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**Siem Reap Province and APSARA Authority, the Royal  
Government of Cambodia  
Japan International Cooperation Agency**

# **The Study on Integrated Master Plan for Sustainable Development of Siem Reap / Angkor Town in the Kingdom of Cambodia**

## **FINAL REPORT**

### **VOLUME I EXECUTIVE SUMMARY**

**March 2006**

**International Development Center of Japan  
Nippon Koei Co., Ltd.  
Kokusai Kogyo Co., Ltd.**

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**Currency Equivalents**  
(Official Exchange Rate in 2004)  
**US\$ 1 = 4,016Riel**

**Unless Specifically Noted**

## **Preface**

In response to a request from the Royal Government of Cambodia, the Government of Japan decided to conduct “The Study on Integrated Master Plan for Sustainable Development of Siem Reap/Angkor Town in the Kingdom of Cambodia” and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent a study team headed by Dr. Jinichiro Yabuta of International Development Center of Japan to Cambodia from November 2004 to March 2006.

The team held discussions with the officials concerned in the Royal Government of Cambodia, and conducted field surveys in the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to sustainable development of Siem Reap/ Angkor Town and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials of the Government and those concerned in Cambodia for the close cooperation they have extended to the study.

March 2006

Takashi Kaneko  
Vice President  
Japan International Cooperation Agency



***The study on Integrated Master Plan for  
Sustainable Development of Siem Reap / Angkor Town(SAT)***

March 2006

Mr. Takashi Kaneko  
Vice President  
Japan International Cooperation Agency  
Tokyo, Japan

Dear Mr. Kaneko,

**Letter of Transmittal**

We are pleased to submit the final report of the Study on Integrated Master Plan for Sustainable Development of Siem Reap/Angkor Town in the Kingdom of Cambodia. The final report is comprised of three volumes, namely, Volume 1: Executive Summary; Volume 2: Main Report; and Volume 3: Sector Report.

Since the historic remains in Siem Reap/Angkor Town are not only the world's cultural heritage but also the symbol of Cambodia in terms of nation's identity, as well as her major source of foreign exchange, an attempt at transforming the Town into a model city with highly sustainable development is meaningful. However, the Town should not be sustainable only in itself by merely attracting tourists to a cluster of historic remains, but instead, to serve as a model city that represents an ideal image of sustainable development in the 21st Century. Repetitive adjustments and improvements will be necessary in the process, but insights into Angkorian wisdom and efforts toward creating environment-friendly atmosphere may help the Town achieve its goal of transforming into a model city with highly sustainable development.

To this end, the currently booming tourism should be transformed to more balanced and quality oriented with a smaller loads to the natural environment. It is highly advised that the Government of Cambodia seriously tackle with urban/environmental management, including water- and land-use control, which is considered indispensable in realizing a model city with truly sustainable development.

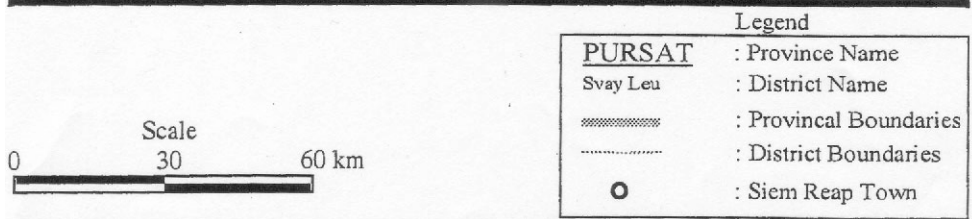
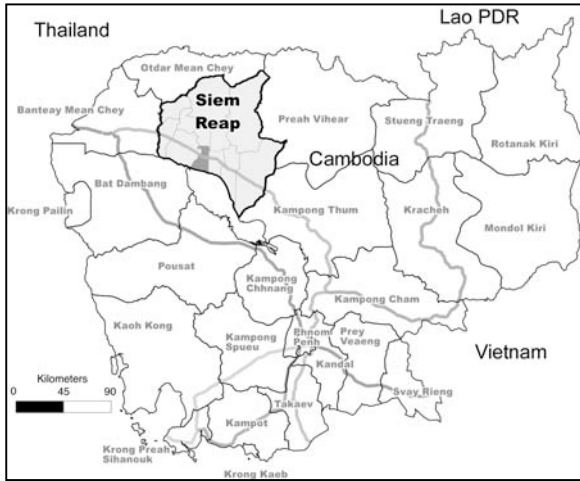
The long-term master plan suggested in the final report should not be regarded as fixed and definite. Therefore, revisions and adjustments are welcomed in accordance with the changing circumstances, whereas the proposed priority projects should fully and constantly be reviewed for timely preparation and implementation. On the other hand, the provincial government is advised to strengthen its capacity to monitor, plan and maintain projects, with the support from specialized national agencies, such as APSARA and related ministries.

We wish to take this opportunity to express our sincere gratitude to your Agency, Siem Reap Province, APSARA Authority, Council of the Development of Cambodia and other distinguished authorities of the Royal Government of Cambodia for their invaluable cooperation and assistance to the Study.

