios, the vision of Siem Reap/ Angkor Town 2020 and six strategies.

3.1 Objective

Prospects will lie undoubtedly in tourism in Siem Reap. A central issue, however, is that environmental and economic sustainability is increasingly endangered by the current tourism characterized by the rush of short-term visitors for sightseeing only at a single destination of Angkor Wat. It tends to give intensive burden on environment and bring about limited local economic benefits. Without good city environment, tourists who once visit may keep away from Siem Reap. Without enough local economic benefits, people can hardly improve environment. This is all the more true as long as Siem Reap will keep being dependent on the current tourism, which tends to end up with a temporary boom.

Siem Reap must avoid a possibility of the environmental degradation particularly in terms of water, the negative impact of recessions of mass tourism on the local economy and the negative reputation as a mass tourism spot. It must embark for a good cycle among excellent environment, local economic prosperity and the tourism being stable as well as lasting.

Thus, the objective of this Master Plan is to achieve sustainable development of Siem Reap/ Angkor Town through:

- Promoting tourism in a sustainable way,
- Promoting and diversify local economy based on the tourism,
- Conserving and improving environment, and
- Strengthening infrastructure and administration.

3.2 Scenarios

Keeping in mind that a hands-off tourism growth at present will somehow have to be adjusted to be more balanced and sustainable, the following two scenarios have been worked out with special reference to the scale and pattern of tourism. These two have then been compared from the viewpoint of economy, environment tourism and public services/ infrastructures:

Scenario A: Trend Growth Scenario

A rapid tourist increase will continue with the present pattern of tourism will to be the same as at present. In other words, tourists will visit Siem Reap mainly in peak season and stay only for a few days to have a look at major Angkor monuments. Hotel construction will possibly continue in response to meet peak demands though at a lower rate of occupancy. Majority of tourists will still be package group tourists to move and spend on limited routes. It may be increasingly difficult for the government to control hotel and other investments, land use, groundwater pumping and waste discharge. It

may also increasingly be difficult for the provision of public facilities and services to catch up with the rapid tourist increase.

Scenario B: Moderate Growth Scenario

Reciprocal action will be discouraged from further taking place between tourism rush and massive start-up investments such as airport and tourism complex. At the same time, government regulations shall be enforced to effectively control hotel and other private investments, land use, groundwater pumping and waste discharge. Meanwhile, the pattern of tourism will change. With better urban environment and more diversified tourism destinations/attractions, more people will stay for longer period and visit in low season. Thus, there will be a relatively lower peak demand and higher rates of capacity utilization of hotels and public utilities. On the same ground as well as through positive market promotion, there will be more individual and up-market tourists who would potentially spend more in not only hotels and a few shops on the pre-designed route but many places in town and tourism destinations.

Under these scenarios, an attempt has been made to forecast the number of tourists, and population in 2012 and 2020.

The Number of Tourists

Under the trend growth scenario, the number of tourists is assumed to increase as forecasted by UNESCO-APSARA-AFD until 2012. After 2012, it is assumed to more or less follow trends of the tourism growth rates as observed at historical tourist destinations of Southeast Asia. The growth tends to converge into a range of single-digit percent rate after showing double-digits percent rate in the beginning. (See Figure III.3.2)

