

**CASE STUDY ON
THE EFFECTS OF TOURISM
ON CULTURE AND
THE ENVIRONMENT**

CAMBODIA

by Son Soubert and Suong Leang Hay



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P R E F A C E

The present publication in the series on Culture and Tourism in Asia is devoted to the Effects of Tourism on Culture and the Environment in Cambodia. The "case studies" were undertaken as part of a project jointly formulated by Indonesia and Thailand in 1992 and based on a research design developed by experts on culture and tourism in a meeting held in Cipanas, West Java, Indonesia from 22-24 July 1992.

The project comes within the purview of the "World Decade for Cultural Development" (1988 - 1997) proclaimed by the General Assembly of the United Nations, which ushered in a new era of sustained activities in the field of culture both at national and international level. The United Nations Educational, Scientific and Cultural Organization (UNESCO) being assigned the role of lead agency for the Decade has sponsored the project.

Over the past decade Asia has witnessed tremendous social, cultural, political and technological changes. The rapid growth of tourism on large scale in some countries in the region has been a significant agent of these, not all very welcome, changes. As in most developing countries of the world, tourism in many Asian countries is also conceived as a powerful means of attracting the coveted foreign exchange and an easy means of boosting the national economy. It brings investment, creates jobs, and promotes sales of crafts and local artifacts, etc. Accordingly the cultural heritage sites, performing arts, crafts and natural resources have all been exploited in attracting tourists. This approach, however, reduces the cultural heritage and the environmental assets to an economic commodity minimizing or sometimes completely ignoring their socio-cultural values.

Moreover, the convergence of a large number of tourists of different backgrounds on a historic monument and the location of tourist facilities within cultural heritage sites have too often resulted in alteration of the original features in all kinds of pollution damaging or even destroying the very fabric of the heritage. The zeal for collecting mementoes, particularly from the archaeological sites, has also led to vandalism of many sites.

Tourism, viewed from another perspective, is a factor of acculturation which affects attitudes, alters popular beliefs, changes mentalities and spreads new concepts relating to work, money, and human relationship. Sometimes it also destroys the ties that bind people to their faith, religion and aesthetics. With the restaurants, bars, discos and other entertainments may come disturbing public behaviour, drunkenness, vandalism, crime, indecency, etc. Local youth in many cases emulate the visitors behaviour and social conflicts arise. On the other hand tourism, by bringing people of different cultures together, provides a direct contact between them and thus serves as a powerful means of diffusion of world cultures. It provides an opportunity for friendly and peaceful dialogue leading to better understanding between people and nations. It can build bridges and create friendship between nations leading to establishing peace – the penultimate goal of the United Nations.

Sporadic studies on various aspects of tourism have been carried out previously but there are serious gaps in the existing body of knowledge on tourism in Asia. There is a need to review these studies and evaluate their impact. This project aims at assessing the present state of tourism, and studying its impacts on culture and the environment in participating countries in Asia. The findings of the case studies are expected to lead to formulation of practicable guidelines which will promote sustainable tourism: a tourism that encourages better understanding of a people and respect for their culture, and protects the natural and social environment of the host country.

The present volume is the result of research undertaken in Cambodia. Mr. Son Soubert and Mr. Suong Leang Hay deserve to be congratulated for their sincere efforts to collect, review and analyze the data. The views and opinions expressed in the case study represent the views and opinions of the authors and not of UNESCO. It is our sincere hope that the case study will encourage further research on the impacts of tourism on culture and the environment.

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Bangkok
July 1995

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I. GENERAL CONSIDERATIONS ON TOURISM IN CAMBODIA

Introduction

Tourism today is a major economic and social phenomenon. It is one of the three main international commercial exchange sectors along with petrol and motorized vehicles. Integrated in the leisure world, it has become a mass phenomenon, and at the same time a social necessity.

In 1991, about 450 million tourists travelled abroad and ten times more tourists circulated within their own country; there were 18 times more tourist arrivals than 40 years before, with an annual increase average of 7.3%. The region which holds the highest increase in the 1980's is Southeast Asia, South Asia and the Pacific. Most of the income from tourism in these countries originates from industrialized countries.

This trend represents a strong hope for tourism in Cambodia. Alongside agriculture and industry, the government has accorded tourism priority status for development. Since the Paris Agreement of October 1991, the number of tourists in Cambodia has steadily increased. An estimated 87,720 visitors came in 1992 (four times more than in 1991). To meet the increasing demand, many hotels and restaurants have been built. At least 40 travel agencies are active in Phnom Penh, with offices also in Siem Reap, where Angkor, Cambodia's main tourist attraction, is located. Air travel, both domestic and international, is on the rise.