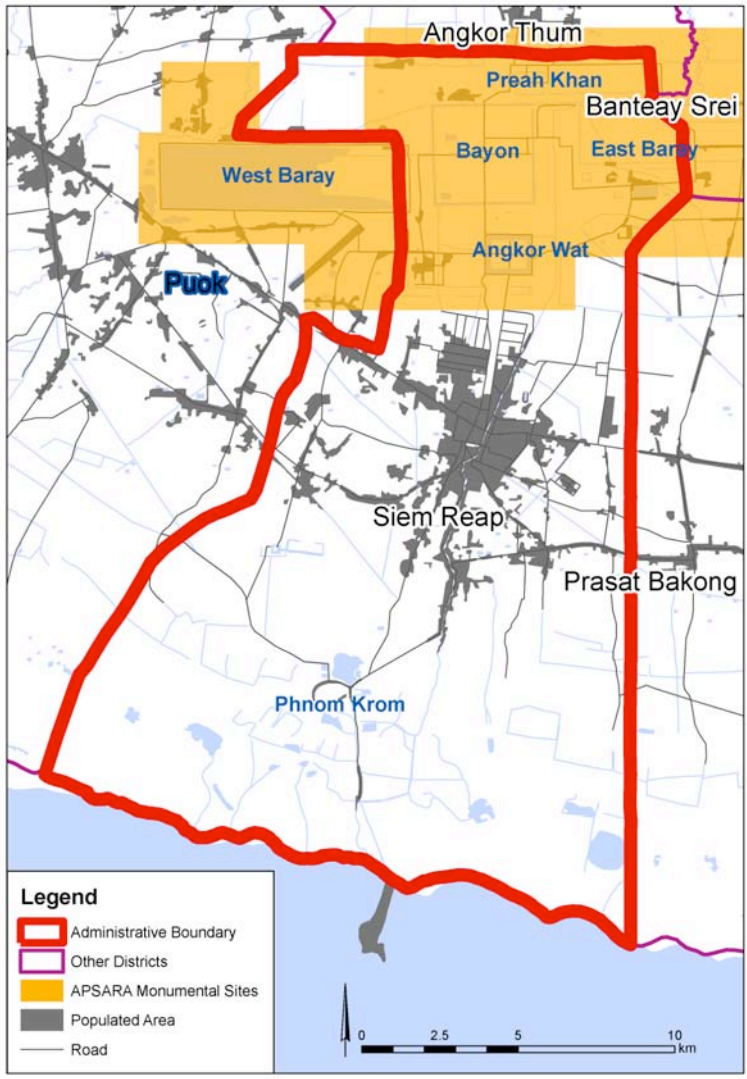
We do hope that this report will contribute to the sustainable development of Siem Reap/Angkor Town.

Very Truly Yours,

Jinichiro Yabuta  
Leader  
JICA Study Team and  
Study Consortium by  
International Development Center of Japan,  
Nippon Koei Co., Ltd. and  
Kokusai Kogyo Co., Ltd.

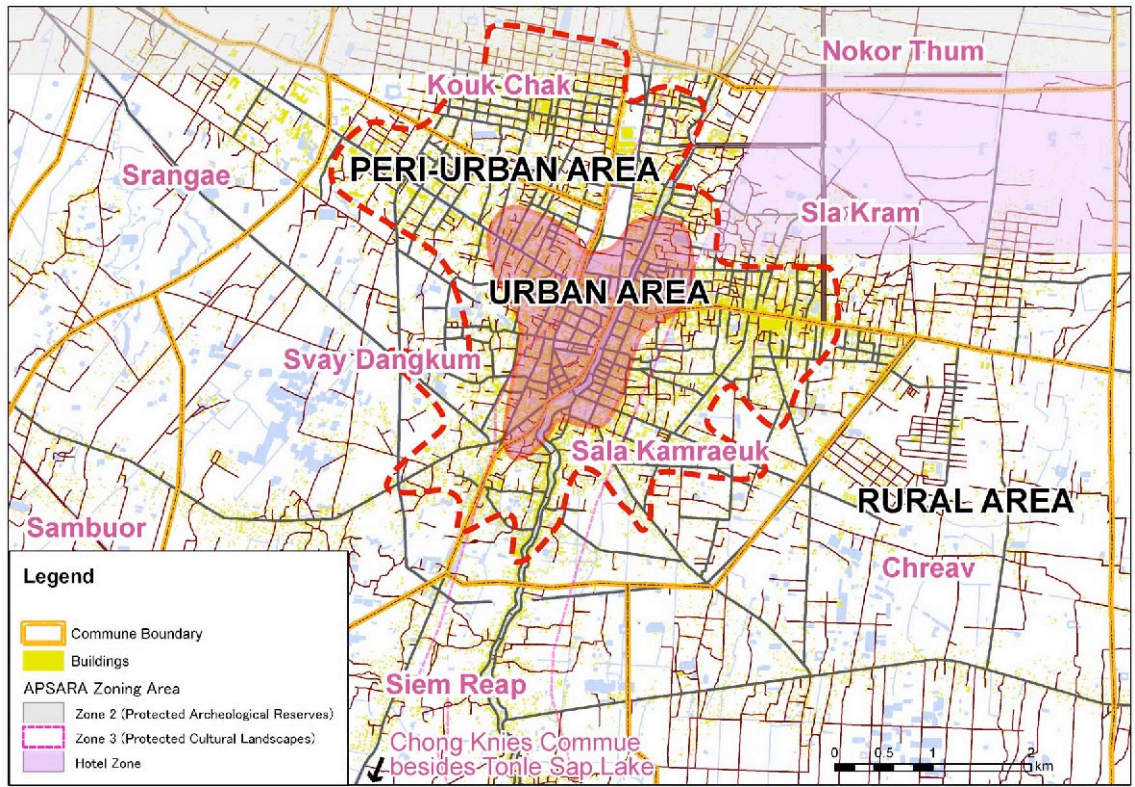


**Location of Siem Reap Province and Siem Reap District**



Siem Reap District

Central Area of Siem Reap District





# Table of Contents

## Volume I Executive Summary

Location of Siem Reap Province and Siem Reap District .....	i
Map of Siem Reap District and Central Area of Siem Reap District .....	ii
Table of Contents.....	iii
List of Figures and Tables.....	iv
Abbreviation List.....	v
<b>1. Background .....</b>	<b>I-1</b>
<b>2. Situation, Prospects and Issues .....</b>	<b>I-6</b>
<b>3. Strategic Vision.....</b>	<b>I-8</b>
<b>4. Area-wise Development Approach .....</b>	<b>I-16</b>
<b>5. Sector Development Plan .....</b>	<b>I-17</b>
<b>6. Projects and Programs .....</b>	<b>I-31</b>
<b>7. Institutional and Financial Arrangements .....</b>	<b>I-35</b>
<b>8. Environment and Social Considerations .....</b>	<b>I-38</b>
<b>9. Recommendations .....</b>	<b>I-41</b>