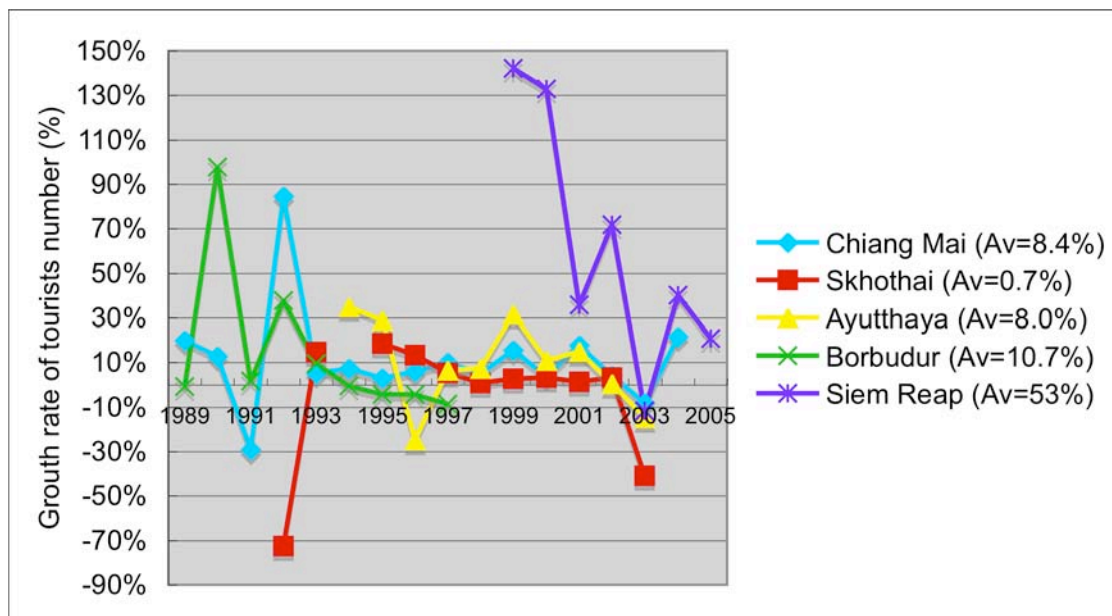


Figure III.3.2 Tourism Growth at Major Historical Destinations in Southeast Asia

Under the moderate growth scenario, an assumption is that the number of the air-bound

tourists, which represent 70 % of all of the tourists, shall not exceed a capacity of the existing airport under the fullest possible utilization and upgrading.

The government maintains the policy to upgrade the service level and carrying capacity of Siem Reap Airport to a maximum possible extent, without either extending its runway or creating another airport elsewhere. Justifications for such policy are:

- Extension of the existing runway or development of a new airport would enable jumbo jet to land on the airport and give rise to a higher peak load of tourists on tourism facilities, utilities and tourism assets;
- The extension cannot be effective without reconstructing the existing one. A total cost of the extension and reconstruction would compare to the cost of new airport development;
- A new airport plan would find it difficult to secure sufficient land within a acceptable distance from Siem Reap/Angkor Town;
- Expansion of international tourism market and aviation network especially in Asia will encourage tourists to take direct flight among small-medium sized airports rather than departing/ landing at hub airport by jumbo jet. This trend would enable Siem Reap to attract tourists year round through an airport at the existing scale.

Results of the projections of the number of tourists are given in the Table II.3.1. The number of tourists in a year will increase from 858 thousand to 4331 thousand during the period 2004-2020 under the trend growth scenario. It will increase up to 2802 thousand at most under the moderate growth scenario.

Population

The population projection has been based on the followings:

- Provincial breakdown of “the First Revision of Population Projection for Cambodia 2001-2021” the single official projection of the nation-wide population incorporating natural growth and population movements;
- Trend of changes in the inter-district population distribution within Siem Reap province; and
- A government policy not to allow population increase within the Zones 1 and 2 which are protected by APSARA Authority and extend over both inside and outside the district.

A part of the tourism employment estimated from the projection of tourists is to be met by the people who live outside the district and commute to the district for work. Such commuting population is estimated at 14 thousand in 2004, 44 thousand in 2012 and 100 thousand in 2020 under the trend growth scenario. It is estimated at 39 thousand in 2012 and 65 thousand in 2020 under the moderate growth scenario.

Results of the population projection are shown in the Figure II. 3.2.