Cambodia houses a treasure other countries of the region do not have. This historic site of Angkor is one of the wonders of the world. It was inscribed on the UNESCO World Heritage List in December 1992. Cambodia is also home to numerous other historic sites, beautiful beaches and splendid landscapes which are unknown to many because the country has been isolated from the outside world for many years. The arrival of tourists will bring necessary hard currency into the country and help solve employment problems. However, it will also inevitably bring changes in the traditional social organization and modify the natural environment.

The influence of tourism on the environment has led many countries to realize the necessity to take into consideration less tangible factors to assess the effects of tourism development. They include the impact on the social structure, intersectoral imbalance, and disruption in the ways of living. Cambodia must not sacrifice short term benefits for a long term catastrophic impact on the environment. International assistance is needed to establish the country's tourism master plan.

Tourism Development in Cambodia

1. Background

Traditional Khmer hospitality coupled with a wealth of tourist sites, featuring mainly the Angkor Complex, means that Cambodia has great potential to attract tourists from all over the world.

There was a significant number of tourists coming to Cambodia in 1950s. Since then, the amount of visitors increased steadily from 21,180 in 1963 to 46,706 in 1969.

The majority of visitors come from the United States, Japan and France, followed by other European countries, Australia and neighbouring countries in the region, especially Thailand.

The subject of tourism also encompasses the subject of land and infrastructure management. This has been one of the major concerns of the authorities, therefore several studies were made. Prior to the disturbances of the 1970s and 1980s, regional tourist destinations were developed in Kirirom, Sihanoukville, Bokor and Battambang. With the assistance of UNESCO, a new tourist area was envisaged on the Phnom Kulen, while the ancient Khmer road was to be restructured to reach several temples in the jungle located between Angkor and Sambor Prei Kuk, such as Beng Mealea, Koh Ker and Preah Khan. A new urban development centre was also to be created 4 km away from Angkor Wat, next to the old city of Siem Reap, in order to accommodate a group of hotels, commercial and sports facilities, as well as recreational activities.

2. Tourism today

Since the mid-1970, no records concerning tourism have been kept. The destruction of human and natural resources starting from 1979 onwards did not allow the revival of tourism until the end of the 1980s.



The Gate of the Dead, Angkor Thom

Source: Richard Engelhardt



The administrative structures

1. The national authority

The former General Direction of Tourism, created in August 1988, has recently become the Ministry of Tourism. Its main roles are to ensure integrated tourism development in Cambodia and to promote tourist activities inside and outside the country.

2. Provincial and municipal tourism offices

To assist local authorities, regional, provincial and municipal tourism offices are being created. They depend technically and financially on the Ministry of Tourism. The main provincial and municipal offices are:

- Phnom Penh Tourism, created in 1983
- Angkor Tourism, created in 1986
- Kompong Som/Sihanoukville Tourism
- Kep Tourism
- Eleven other tourism offices exist in the provinces, but have little activity

The infrastructure

1. Transport

a) Road transport

In 1968, Cambodia had 16,000 km of roads and highways. Approximately 40% of all roads and bridges were destroyed by over 20 years of war. Even though foreign aid was slow to come, the Royal Cambodian Government managed to repair those tourism infrastructures vital to Cambodia's national reconstruction. By the end of 1995, Highway 4 linking Phnom Penh to Kompong Som, and Veal Rinh to Kompong Som is expected to be completed. This project is financed by the American Government.

b) Transport by train or water

Waterways have not yet been professionally used for tourist purposes. The Ministry of Tourism has suggested cruise lines on the Mekong River and the Tonle Sap Lake. Some investors have expressed their interest in the project.

Railways are only used to carry merchandise and local passengers. The two railroad lines are Phnom Penh-Kep-Sihanoukville (263 km) and Phnom Penh-Kompong Chhnang-Pursat-Battambang-Sisophon (338 km).

c) Air transport

Most tourists arrive by air. During the 1980's, the only planes came from Viet Nam, Laos and the Soviet Union. Gradually, other companies have set up regular flights to Phnom Penh, notably from Thailand. Presently, there are several weekly or daily flights from Bangkok, Kuala Lumpur, Vientiane, Ho Chi Minh City, Moscow, Singapore, Taipei and Hong Kong. In 1991, 81 % of all tourists entered Cambodia by air.

Domestic flights have also increased and new provincial airports have reopened in Siem Reap, Battambang, Sihanoukville, Koh Kong, Rattanakiri, and Kompong Cham.