## List of Figures and Tables

### Figures

Figure I.1	Time Frame of the Master Plan Study .....	I-2
Figure I.2	Structure of the Reports (1) .....	I-3
Figure I.3	Structure of the Report (2).....	I-4
Figure I.4	Problem Structure of Siem Reap.....	I-7
Figure I.5	Strategies to Siem Reap/ Angkor Town 2020 .....	I-12
Figure I.6	Three Areas of Siem Reap.....	I-16
Figure I.7	A Flow of Diagram of Development .....	I-21
Figure I.8	Overall Plan for U-1 Project.....	I-22
Figure I.9	Program Sequence.....	I-23
Figure I.10	Distant Angkor Monument Areas and Their Networking.....	I-24
Figure I.11	Structure of the Sector Plan .....	I-25
Figure I.12	Principal Road Network (2012).....	I-26
Figure I.13	Proposed Time Frame and Stage-wise Development .....	I-27
Figure I.14	Wastewater System Layout Plan .....	I-29
Figure I.15	Power Distribution Plan in 2020.....	I-30

### Tables

Table I.1	Outline of Master Plan .....	I-5
Table I.2	Historical Tourist Destinations in Southeast Asia and Siem Reap....	I-8
Table I.3	Scenarios Compared.....	I-9
Table I.4	Two Scenarios Assessed.....	I-9
Table I.5	Strategies and Sector Development Plan: An Overview .....	I-20
Table I.6	Projects and Programs Proposed (1/2) .....	I-31
Table I.7	Projects and Programs Proposed (2/2) .....	I-32
Table I.8	Priority Projects (1/2).....	I-33
Table I.9	Priority Projects (2/2).....	I-34
Table I.10	Project Cost Estimate .....	I-34
Table I.11	Capacity Building Program for Provincial Government.....	I-37
Table I.12	Summary of Impacts (For all Projects) .....	I-38

## Abbreviation List

3R	Reduce, Reuse, and Recycle
ADB	Asian Development Bank
APPC	Angkor Products Promotion Center
DF/R	Draft Final Report
DLMUPC	Department of Land Management, Urban Planning and Construction
DOE	Department of Environment
DPWT	Department of Public Works and Transport
EdC	Elictricity du Cambodge
FR	Final Report
IC/R	Inception Report
IDCJ	International Development Center of Japan
IT/R	Interim Report
JICA	Japan International Cooperation Agency
KKC	Kokusai Kogyo Co., Ltd.
MIME	Ministry of Industry, Mines and Energy
MOCFA	Ministry of Culture and Fine Arts
MOT	Ministry of Tourism
MOWRAM	Ministry of Water Resource and Meteorology
MPWT	Ministry of Public Works and Transport
MRD	Ministry of Rural Development
NGOs	Non-Governmental Organizations
NK	Nippon Koei Co., Ltd,
OVOP	One Village One Product
PR/R	Progress Report
RGC	The Royal Government of Cambodia
SHM	Stakeholder Meeting
SWM	Solid Waste Management
WSP	Waste Stabilization Pond

# Executive Summary

## 1. Background

The Royal Government of Cambodia (RGC) and Japan International Cooperation Agency (JICA) have recognized a great need for an integrated plan to develop the 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 (the Study) 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 started undertaking the study in November 2004, lasting in March 2006, consisting of four phases. Draft Final Report (DF/R) was compiled to propose the Master Plan in February 2006. In receipt of the comments on this DF/R, the Study Team has submitted the Final Report in March 2006.

### 1.1 The Objectives of the Study

The objectives of the Study have thus been set as:

- (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 in connection with tourism development as part of the integrated master plan; and
- (3) To promote technical transfer to the Cambodian counterpart so as to strengthen the institutional capacity of local stakeholders such as government organizations and community.

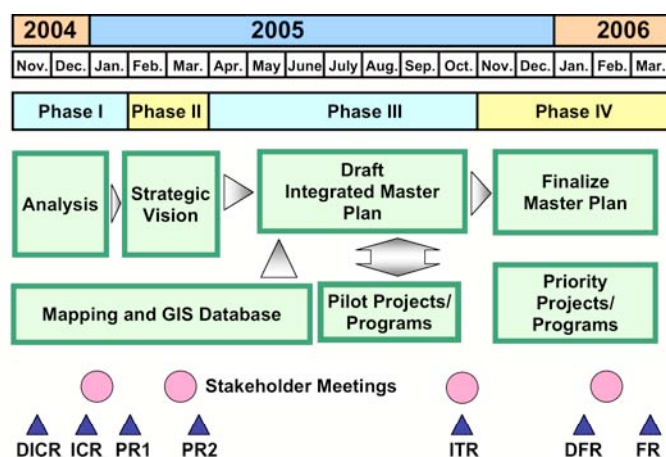
### 1.2 The Study Area

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) Time Frame of the Study

The Study Team undertakes the study during the period from November 2004 to March 2006. The study was conducted in the 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 I.1 Time Frame of the Master Plan Study**

## (2) Organizational Set-up

The Siem Reap Province and APSARA Authority are the counterpart agencies for this JICA Study Team. Thirteen counterpart personnel from the Siem Reap Province and APSARA were nominated to participate in the Team to work closely with JICA Study Team members.