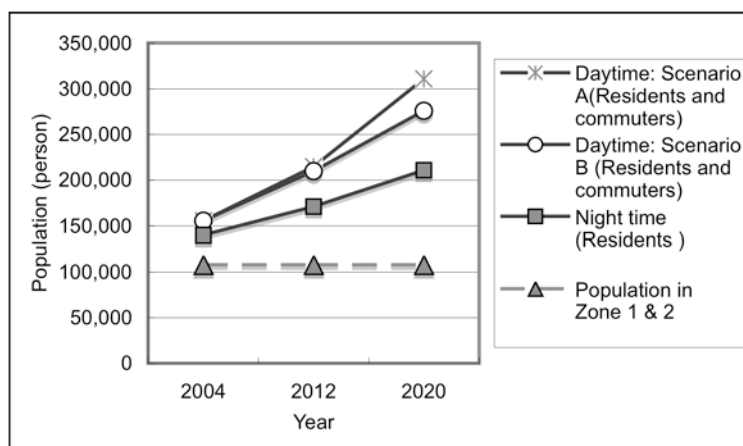


Figure II.3.2 Population Projection

Population of Siem Reap District will increase from 140 thousand to 211 thousand at an annual rate of 2.6% during the period 2004-2020. It should be noted that daytime population of the district would increase from 154 thousand to 311 thousand under the growth trend scenario and 276 thousand during the same period under the moderate growth scenario.

We assume that increasing number of population in the province will inevitably work in the district, tourism sector in particular, but without flocking into the district to cause unmanageably excessive urban expansion and heavy concentration of urban utility demand in the district. This is desirable from the viewpoint of maintaining agricultural lands and diversifying agriculture both within and outside the district.

An attempt has been made to roughly estimate the water and power requirements of residents and tourists and environmental loads of them for assessing environmental implications of the two scenarios.

Table II.3.1 Scenarios Compared

Indicators	Base Year	Scenario (A): Trend Growth Projection		Scenario (B): Moderate Growth Projection		
	2004	2012	2020	2012	2020	
Residential Population (1000 persons)	139	171	211	171	211	
Commuting Population (1000 person)	16	44	100	39	65	
Number of Tourists (1000 persons/ year)	Total	858	2,324	4,331	2,220	2,802
	International	561	1,709	3,343	1,648	2,007
	Domestic	297	614	988	572	795
Demand for Infrastructure and Utilities	Water Consumption in Peak Period (1000m ³ /day)	9.0	20	34	19	28
	Power Demand Peak (MW)	33	72	117	61	74
Environmental Impact Projected	Wastewater (BOD: kg/day)	6,364	8,199	10,663	8,172	10,141
	Individual Groundwater intake (1000m ³ /day)	7.0	10	24	9	18
	Solid Waste Amount (ton/day)	99	177	323	176	295
	SOX (ton/year)	35	94	162	77	97
Economic Impact: Consumption Base (million US\$/year)	172		1,023		771 (1,243*)	

* Figure in parenthesis indicates the economic impact by a tourists composition in favour of a greater number of individual and up-market tourists.

Source: JICA Study Team

Table II.3.1 summarizes population, number of tourists, water consumption in peak period, peak power demand and environmental loads in terms of wastewater quality, groundwater intake, solid waste amount and air pollution, respectively for the years 2012 and 2020. During the period 2004-2020, water consumption will expand by 3.8 times under the trend growth scenario and 3.1 times under the moderate growth scenario. Peak power demand will increase by 3.5 times under the trend growth scenario and by 3.0 times under the moderate growth scenario.

Individual groundwater intake will increase by 3.7 times under the trend growth scenario and by 2.8 times under the moderate growth scenario, if the use of individual groundwater will be replaced by no water supply facilities other than the ongoing water supply project with a maximum capacity of 8,000 tons per day. The amount of solid waste would increase by 3.3 times under the trend growth scenario and by 3.0 times under the moderate growth scenario. The air pollution in SOX term would increase by 4.5 times under the growth trend scenario and 2.8 times under the moderate growth scenario.

These scenarios have been compared in quantitative term from the viewpoint of local economic impact. The total consumption by tourists is estimated to increase from 172 million US dollars in 2004 to 1,023 million US dollars in 2020 under the trend growth scenario and to 771 million US dollars in 2020 under the moderate growth scenario. However, the total consumption would reach as much as 1,243 million US dollars under the moderate growth scenario, if tourist composition were represented by a greater number of individual and up-market tourists.

Comparison has been made from the viewpoint of national economy, regional economy, environment and tourism, based on these estimates and the following qualitative analysis:

From the national economic viewpoint, the trend growth scenario should definitely be preferable to the moderate growth scenario. Until the national economy will have a more diversified export base, Siem Reap will be essential to the national foreign exchange earnings. It attracts more than half of the international tourists to Cambodia.