2. Telecommunications

Until 1991, communications inside and outside Cambodia were extremely difficult. They have improved considerably with the establishment of two satellite links, one from the former Soviet Union and the other from Australia. The Thai company Samart has introduced the use of mobile phones. Most of the hotels and restaurants are now equipped with telephone and fax services.

3. Accommodation and restaurants

The number of hotels has sharply increased, especially since 1991 with the influx of the UN forces. At the time of writing in Phnom Penh there were 129 hotels with a total of 5,024 rooms. In Siem Reap, there were 8 hotels with 315 rooms in addition to several guest houses.

There are many restaurants serving foreign and local specialties. However, the service needs to be improved in order to meet international standards

4. Tourism potential

Cambodia possesses many tourist attractions throughout the country. They are notably the following:

Natural resources

- The Mekong River, the Tonle Sap Lake, numerous waterfalls;
- Seaside, beaches, islands;
- Scenic forests and mountains;
- Paddy fields and other landscapes of natural beauty.

Cultural heritage

- Ancient temples numbering more than 1,070, mostly built between the 9th and 13th centuries;
- Old pagodas, shrines, monasteries, and mosques;
- Palaces and museums;
- Ethnic minority settlements.

Tourist centres

- Tonle Bati, Mekong Island, Koh Ohna Tev (handicrafts village).

Festivals

- Buddhist ceremonies, water festival, New Year's celebration, etc.

Tourist services

1. Formalities

There are three official border entries: Bavet, on the border with Viet Nam; Kompong Som/Sihanoukville on the seaside in the South; and Phnom Penh via the international airport. At Poipet, in the West of the country, Thais can enter but cannot go further than the Poipet market.

Entry formalities are facilitated as visas can be obtained directly at the Ministry of Foreign Affairs or in the various Cambodian consulates in foreign countries. The immigration service at the international airport can deliver visas upon entry for a short period, for a cost of 20 US\$. The Royal Cambodian Government allows tourists to enter Cambodia without visas for a period of seven days.

2. Statistics of tourism

The following is some statistical data collected by the Ministry of Tourism.

The following is statistical data collected by the Ministry of Tourism.

Statistics: Arrival of Tourists

Year	1988	1989	1990	1991	1992
Number of tourists	19,864	20,164	16,993	25,012	87,720
Percentage	100	101.5	85.5	125.9	441.60
Increase	-	+1.5	-15.7	+47.2	+246.7

Percentage by Nationality

Nationality	1990 %	1991 %	1992* %
Japan	10.2	24.0	14.6
France	4.6	13.0	13.4
Germany	6.0	12.0	12.0
America	4.0	9.0	13.0
Italy	3.2	6.0	6.0
Others	71.9	36.0	41.0

* In 1992, the number of Thai and Taiwanese tourists was high.

Income

(Data taken from the two national travel agencies: Phnom Penh Tourism and Angkor Tourism)

	1988	1989	1990	1991	1992
Millions of riels	87,688	168,774	622,505	682,853	766,905
US Dollars	598,826	1,323,933	1,211,570	2,021,972	907,441

3. Travel agencies

Up to the end of 1992, 122 travel agencies were registered. They are mainly receiving agencies for tourists sent by agencies in foreign countries, such as Japan, Thailand, France, Italy, Taiwan, Hong Kong, and the United States. Most owners of these agencies are foreigners. The agencies do not only take care of foreign visitors but also of Cambodians wishing to travel abroad.

4. The provincial agencies

a) Phnom Penh Tourism

A tourism office in the capital was created in 1983, and three years later, an agreement was signed with the Tourism Agency of Viet Nam. Until 1991, Phnom Penh Tourism was in charge of three hotels: the Monorom, the Cambodiana Inn, and the Cambodiana Hotel. These hotels have now been privatized as joint-ventures.

Arrival of tourists in Phnom Penh:

1989	1,364
1990	5,134
1991	1,735
1992	2,937

b) The Tourism Office of Siem Reap

This office is usually called Angkor Tourism. It was created in 1986.

Arrival of tourists in Siem Reap:

1990	5,134
1991	5,492
1992	10,530

Nationality of tourists (in 1992)

Japan	2,397
France	1,575
America	1,784
Taiwan	887
Germany	710
Italy	674
Great Britain	608
Thailand	618

c) *The Tourism Office of Kompong Som/Sihanoukville and Kampot*

The tourist activities in those two seaside areas have risen since 1991, with mainly an increase in local tourists.

In Kompong Som/Sihanoukville

international	4,153
cruises	992
local tourism	4,749

5. Programmes of visits

In order to efficiently manage the international tourists, and show them the best of Cambodia, as well as to preserve the prestige of the capital, all tourists must go through Phnom Penh. Tours of one to twelve days are proposed with one to eight days in Siem Reap, the site of the Angkor World Heritage Site.