## (3) 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.

## (4) Process of People's Participation

This study adopted the people's participatory approach throughout the course of study. Among them, 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.

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.

#### (5) Pilot Projects

As part of the Study, the Study Team and counterpart carried out the following two pilot projects jointly in an effort to enhance awareness and capacity of the stakeholders and to incorporate lessons and findings through the experiences in the pilot projects into the Master Plan.

- A More Beautiful Siem Reap: Environmental Awareness
- Angkor Product Fair 2005: for local product promotion

### 1.4 Structure of Final Report

In this Phase IV, Master Plan has been prepared. It is compiled in this Final Report (FR). The FR comprises three volumes with the contents shown below.

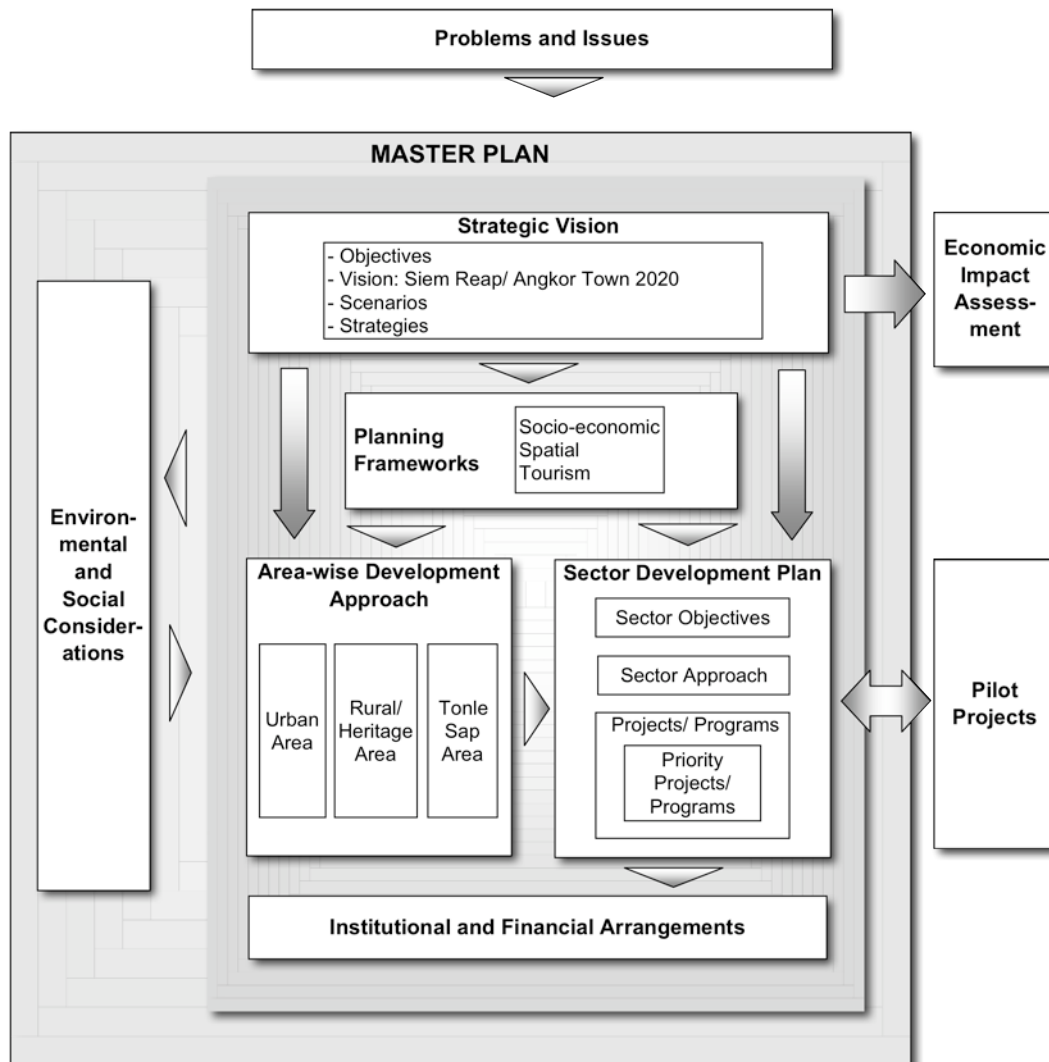
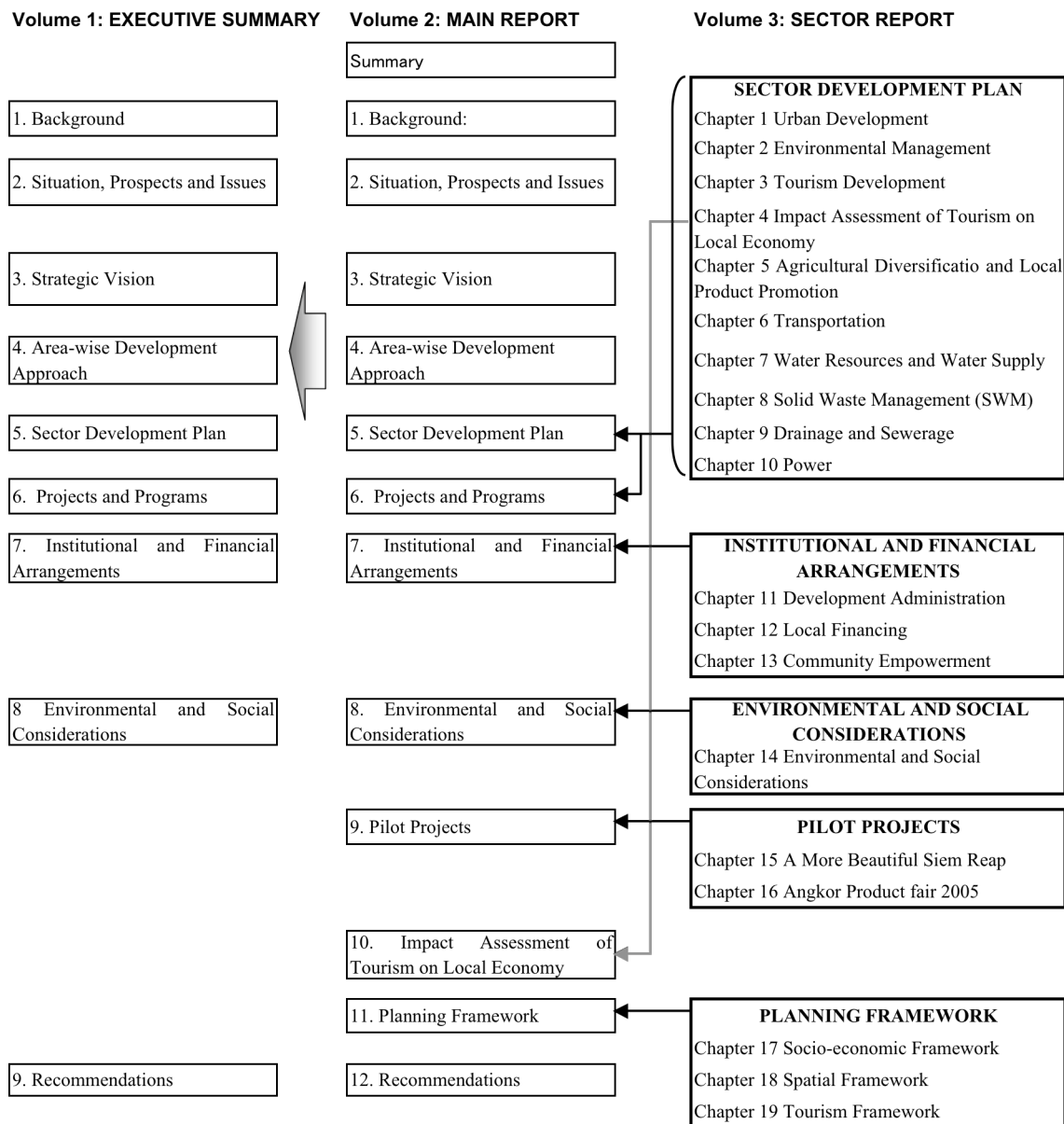