From regional economic viewpoint, **the trend growth scenario** has both positive and negative aspects. It may accelerate regional economic growth and expand job opportunities. However, it would possibly cause more serious recession, bankruptcy and unemployment than the moderate growth scenario when tourism will experience stagnation. This could be said from the large economic dependence on tourism in Siem Reap as compared with those of Southeast Asian historical tourist destinations and those destinations' experiences of tourism growth as shown in the table below. Land speculation would be a graver concern under the trend growth scenario. Land price spiral is already alarming. The land speculation would surely cause the bubble economy burst if the trend growth will sharply slow down.

The moderate growth scenario would involve less risk of the bubble economy burst. In addition, it could bring about larger economic benefits than the trend grow scenario if

quantitative tourism expansion is somehow restrained in favor of a greater number of individual and up-market tourists.

Table II.3.2 Historical Tourist Destinations in Southeast Asia and Siem Reap

Major Historical Destination in Southeast Asia	Population (1000)	International Tourists (1000)	Tourists/Population Ratio	Growth rate	
				Past 15 years	Past 5 years
Chiang Mai, Thailand	400	1,800	4.5	8.4%	7.8%
Sukhothai, Thailand	590	208	0.4	0.7%	-8.2%
Ayutthaya, Thailand	150	988	6.6	8.0%	3.0%
Borbudur, Indonesia	400	241	0.6	10.7%	-1.7%
AVERAGE	385	809	3.0	7.0%	0.2%
Siem Reap					
2004	139	561	4.0	53%*	38%
2020 Scenario A	211	3,342	15.8	11.8%**	8.3%***
2020 Scenario B	211	2,007	9.5	9.0%**	3.6%***

* Past 7 years due to data availability.

**16 years (2005-2020)

*** 10 years (2011-2020)

From the environmental point of view, the trend growth scenario will be less manageable as the previous quantitative estimates suggest.

From the viewpoint of tourism, a major issue is the human resource capacity. The faster the growth of tourism is, the more difficult is to secure the manpower for the tourism industries, especially well-trained and experienced one. Quality of tourism would decline, if well-trained and experienced manpower were inadequate. Thus, the trend growth scenario tends to give rise to declining quality of tourism.

To summarize, the moderate growth scenario is outstandingly preferable from the viewpoint of environment, regional economy and tourism. The trend growth scenario is preferable from the viewpoint of national foreign exchange earnings. Thus we recommended that the moderate growth scenario be adopted for the development and environmental management of Siem Reap District. With reference to the need for maintaining the foreign exchange, the national government should promote export diversification and tourism activities nation-wide, so as not rely too much on the Angkor monuments in earning foreign exchange.

3.3 Siem Reap/ Angkor Town 2020

Further construction of hotels and infrastructures should be essential and sufficient, if Siem Reap single-mindedly pursue tourism expansion. In this case, a main issue is the public infrastructure investments that lag behind the private hotel investments. If Siem Reap pursues a more balanced tourism with more diversified tourists, however, the further construction of hotels and infrastructures would neither be essential or sufficient. In this case, it is essential to set a vision whereby governmental organizations, businesses and local communities can share a common understanding so that Siem

Reap/Angkor Town is worthy, for the tourists in a variety, of staying, enjoying and visiting again. It is in this regard that the vision should be strategic to encouraging all the stakeholders to think and work together in long term.

Thus, we set a vision for Siem Reap/ Angkor Town in the year 2020 as “Siem Reap/ Angkor Town 2020” to be:

A beautiful and unique tourist city based on a harmony of history, arts and nature of Khmer.

As such, Siem Reap/Angkor Town will be featured by the followings:

(1) A quality tourism city where tourists can fully feel a touch of the Khmer culture, the Khmer history and the Khmer arts.

Siem Reap will evolve from the place to have a glance at the unveiled Angkor Wat into the one in which various tourists stay long and visit extensive historical spots all year round. In this manner, Siem Reap can reduce seasonal fluctuation of tourism and ensure sustainability. It will, in turn, be a center of regional economy. In this quality tourism city:

- About 2 million foreign tourists will visit and many of them stay for more than a few days every year.
- The tourists will not only be those in group tours and backpackers but also many individuals, families and those in up-market.
- Those who stay for more than a few days are likely to visit again with a wish for further touch on the history and the culture of Khmer.
- The tourists will enjoy the city itself for eating, shopping and relaxing. This will enable many local people to receive economic benefits from the tourism.