In addition to Siem Reap, several tourist sites exist around Phnom Penh and further away to the seaside. The diversity of the activities has increased since 1992.

6. Evolution of the tourism market

With the introduction of the market economy and the signature of the Paris Agreement, the country is again open to the international community. The global exposure and increasing arrivals of tourists have a decisive impact on the national economy.

a) *Investments*

National and international investment in the tourism industry goes mainly towards the building or renovation of hotels and restaurants. Investment will be expanded not only in terms of infrastructure but also in terms of improvement of human resources.

b) *The development of tourism*

In 1992, there were great efforts made to promote Cambodian tourism, through the travel agencies, international organizations and the media. Several groups from abroad visited Cambodia, and Cambodian representatives in turn attended international seminars on tourism organized by the World Tourism Organization (WTO) in Bali and in Spain, and PATA in Hong Kong

and in Japan, as well as other meetings. The Ministry of Tourism of the Royal Cambodian Government plans to celebrate Cambodia Tourism Year in 1996.

Tourism development must be well planned and controlled with strong management structures. The unforeseen boom development of tourism in 1992 disrupted the lives of the population, isolated from the rest of the world for so many years. Its long-term impact on the culture and the environment have not yet been studied thoroughly. The Ministry of Tourism will be co-operating with many ministries and organizations recently created - such as the Secretariat of State for Environment and the National Committee for the Management of the Territory - in order to avoid any possible misunderstanding.

II. THE EFFECTS ON CULTURE AND ENVIRONMENT: GENERAL CONSIDERATIONS

Introduction

As the revival of tourism is a new phenomenon in Cambodia, its effects on culture and environment have yet to be taken into consideration. However, the changes which occurred in 1992 pose problems for the responsible authorities, concerned for the long-term development of the country.

The question of the protection of the environment is a new concept in Cambodia. The Secretariat of State for Environment has just been created, and already it has several issues to address. Similarly, the Ministry of Culture faces difficulties in the preservation and restoration of the cultural heritage. The National Committee for the Management of the Territory is organized out of a need to resolve differences between the regions.

The national two-year Tourism Plan for 1994-1995 considers tourism not only as a source for foreign currency and employment but also as a contributor to the protection and the conservation of the culture and traditions of the country.

Cambodia is now experiencing a historic turn, notably in terms of its economy. It offers great potential for tourism-related investments. At the same time, it faces the challenges of protecting its national heritage and the environment as a whole.

The development of hotels and restaurants

Since Cambodia has been isolated from the rest of the world for two decades, it is only natural for foreigners to be curious about the country and its culture. Visitors are especially eager to see the splendour of Angkor and the exotic landscapes.

Besides the 20,000 UN personnel coming into the country, the year 1992 saw the arrival of foreign businessmen, officials, journalists and tourists. Accommodation, hotels and office space were suddenly in great demand and were established in a rather anarchic way, as the time and means were not available to arrange this in an organized manner. In the development of hotels, guest houses and restaurants, no consideration was given to the maintenance of public order or to the traditional way of living of the local population. The rapid increase of city dwellers, comprising also foreigners and locals coming from the provinces, has seriously disturbed the capital city of Phnom Penh. Neither urban zoning nor regulations on architecture has been elaborated, creating more problems for traffic and parking facilities.

1. The effects on culture

To date the location of new hotels and buildings is arbitrary and does not account for the ancient urbanism of Phnom Penh and of other cities like Battambang and Siem Reap. Their architecture clashes with the traditional settings, thus damaging the general character of the town. Moreover, the interior decoration of some of those hotels and restaurants do not have a Khmer character. To maintain the consistency of the ancient urban cities of Cambodia, the decor and architecture of these new buildings need to be Khmer.

The establishment of hotels has aggravated the problem caused by the absence of sewage treatment throughout the country. As a consequence, the pollution level of the rivers is increasing, and the country does not have the financial and technical capabilities to solve the problem. The lack of electrical power has forced the installation of diesel generators, which in turn cause noise and air pollution due to petrol fumes.

2. The economic effects

Unplanned development strategies will have disastrous environmental effects. Since the Paris Agreement, Cambodia has changed from a centralized to a market economy. With the steady increase of foreign investment, the current administrative structures do not have the absorptive and management capacity to deal with the present situation. There is a lack of organization in the distribution of responsibilities and regulations to manage foreign investments and therefore the co-ordination of development projects.

An important aspect of tourism is the creation of jobs. Because of the dearth of experienced personnel in hotel and restaurant sectors, management jobs are often given to foreigners. This problem is frequent within the travel agencies. Appropriate training should be given to young Cambodians willing to work for the tourism sector.