Figure I.2 Structure of the Reports (1)



**Figure I.3 Structure of the Report (2)**

The outline of master plan is as shown the table below.

**Table I.1 Outline of 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)
Limited local economic benefits				Night market (TO-2)
Poor urban environment and amenities		2. Maximizing local benefits from tourism	Urban Development: Making an attractive city	Provincial tourism marketing board (TO-3)
Uncertain environmental sustainability				Community based eco-/rural tourism (TO-4)
Insufficient infrastructure		3. Making town more attractive to tourists	Environmental Management: Resource saving and reducing environmental loads	Tour guide system improvement (TO-5)
Weak local capacity to manage development				Carrying capacity and site management (TO-6)
		4. Making town more sustainable in environment	Transportation: Sufficient road network	APPC (A-1)
				OVOP (A-2)
		5. Strengthening infrastructure for tourists and people	Water resources and water supply: Developing water resources, increasing water supply coverage and managing groundwater	Production Villages (A-3)
				Angkor Products Fair (A-4)
	6. Strengthening local administration and finance	Solid waste management: Making the town LOVELY	City center development (U-1)	
			Environmental management capacity (E-1)	
		Drainage and Sewerage: Sustainable drainage and sewerage system	Planning capacity (U-2)	
		Power: Supplying reliable electric power with less environmental loads	Historical building inventory (U-3)	
		Local administration: Streamlined with transparency and accountability	Residential area development (U-4)	
		Local financing: Adequate financial resources base	Cultural and tourism zone (U-5)	
		Community empowerment: People-government partnership	Environmental awareness (E-2)	
			Joint fee collection (E-3)	
			French bridge (TR-1)	
			Sub-arterial road network (Phase 1) (TR-1)	
			Sub-arterial road network (TR-2~5)	
			Road safety (TR-6)	
			Rural heritage network (TR-7)	
			Angkor archaeological park transportation (TR-8, 9)	
			Road maintenance (TR-10)	
			Groundwater control (W-1, 2)	
			Rehabilitation of obsolete pipeline (W-3)	
			Water resource management study (W-4)	
			Water supply (W-5, 6)	
			Solid waste management (SW-1, 2)	
			Sanitary landfill (SW-3)	
			Urban Development Project (SD-2)	
			Sewerage and drainage improvement (SD-1, 3~9)	
			Urgent installation of diesel generators (P-1)	
			Power supply improvement (P-2~10)	
			(Recommendations)	
			Provincial development committee	
			HRD of Province	
			Organizational reform	
			Streamlined regulation	
			Development fund	



## 2. Situation, Prospects and Issues

### 2.1 Situation

Siem Reap had been an ancient capital of the Angkorian state for about 650 years since the beginning of 9<sup>th</sup> centuries. The state was prosperous with sophisticated 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 after the achievement of peace. The number of visitors reached 750,000 in 2004. Population of the district is 139,000 in 2004. In Siem Reap, tourism is estimated to generate the employment about 55 thousand when indirect multiplier effects are taken into account. Tourism of Siem Reap is important for the country as well, in that it contributes almost 40% of the amount of foreign exchange necessary to import oil in 2003.