(2) A human scale city in the atmosphere of Angkor

The city is the base of Angkor tour. It is in the green. It is also in the atmosphere of Angkor. The whole city is safe, clean, convenient and comfortable for the tourists as well as the citizens. In this human scale city;

- 210 thousand people will live. In addition, 65 thousand people will commute from surrounding districts to work for tourism and other urban activities but not to cause expansion of undesirable settlements through migration.
- Urban activities will be compact for efficient public services and utilities.
- Built-up areas will be 4,241 hectares at the widest, or about 3 times as wide as at present. They will be discouraged from encroaching historical, agricultural, green or food-prone space and encouraged to expand toward southeast.

- City center will be safe, clean and comfortable so that it is a major tourism space by itself.
- The afterglow of Angkorian experience and atmosphere will be maintained and fostered for the tourists and the people, with the breeze of the deep forests and in the panoramic sky of the dramatic sunset.

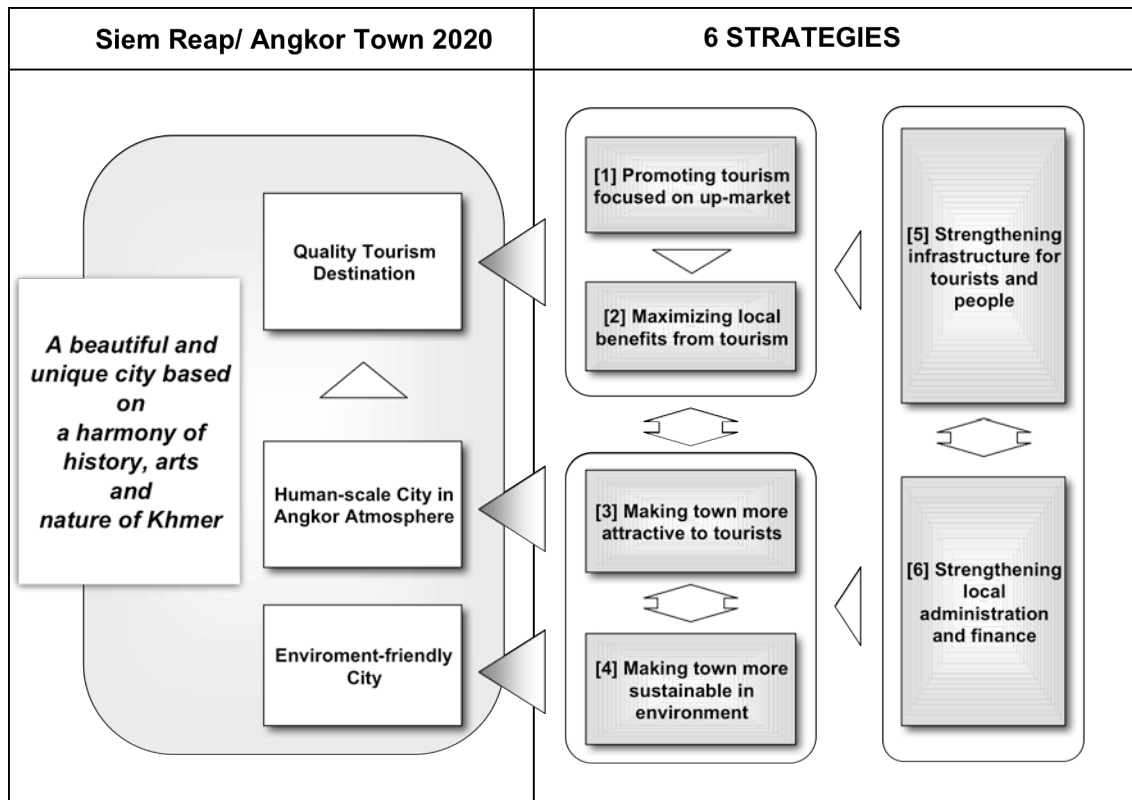
(3) An environment-friendly city

The city will be water saving, energy saving and waste recycling with effective control and the awareness of tourists and people. It shall be a model of Cambodia in this regard.