The local travel agencies are mainly responsible for receiving tourists, taking them from and to the airport and making bookings. They do not organize travel and package tours which are usually paid in foreign countries, thereby no local income is generated. Consequently, the national agencies do not have the necessary funds to promote and expand themselves.

3. The social effects

One of the main social problems caused by the massive arrival of tourists and foreigners is the increasing number of nightclubs and prostitution.

The establishment of tourist centres

The tourist sites in Cambodia are not yet laid out and organized. For example, the site of Tonle Bati, not far from Phnom Penh, could be a great tourist attraction if it were well managed. Without a thorough and effective plan for tourism development, the disorder will only increase. The choice must not only be left to the foreign investors but should also be decided at the national level.

A French company has established a tourist centre on an island of the Mekong River. Two other Cambodian companies are exploiting large pieces of land (10 ha) not far from Pochentong Airport, forcing farmers there to leave and abandon their traditional activities. The project to extend the capital towards the west and the one to improve the capacity of Pochentong Airport have considerably augmented the price of land.

On the seaside, the influx of local tourists has already spoiled the beauty of the coastline by polluting it. Exposure to new ideas has also modified the people's lifestyle. The management of the coastal areas needs appropriate studies and specific regulations to prevent further deterioration of the environment, social and cultural values.

The effects of tourism on culture and environment in Cambodia are not yet as dramatic as in other countries of the region. This is the reason why the tourism industry should be well planned and its development carefully

controlled in order to create sustainable tourism, integrated within the cultural and environmental context of the country.

Sustainable tourism

Sustainable tourism was defined by the Globe 90 Conferences on Environment and Industry as "... the management of tourism resources in such a way that fulfills economic, social and aesthetic needs while maintaining cultural integrity, essential ecological process, biological diversity and life support systems." In other words, it is necessary to preserve the environmental resources and the cultural integrity, while bringing the socio-economic benefit of tourism to the people living in the country.

In this context, Cambodia has requested international assistance to elaborate a master plan for tourism development. UNDP and WTO have already drafted a report called "Tourism Sector Review, Cambodia" (Project KAM/91/003, mission report Madrid 1992).

Taking into account the fact that tourism concerns several other sectors, this report recommends that the elaboration of master plans for regions or cities in Cambodia with tourism potential be undertaken as soon as possible. In any event, all these plans are only the starting point because of the lack of funds and of experience in this field.

If well managed, most of the natural and cultural resources of the country can bring numerous benefits to the tourism industry, developed only on the basis of the maintenance of the environmental and cultural quality of the country.

This objective cannot be obtained without the participation of the other ministries and institutions concerned. The final result will also depend on the full participation of the local population. In order to co-ordinate the action of those various ministries and private organizations, the establishment of an intersectoral body would be an asset.

The war left unexperienced personnel in the tourism administration and industry. Therefore, the most urgent task is to train competent staff for the public as well as the private sectors. The second priority is to inform the public, establish properly managed tourist parks and infrastructure and prevent or mitigate the negative effects of tourism development on the population, the cultural heritage and the environment of the country.

For this reason, it is essential that studies be carried out and regulations set up to establish protected areas in view of a sustainable tourism development, satisfying the local population as well as the investors.

1. The development of infrastructures

Access to the main tourist centres is one of the major obstacles to development. This task is under the responsibility of the Ministry of Transport. Depending on the availability of funds, the Ministry's main objective is to renovate most of the roads. The airport facilities have considerably improved and the airports should soon be upgraded.

2. Environmental protection and conservation

Until now, Cambodia has had no structure for the protection and conservation of the environment. WWF has proposed to UNDP a project for the management of the environment through the establishment of a group of environmental advisers, called "Cambodian Environmental Advisory Team" (CEAT) to work with the national authorities.

3. Zoning and environmental management plan for the Angkor site

The archaeological complex of Angkor is the most exceptional site of the region, and it could receive a minimum of 2,000 tourists a day. The site was inscribed on the UNESCO World Heritage List in December 1992 on the condition that the Cambodian authorities:

- i) promulgate adequate protective legislation;
- ii) establish a national protection agency;
- iii) delimit permanent boundaries and buffer zones; and
- iv) establish international monitoring and co-ordination.