### 2.2 Prospects

In the following three points, Siem Reap District has distinct strengths as compared with other parts of the country.

Firstly, the monuments of Angkor are the most important cultural heritage of the country. It is a world heritage as well. Secondly, the district has good accessibilities in air, land and water surface. Thirdly, because of these strengths above, Siem Reap District has received favorable policy support from the national government. For example, 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.

### 2.3 Issues

Despite the prospects above, Siem Reap has faced itself with the following six issues:

#### **Issue 1: Heavy Dependence on Mass Tourism:**

The feature of tourism in Siem Reap is short-stay concentrated tourism. 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 monuments of Angkor. Most of them never visit here again. They do not visit wide spread excellent monuments away from Siem Reap. Most of them never visit here again. Here it can be defined as a typical mass tourism. This feature brings about increasing environmental loads, limited local benefits and little cultural interaction. One of the major reasons of these tourists' behavior is the limited attractiveness only to Angkor monuments, which needs to create an attractive destination to diversify the tourist types and their behaviors of short-stay concentrated visit.

#### **Issue 2: Limited Local Economic Benefits**

This characteristic of mass-tourism mentioned above tends to provide limited local benefits. The expenditures by international tourists amount to US \$97 million in 2004, of which 70% is estimated to be retained in the province and induce additional local consumptions of US\$ 38 million. There are potentials to augment local benefits by expanding tourists' expenditures through diversified tourism and by retaining tourists' expenditures in locally.

### Issue 3: Poor Urban Environment and Amenities

A tourism boom brings about land speculation and disordered and rushing development of hotels and guesthouses, which could disturb the Angkor atmosphere. 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. Tourists tend to simply stay only at the 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.

### Issue 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. Second, the sustainability of natural resources is uncertain; especially a heavy dependence of potable water on groundwater has an uncertain risk of land subsidence. These are major threats to sustainability of the tourism.

### Issue 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 such as water supply, transportation and electricity.

### Issue 6: Weak Local Capacity to Manage Development

The limited capacity for development lies first in the lack of local coordination and local governance. Financial base is very weak at the local level. In addition, human resource base is also weak at the provincial and district levels especially in management and monitoring of public works, land management, information systems and budget accounting.

Based on the above ideas, the following problem structure is recognized.

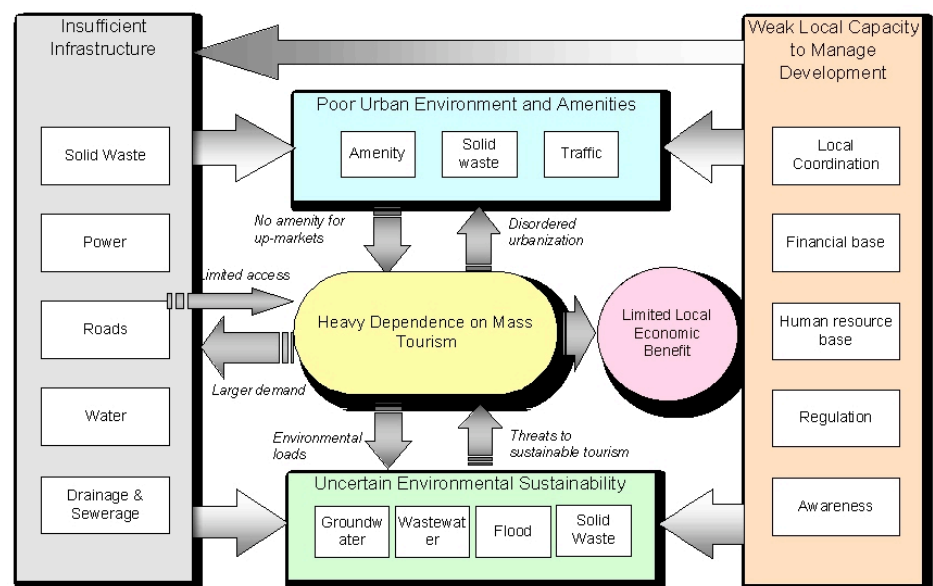


Figure I.4 Problem Structure of Siem Reap

### 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 Siem Reap/ Angkor Town 2020 and six strategies.

#### 3.1 Objectives of the Master Plan

The objective of this Master Plan is to achieve sustainable development of Siem Reap/ Angkor Town toward 2020 through the following measures:

- Tourism promotion in a sustainable way,
- Diversification of local economy based on the tourism,
- Conservation and improvement of environment, and
- Strengthening of 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. Under these scenarios, an attempt has been made to forecast the number of tourists, and population in 2012 and 2020.

- Scenario A: Trend Growth Scenario
- Scenario B: Moderate Growth Scenario

#### The Number of Tourists

The number of tourists is assumed to increase as forecasted by UNESCO-APSARA-AFD until 2012 for both scenarios. After 2012, two sets of the number of tourists are estimated for two scenarios on the assumption that the number of tourists more or less follows 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.

**Table I.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%
Borbadur, 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)

#### Population

The population projection has been based on Provincial breakdown of “the First Revision of Population Projection for Cambodia 2001-2021”, 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.

A part of the tourism employment estimated from the projection of tourists is to be met by commuting population who live 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 as shown in the table below.

**Table I.3 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 <sup>3</sup> /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 <sup>3</sup> /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

The demands for infrastructure and utilities and environmental loads will be smaller under the moderate growth scenario. Economic benefit will be smaller under this scenario; however, it will be larger if tourist composition were represented by a greater number of individual and up-market tourists.

A comparison has been made from the viewpoint of national economy, local economy, environment and tourism. The moderate growth scenario is outstandingly preferable from these viewpoints as shown the table below. Thus, we recommended that the moderate growth scenario be adopted for the sustainable of Siem Reap District.