The city will thus be sustainable. It will not just sustainable in itself but will offer implications of the Angkorian wisdom for sustainable development and cultural diversity and people participation in the 21st century. It is not just the seat of physical monument either, but the source of universal spirit being conveyed to the rest of the world. It will also be a cultural magnet in Southeast Asia.

3.4 Strategies to the Vision of Siem Reap/Angkor Town in 2020

Toward the Siem Reap/ Angkor Town 2020, we propose a set of six strategies as shown in Figure II.3.3. Strategies 1 and 2 are driving force of the economy of Siem Reap. Strategies 3 and 4 are supposed to prepare a basis for sustainable development of Siem Reap. For those strategies to be effective, Siem Reap needs to reinforce physical and institutional infrastructures through strategies 5 and 6.



Source: JICA Study Team

Figure II.3.3 Strategies to Siem Reap/ Angkor Town 2020

Strategy 1. Promoting Tourism Focused on Up-market

A fundamental approach to the Siem Reap/ Angkor Town 2020 is to maximize the positive economic impact of tourism on regional economy and to control environmental load at a reasonable level. Aiming at the up-market tourists, this approach associates itself with increasing unit consumption amount per tourist, reducing a relative weight of peak season tourists and extending the period of their stay, while somehow refraining the city from attracting the investments and tours for mass tourism.

According to an analysis of tourists' consumption in the Chapter 10, the individual tourists who stay in the hotels of four-star or above tend to stay longer and spend more. However, a large part of the tourists are those in the group tours and in the hotels of three-star or below at present. They all flock into Angkor Wat being their single destination, with a result of the congestions and possible damage on the heritage.

In order to attract the tourists in up-market, it is necessary to fill the gap between what they expect and what Siem Reap/ Angkor Town can offer. We have to know their preferences. According to the tourism survey undertaken by JICA Study Team, the Angkor monuments are of course the most attractive to them. However, those in up-market want not only to see monuments but also to expose themselves to local people, to enjoy traditional culture and the town itself. Furthermore, they are environmental conscious and feeling satisfied if their spending contributes to the improvement of local people livelihood and the preservation of Khmer culture.

The following points shall fill the gap between expectations of the tourists in up-market and what Siem Reap can offer:

- An integrated planning and management of the site of major Angkor monuments such as Angkor Wat and Angkor Tom: parking space, traffic regulation, in-site transit, parks and shops
- Attractions on top of the Angkor monuments including:
 - Safe, clean and elegant downtown streets enabling town-walk, shopping and eating in good atmosphere and townscape.
 - Natural environment unique to Siem Reap, Tonle Sap Lake and Kulen Mountain in particular.
 - Interactions with Khmer life and culture through village tours
- Good public services and facilities to support the attractions above, especially the roads in good condition on rainy days and tour information such as signboards.
- Improvement of cultural, historical and artistic values through local publication and utilization of the research and rehabilitation of Angkor monuments, theme-specific routing development and mobilization of potential cultural resources such as festival, native houses and local custom.
- Urban planning criteria to incorporate environmental and other standards for hotel development
- Improvement of tour services, including tourist information, transportation within the district and tour guide
- The marketing on travel agents and airlines especially to convince them that Angkor monuments are attractive, too, in rainy season and that Siem Reap has variety of attractive destinations in addition to Angkor monuments.

Strategy 2. Maximizing Local Benefits from Tourism

A shift to a more balanced tourism will stimulate not only tourism industry itself but also other local economic activities and employment in commerce, services manufacturing and possibly agriculture. Particularly, individual tourists bring about economic benefits more extensively than group tourists.

The group tourists tend to make a round trip among hotel, monuments and designated shops only. The tourism of such pattern would intensify disparities between the people working in the tourism industry and the rest, especially rural population.

It is necessary to encourage benefit of tourism to reach many local people. A viable strategy is to promote products under “Angkor Brand”. Currently, the souvenir shops are dependent 60% of their products on the suppliers from outside Siem Reap. The city could capture a larger share of local products by creating Angkor Brands by which local businesses and farmers succeed in upgrading and selling their products especially to the tourists in up-market.