In response, Cambodia has requested UNESCO to undertake a large-scale study in order to establish the zoning and an environmental management plan (ZEMP). This study was carried out by international experts and Cambodian counterpart specialists in 1992-1993. It involved the interpretation of newly flown large-scale aerial photographs from the Land Use Mapping Office (Ministry of Agriculture) and ground survey to verify results. Part of the study area was off limits because of security. Reports were prepared on archaeology, hydrology, ecology and wildlife, social conditions, urban development, rural development, tourism development, studies of the legal and

regulatory framework, organization and management of protected areas/parks and the protection of archaeological sites and monuments and their presentation to visitors. (See **Chapter III: Angkor, a case-study**).

4. The priority development zones

Angkor is the main tourist attraction of the country. Beside the development of the archaeological complex, which is the highest priority, other areas in Cambodia need to be improved for tourism: the sites around Phnom Penh, the coastal areas such as Sihanoukville and Kep, as well as provinces such as Takeo, Kompong Cham, Battambang, and Rattanakiri.

International assistance is needed not only for the maintenance of peace but also for both material and spiritual reconstruction and development of the country in order to help Cambodia preserve its identity in the international community.

III. CASE STUDY: THE ANGKOR WORLD HERITAGE SITE AREA

Foreword

The purpose of this case study is to model the impacts which tourism may have on the indigenous local culture of the Angkor area, a 5,000 sq km area which includes the provincial capital of Siem Reap, as well as several smaller villages which have existed for hundreds of years. While such impacts are inseparable from other factors of economic change relating to the expansion of the tourism industry, with careful planning, tourism can be regulated to ensure that the carrying capacity of the site is not exceeded. The tourism industry may adequately finance the conservation efforts, and profits from it can be used to improve the standard of living of the local communities.

This study examines the impact of tourism on local culture and opportunities for revitalizing the traditional culture of the local communities in the Angkor area.

Introduction

Cambodia is currently in a significant period of transition from isolation toward full-fledged participation in the booming markets of Asia. Peace and technological progress in transport and telecommunications will bring rapid growth in the development of tourism to Cambodia.

There are, however, anxieties about the role of tourism and its possible negative effects as development takes place. The conflict may involve choosing between short and long-term interests as well as commercial exploitation and maintenance of socio-cultural and environmental quality. The cross cultural interaction of various conflicting value systems is another unavoidable consequence of international tourism which may become a matter for concern.

Most foreigners equate the Angkor complex, especially Angkor Wat, with Cambodia. The monuments give the country an instantly recognizable



Angkor Wat

Source: Richard Engelhardt



Preah Ko, Rolous Group, Angkor

Source: Richard Engelhardt



and prestigious profile. The Angkor Cultural Area of the province of Siem Reap, within which the Angkor World Heritage Site is located, covers approximately 5,000 sq. km. The area, spreading over the Angkor plain between the Kulen plateau to the north and the Tonle Sap to the south, encompasses over 1,000 archaeological sites and the remains of at least seven cities built by Khmer kings between the 9th and the 13th centuries.

Current political stability has led to a more peaceful reconstruction period for Cambodia which, in turn, will provide opportunities to revitalize international efforts focused on preserving Angkor. While these efforts have helped to rekindle global awareness and concern for Angkor, a new set of challenges lies ahead for Cambodia. These include how to manage and balance tourism interests, archaeological research opportunities and restoration work with the socio-economic needs of the Cambodian people. This could be implemented through the development of ecologically sustainable agriculture, forestry, aquaculture, water management and tourism in and around the Angkor Cultural Area.

The traditional way of life of the local communities of Siem Reap province can draw considerable cultural and touristic interest. It must therefore be maintained and protected. A tourism development plan should include the conservation of the villagers' traditional village locations and the assistance to revitalize their handicraft techniques for generating supplemental income from the sale of traditional souvenirs to tourists. Village houses could be restored and renovated so that handicrafts can be presented and sold on location. On the whole, the local people are aware and proud of their heritage and can both contribute to and benefit from a revival of these traditions.

The proximity of the town of Siem Reap and the Angkor World Heritage Site provides both an opportunity and a constraint for these conservation efforts. At the cross-roads involving contradictory but not incompatible interests, Siem Reap can avoid falling victim to incongruous tourism development. It is a small, low density town with an homogeneous traditional architecture. The city's character must be preserved and strict zoning rules must be applied to future development. Already the Angkor Reserve commands respect from both the developers and the local community. The major issue is how to reconcile conservation and urban development.

Current situation: a traditional way of life

Three types of groups live in the villages around or within the Angkor site. They are as follows:

1. The Angkor Site Hamlets (Khum Leang Day, Peam and Kok Po, Preah Dak and Banteay Srei)

These human settlements are several centuries old. According to the locals, the villages have been settled by 'Ta Lie' (the ancestors) and the subsequent 'Phum' newly-settled, a result of population growth. Despite some agricultural problems, these peasants are deeply attached to their land. Agricultural land for rice cultivation is in short supply. Due to the population increase and political situation, families now have to survive on half a hectare of land where, previously, two were available. The production of rice is not sufficient to feed the population because of the small size of the freshly cleared ground, the mediocrity of land quality, and the lack of water.