**Table I.4 Two Scenarios Assessed**

Item	Scenario A	Scenario B
National Economy	Very large contribution to foreign currency earning	Large contribution to foreign currency earning
Regional Economy	Very high growth but unstable	High growth and stable
Environment	Difficult to manage	Manageable
Tourism Quality	Possible decline	Manageable
Realization	Not realistic according to the past trend of destinations in SEA	Realistic

### 3.3 Siem Reap/ Angkor 2020

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 into the place 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**

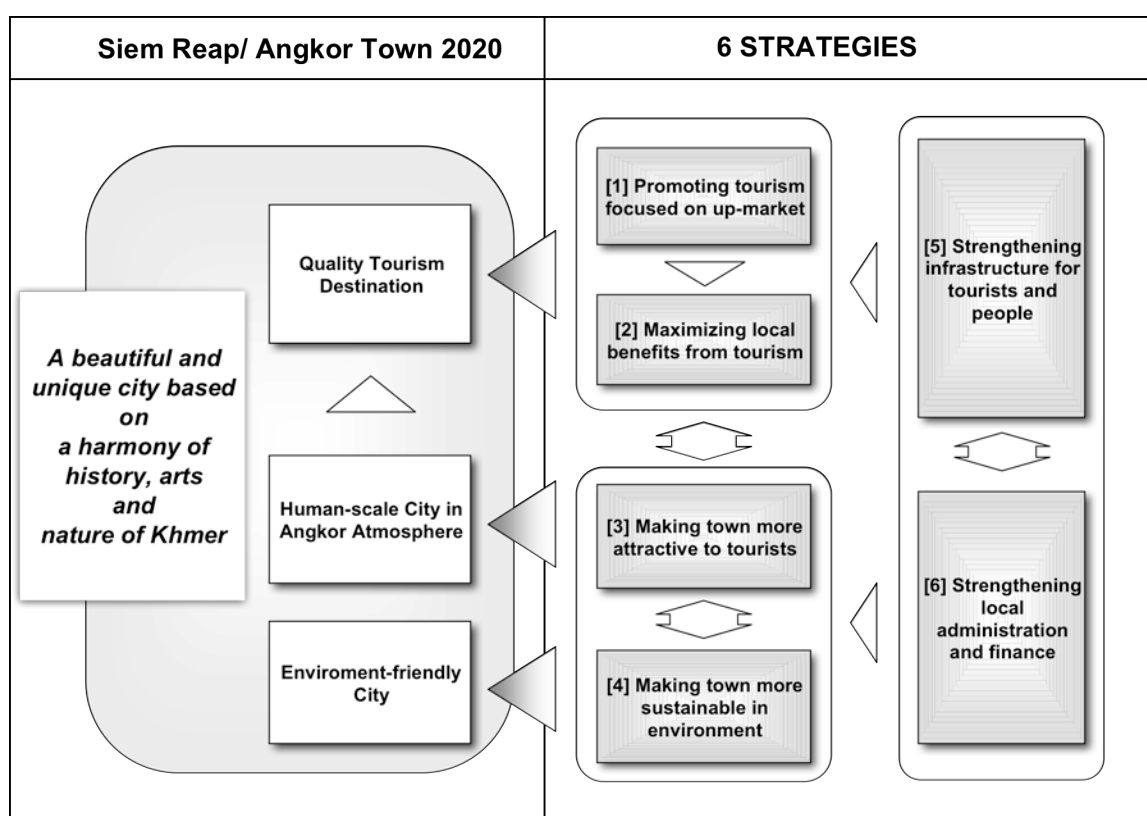
Angkor state was known for its sustainable resource use. Learning from this wisdom for sustainable development, Siem Reap, as an environment-friendly city, will be:

- Protecting urban environment from negative impact of rushing tourism and urbanization,
- Resource and energy saving and recycling to make city sustainable in environment,
- Harmonizing with nature and Angkor heritage, and
- Being a model of Cambodia

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 21<sup>st</sup> 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

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 I.5 Strategies to Siem Reap/ Angkor Town 2020**

#### Strategy 1: Promoting Tourism Focused on Up-market

The current feature of tourism in Siem Reap is short-stay concentrated tourism, which causes increasing environmental loads, limited local benefits and little cultural interaction. A fundamental approach to the Siem Reap/ Angkor Town 2020 is to maximize the positive economic impact of tourism on local economy and to control environmental load at a reasonable level.

By “aiming at the up-market”, Siem Reap become an attractive destination satisfying even up-market tourists, consequently satisfying diversified 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. 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, 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. Those tourists want not only to see monuments but also to expose themselves to local people, to enjoy traditional culture and the town itself. In addition, they are environmental conscious and feeling satisfied if their spending contributes to the improvement of local people livelihood and the preservation of Khmer culture. Attractions and improvement on top of the Angkor monuments is necessary to fill this gap being an attractive destination.

- An integrated planning and management of the site of major Angkor monuments: 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
- Promotion of cultural appreciation and theme-specific routing development and mobilization of potential cultural resources such as festival, native houses and local custom.
- Improvement of tour services, including tourist information, transportation within the district and tour guide
- Strengthening marketing and promotion

### **Strategy 2: Maximizing Local Benefits from Tourism**

A shift to a more balanced tourism will stimulate not only tourism industry but also other local economic activities. Particularly, individual tourists bring about greater economic benefits than group tourists. It is necessary to encourage benefit of tourism to reach many local people.

- A viable approach is to promote a local brand, the Angkor brand. Siem Reap 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.
- Rural area, especially, is not linked with tourism industry, which gives a limited benefit. Another approach is to integrate rural economy into tourism by two-fold measures: promoting community business by One Village One Product to maximize tourism benefits in the rural area; and creating Production Village to be incorporated into tourism routing.