For the Angkor Brand to be fostered, a small but flexible and active local body should

be organized to promote facilitate product quality improvement and marketing with an aim at the tourist market and the domestic middle market. Community business should be promoted to maximize tourism benefits in the rural area. It is strategic in this connection to maintain and develop Angkor Product Fair undertaken as a pilot project of this study.

Strategy 3. Making Town More Attractive to Tourists

The urban space of Siem Reap accommodates two kinds of people: tourists and local residents, both expanding fast. In view of making town more attractive to tourists, there should be an integrated and long-term undertaking for urban development and better urban amenities through the formation of a compact city.

First, the urbanization should be guided to form a compact city. Physical urban expansion shall not exceed the urbanization area that is to be designated to be within the planned ring road and outside the heritage zones as well as the irrigated agricultural land on the west. This agricultural land is to be designated as an urbanization control area on the west. The urbanization area shall be expanded toward east in future. A major tool to guide this urbanization shall be road development in advance of urban land expansion.

Second, hotels should be discouraged from being built any places. According to our estimate, the total requirement of hotels toward the year 2020 can well be accommodated within the existing areas of hotel location, including those along Route 6 and Sivatha Boulevard, and the Cultural and Tourism Zone under APSARA Authority. Third, a city center area along the Siem Reap River should be improved intensively. This is a strategic corridor to vividly enhance tourism attractiveness of urban space. Roads, bridges, the river, green and street accessories shall be upgraded in a coordinated manner.

Fourth, basic community facilities for sanitation should be developed in target areas such as sprawl areas settled by many in-migrants without land title and those having been settled along the course of boat tours in Tonle Sap Lake. For the purpose of hygiene, river maintenance and tourism, some unlawful settlements along the Siem Reap River will have to be resettled within a socially acceptable length of period.

Fifth, for all these undertakings, a fundamental task is to establish a consistent, transparent and strong urban planning framework. At present, different frameworks are prepared on the basis of different legal basis and revised from time to time, by different organizations such as DLMUPC, Siem Reap District and APSARA Authority. This study should be useful to streamline pictures so far made in uncoordinated way. Meanwhile, an important factor is to strengthen the power, especially of the provincial governor to monitor and enforce the planning framework.

Strategy 4. Making Town More Sustainable in Environment

Together with the urban attractiveness, the environmental sustainability is crucial to a more balanced tourism. Firstly, it is a minimum requirement for an internationally

competitive tourist city to be clean in public space such as streets and the river. Good drainage, solid waste management and sewerage are essential. Secondly, the city should be sustainable in natural environmental base, water in particular. Thirdly, sanitation of local residents should also be maintained for tourism environment as well as for themselves.

Environment should be made sustainable by reducing environmental load through continuous efforts to enhance people's awareness and stronger enforcement of regulations. We propose to cut possible escalation of the environmental loads by 10% in the coming 15 years. The remaining part of the environmental load has to be met through increasing capacities of utilities, by private and public.

With the target areas set in downtown streets and Angkor Heritage Park, Siem Reap/Angkor Town should address itself to:

- Establishing a strong environmental monitoring unit at the provincial level,
- Accelerating people awareness building for environment,
- Securing local funds for environmental maintenance,
- Encouraging environmentally friendly planning and management of hotels,
- Reducing individual underground pumping through widespread use of the new urban water supply system,
- Reducing water pollution through drainage and sewerage systems development,
- Solid waste collection and treatment with an emphasis on public and residential areas,
- Reducing air pollution from generators through a more extensive public supply of electricity, and
- Promotion of environmentally friendly transportation in the Heritage Park.

Strategy 5. Strengthening Infrastructures for Tourists and People

Infrastructures should drastically be strengthened as a major basis of the integral set of tourism, economy and environment of Siem Reap, being an international tourist city.

Those to be substantially strengthened include water supply, roads, drainage, sewerage, solid waste management and power.

Strengthening infrastructures needs some considerations peculiar to Siem Reap. Firstly, the infrastructures here are to be used by two distinct beneficiary groups; the tourists that increase fast, impose intensive demand and have a large ability to pay, and the local people that are large in number, cause dispersed demand and have a limited ability to pay. Infrastructure investments should inevitably stress the tourists since they are the economic base of Siem Reap, grow faster and are more recoverable.