Supplementary income is therefore sought through swidden agriculture (slash and burn), the collection of resin from the forest, palm juice for sugar; rattan and jungle vines for the manufacture of fishing baskets and the cutting of firewood to make charcoal.

Technical skills such as silk weaving and handicraft activities which generated complementary income in the past are now largely lost.

2. The Backbanks Population (Khum Chreav, Khnar Thmei, Phum Chan Laong and Phum Srangae)

As these settlements are ancient, populations have over the years developed several kinds of micro-cultures:

- on the river banks: vegetable cultivation;
- on the back of the river banks: dry season rice (srovprang);
- near the hamlets and during the monsoon: floating rice (srov laeng teuk and srov bandaeng teuk);
- near the villages and between the houses: flooded rice (srov vossa).

Each household owns two hectares of land and has more than enough rice to feed the family. In exchange for the extra rice, they get rattan, resin and jungle vines from surrounding Angkor villages. Moreover, for supplementary income, villagers sell vegetables.

3. The Tonle Sap Fishermen

Fishermen form the Khum Cong Khneas, consisting of 379 families. This is a mixed community comprised mostly of Khmers, plus some ethnic Chinese, Vietnamese and Chams who are settled in five Phums.

From June to November, the lake communities cannot fish because it is the fish spawning season and the time of rapid expansion of the Tonle Sap and the flooding of the surrounding forests. During this period, women collect water vegetables, such as water convolvulus, sngao flowers, water lily stalks and reang teuk. Some of these are eaten, and the rest are sold to buy rice.

These different populations have certain features in common:

- Their settlements have long been in existence, and they are deeply attached to their traditional way of life;
- Over half of the population is under 15-16 years of age, and there is an urgent need to find activities for their future livelihood.
- There is a lack of land. The scarcity of water and poor soil add to this problem. The building of small dams and extension of the rice fields would improve the situation. Areas of slash-and-burn activities could be transformed into areas of rain-fed agriculture by helping the locals to uproot the existing small trees. Small irrigation works could be undertaken to help counteract the water deficit. Cement wells with simple manual pumps could be provided to supply water for the dry season. Cattle could be reared to help in the rice fields. Fisheries could be developed and new strains of rice cultivated.

The economy is in dire need of revitalization. Help could be provided by involving the local people in a new tourism industry which would encompass the staffing of hotels, restaurants, and temple maintenance.

The need to generate rapid improvements in village facilities and rural land management should be met through planned programmes for rural and community development throughout the area.

Tourism potential

1. World heritage status

In recognition of the national and global significance of the Angkor monuments as the representation of Khmer civilization, His Majesty Samdech Preah Norodom Sihanouk Varman, in his capacity as Head of State and President of the Supreme National Council of Cambodia, signed the World Heritage Convention in 1991 and presented the Angkor Archaeological Park for inscription on the World Heritage List for the following reasons:

- i) it represents a unique artistic achievement, a masterpiece of creative genius;
- ii) it has exerted great influence over a span of time, within a cultural area of the world, on developments in architecture, monumental arts and landscaping;
- iii) it bears a unique exceptional testimony to a civilization which has disappeared;
- iv) it is an outstanding example of an architectural ensemble which illustrates a significant stage in history.

In December 1992, at Santa Fe, the World Heritage Committee inscribed Angkor on the World Heritage List as well as on the World Heritage List in Danger. This status confers to the site a prestigious label and world-wide recognition.

2. An attractive situation

The situation in Cambodia, seen from a tourism point of view, must be evaluated in the context of the political situation and regional development in southeast Asia, particularly in Thailand, Laos and Viet Nam. Having been "closed" to visitors for many years, Cambodia (and therefore Angkor) is now wide open to the international tourism market.

Tourists are eager for new experiences and adventures, while tour operators consider Angkor one of the last places to discover and offer a new, previously unexplored destination in their tour programmes and travel catalogues.

Investors, especially in hotel projects, sense this coming boom and see the good earning potential, given the current acute shortage of appropriate lodging facilities in Siem Reap. The pressure to develop tourist facilities and

infrastructure will be strong within the next 5-10 years, and the possibility of using the tourist boom to develop the Siem Reap region and the country is high. However, the problem of controlling and channelling this development is paramount, especially during these key years.