**Strategy 3: Making Town More Attractive to Tourists**

In view of making city harmonized with Angkor atmosphere, human-scale, and as a base of distant Angkor heritage tourism, “making town more attractive to tourists” is proposed as a strategy. According to the strategy, it needs that:

- Urbanization should be guided to form a compact city. Hotels should be discouraged from being built at any place.
- For all these undertakings, a fundamental task is to establish a consistent, transparent and strong city-planning framework. Urban planning capacity shall be strengthened. Road network development as well as drainage in advance is also one of the tools to guide urbanization.
- 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.

**Strategy 4: Making Town More Sustainable in Environment**

Together with the urban attractiveness, the environmental sustainability is crucial to a more balanced tourism. Learning from the ancient wisdom of resource use, Siem Reap aims at being an environmentally sustainable city, which will give an additional value of tourist destination.

Firstly, Siem Reap has to protect the urban environment from negative impacts of rushing tourism and urbanization. Negative impacts are water pollution from wastewater, air pollution from increasing vehicles and generators and growing solid waste. These are deteriorating aesthetic view as a tourist destination as well as hygienic conditions. 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. The city should be sustainable in natural environmental base, water in particular. Prior to treating waste, the 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.

Secondly, Siem Reap has to harmonize with Angkor heritage as well as the surrounding nature. Siem Reap should protect Angkor heritages from negative impacts from tourism and keep these heritages away from risk of damages. Thus, it has to manage: groundwater intake that has a risk of land subsidence; rushing tourist vehicles in the Heritage park; and too much concentration on the Angkor Wat. People, especially in Zone 1 and 2, have to co-exist with Angkor heritage.

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:
  - Urban planning criteria to incorporate environmental standards for hotels,
  - Reducing water pollution through drainage and sewerage systems development,
  - Solid waste collection and treatment emphasizing on public and residential areas,
  - Reducing air pollution from generators through an extensive public power supply,
  - Reducing individual underground pumping through widespread use of the new urban water supply system, 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.

The infrastructures in Siem Reap are to be used by two distinct beneficiary groups: the tourists and the local people. Infrastructure investments should inevitably stress the tourists since they are the economic base of Siem Reap, grow faster and are more recoverable. A number of public facilities and services will have to be provided through public-private partnership arrangements, in view of limited financial and managerial capabilities at the local level. It should be made clearer that such PPP arrangements be made on competitive and transparent bases.

### **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. One should accelerate ongoing initiative of the provincial governor to strengthen development administration.

- The provincial governor is to set up a committee to cover line departments as well as APSARA Authority to let them share information on ongoing and proposed projects in the province.
- Local finance should be strengthened.
- Strengthening human resource base at the provincial levels especially for the management and monitoring of public works project, land management, tax collection, the information systems to support coordination and budget accounting.
- Rules and regulations should be enforced with patience but no exception, especially for areas of enforcement include the use of public land, building permit, vehicle registration, individual groundwater tapping and environmental control.
- Urban policy should be established and managed under the provincial government initiative for the reasons being:

## 4. Area-wise Development Approach

To materialize the Strategic Vision 2020, this section provides spatial approaches as area-wise development priorities.

### Conceptual Zoning

Siem Reap area is divided into three areas by its attributes as shown in Figure I.6.

- Urban Area
- Rural/ Heritage Area
- Tonle Sap Lake Area

The Urban Area is defined as the area which will be urbanized by 2020. For each area development concept is set as:

#### **Development Concept for Urban Area:**

This study prepares the development concepts for the urban area as “Siem Reap: Making an Attractive City.”

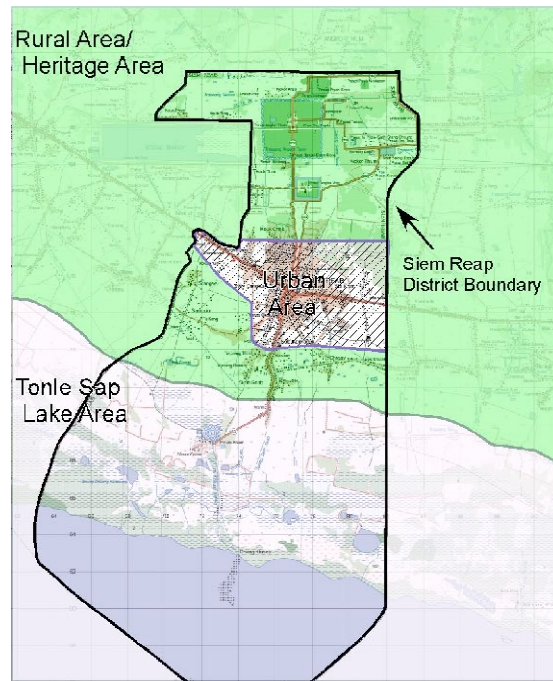
#### **Development Concept for Rural/Heritage Area:**

Rural and heritage areas co-exist and are inseparable. The area development concept is set as “Rural/Heritage Area: The Rural Communities Attractive for Tourists in Harmony with Heritages, Supporting the Tourism and Preservation.”

Under the concept, two approaches for the area are provided as follows:

- Agricultural development in the western suburbs
- Promotion of village and eco tourism based on Khmer Culture.

**Development Concept for Tonle Sap Lake Area:** The Tonle Sap Area is another indispensable area to consider Siem Reap and Angkor Heritages. This study prepares the development concept for the area as “Tonle Sap: The Eco-Tourism Area with Protection and Sustainable Use of Diverse Natural Environment providing Ideas what has nurtured Khmer Culture.”



**Figure I.6 Three Areas of Siem Reap**