Secondly, Siem Reap is growing so fast that infrastructure investments have to be made by combining two ways. One is a solution being quick and less costly but not sustainable in long term. The other is a solution requiring long gestation period, considerable cost and institutional capability but being sustainable. It is inevitable to adopt the quick solution for the time being, but from the viewpoint of sustainability, an

increasingly greater importance will have to be placed on the other solution in long term.

Thirdly, a number of public facilities and services have been and will have to be provided and maintained by private investors through public-private partnership arrangements, in view of limited financial and managerial capabilities of government administration at the local level and fast growing demand. However, it should be made clearer that such PPP arrangements be made on competitive and transparent bases. It should also be made clear that final responsibility and authority lie in the government, including provincial government and specialized government authorities, in securing the public facilities and services, whether they are operated/maintained by private or government agencies.

Fourthly, many infrastructures have been and will have to be provided through foreign assistance. Donors, however, participate mostly in initial investments only. Government has to take care of maintenance and operation. Especially in Siem Reap, however, there is a large gap between the infrastructures demanded by fast growing tourism as well as local people and the capacities of the government administration at the local level to maintain and operate. Infrastructure planning should, therefore, take into full account of existing capacities to maintain and operate.

Fifthly, Siem Reap is not a million-population city, but it is medium-sized and preferably compact. Thus, the size of its demand for infrastructure does not justify either large-scale facilities suitable to metropolitan cities or small-scale facilities suitable to villages. Siem Reap needs their combination according to location and timing.

Strategy 6. Strengthening Local Administration and Finance

Another important basis of the integral set of tourism, economy and environment is the local administration and finance.

Firstly, one should accelerate ongoing attempts to strengthen initiative of the provincial governor for development, such as “one window service”, approval of the projects that cost less than 2 million US dollars and inter-departmental meeting for improving city environment and efficiency in local level administration. It has also been envisaged to organize a provincial council. Along with this line, the provincial governor could set up a committee or the governor’s board, to cover line departments as well as APSARA Authority to let them share information on ongoing and proposed projects in the province. It is also supposed to encourage them to have common understanding on the present situation and the issues for development in the province. Such committee or board might as well be participated by advisory members such as those from relevant central ministries, international donors, NGOs and business community.

Secondly, local finance should be strengthened. Siem Reap has special reasons for strengthening its financial base. In the first place, a stronger financial base is interdependent with greater economic benefits from tourists. In the second place, a part of the capital gain from land price escalation should be distributed for the local public interest. Lastly, internationally financed projects considerably concentrate on

Siem Reap without sufficient financing for maintenance. However, good urban amenity and environment depend more often on the maintenance itself as well as the investment in small rather than large projects, such as those usually financed by international donors.

It is encouraging that hotel staying tax will be introduced as a provincial tax in 2006. In addition, further strengthening of local financing would warrant (1) a more consistent and greater use of the revenue from entry fee to Angkor Park for environmental and urban improvement at the local level, (2) a greater transparency and systematic tax collection, (3) a new tax such as levying on individual ground water pumping, and (4) a timely disbursement through simpler bidding system and payment mechanism.

Thirdly, human resource base should be strengthened at the provincial and district levels especially for the management and monitoring of public works project, land management, tax collection, the information systems to support coordination and budget accounting. The training of the provincial and district officials is important. They can make full use of SEILA Program. In addition, the province and districts might as well tap the technical resources of APSARA Authority for training their officials especially in public works.

Fourthly, rules and regulations should be enforced with patience but no exception. Priority areas of enforcement include the use of public land, building permit, vehicle registration, individual groundwater tapping and environmental control. Many exceptions discourage people and businesses from keeping the rules and regulations.

Fifthly, urban policy should be established and managed under the provincial government initiative. There are three reasons for this proposal. First, Siem Reap is different from many other provinces in that its economy is based on urban/tourism more than rural economy. Second, Siem Reap District can hardly survive without the resources of neighboring rural districts, especially in water, land and manpower. Third, urban emphasis should not cause superfluous structure in local administration until overall government structure is more streamlined and equipped with sufficient managerial manpower.