The basis of the economy of Siem Reap town and the Angkor area will be tourism. However, elsewhere modernization of subsistence agriculture and sustainable use of forest and lake resources, capitalized by the profits of tourism, should lead to improvements in living standards for the rural population throughout the whole province.

The Angkor area offers a unique cultural experience. The value of cultural tourism – and here the term is used to define tourism which involves active participation by the culture sector with a view to sharing with visitors the genuine cultural and historical values of the region – lies not simply in its capacity to heighten visitors' pleasure by broadening their knowledge of life in a given tourist destination, it is also important as a means of encouraging sensitivity towards the safeguarding and restoration of cultural assets and of protecting the environment and the population's traditional way of life.

3. Prospective figures

In 1988 and 1989, only a few thousand visitors came to Cambodia. However, this figure jumped to an annual figure of over 25,000 in 1991 and 87,720 in 1992.

Figures from Siem Reap, which nearly 100% of all tourists to Cambodia visit, indicate that there has been a strong increase in tourism arrivals between 1991 and 1992. Despite the political situation, the estimate of holiday tourists in Siem Reap in 1992 was between 30,000 to 35,000. The largest number of tourists came from Japan, followed by France and then by the United States of America, Germany, Italy and Thailand respectively.

If the political situation stabilizes, tourism experts anticipate that the annual number of tourists visiting Siem Reap could reach 300,000 plus by the end of the century. Cambodia – with Angkor as its main asset and major tourist attraction – stands to become the most popular tourist destination in Southeast Asia. But first, the needed infrastructure must be built.

A limit for tourism: the carrying capacity of the Angkor Park

Regarding quantitative development of tourism in the Angkor area, the number of tourists visiting the monuments, and the number of hotel rooms in Siem Reap are key considerations for planning.

However, the starting point for considering the optimum number of tourists visiting Angkor is the carrying capacity of each individual monument as well as that of the park area as a whole. This will change over time from the current situation, where there is no effective park organization to meet with tourists' needs and complaints, to the day when a Park Authority will be established in full professional operation, and equipped to cope with thousands of visitors a day.

The limiting factor for the maximum number of tourists who can visit Angkor at any one time is the carrying capacity of the park, not the number of hotel rooms, or the convenience of other aspects of the tourism infrastructure. One of the most obvious dangers for Angkor is development which does not take into account the carrying capacity of the monuments, as the main monuments have a limited capacity to accommodate visitors. Detailed surveys of the carrying capacity of each of the various monuments are required with regard to their physical capacity, condition and perceptual or psychological capacity of what were meant to be sacred spaces.

At the moment, the visitors to Siem Reap/Angkor have varying interests in the sites. Some of them stay only one day and visit only 1 to 2 monuments. Others stay up to 5 to 8 days and visit nearly 20 to 40 monuments. The majority stay from 2 to 3 days and visit between 5 and 15 monuments.

The most visited monuments are Angkor Wat, Bayon, Ta Prohm, Preah Khan, Phnom Bakheng, Baphuon and Banteay Srei. These seven monuments therefore set the limit for the carrying capacity of the archaeological park and determine the number of tourists who can be received there at any one time.

Calculating the maximum number of visitors who could visit the monuments is a complex task. If 3,000 visitors a day is assumed for each of the major sites, with visitors staying between 1 and 2 hours in the monuments, this means that during one day, a maximum of 1,500 persons can go through the temples in the morning and another 1,500 in the afternoon.

Based on these considerations and bearing in mind that the distribution of tourists is not equally spread over all months of the year and that there will be a considerable number of domestic tourists and pilgrims added to the estimate above, the maximum capacity of the park might be estimated between 500,000 and 700,000 international tourists per year.

It is also essential that money generated by tourism be reinvested in the proper maintenance of the monuments themselves to maintain the site and protect the temples from the stress caused by visitors.

Given the economically impoverished condition of Cambodia, the entrance fee will have to be different for international tourists and local/domestic visitors. While the entrance fee for international visitors should be high and should incorporate a major contribution towards the restoration of the monuments, the entrance fee should be much lower for domestic visitors and should be set according to the income of the average Cambodian.

What is crucial is that the monuments of Angkor should not be reduced to the status of an expendable commercial resource and thus be deprived of the funds needed to secure their proper conservation and to facilitate their presentation to visitors in an appealing and educational way. This would not only damage the cultural heritage of the country, but also destroy the most important resource on which the Cambodian tourism industry is built.

Socio-economic development: current situation and proposals for the future

The district of Siem Reap (i.e. Siem Reap town) is divided into ten sectors; four of them are mainly urban. There are two new large urbanized areas. The first one, located to the north of the Grand Hotel, was created in 1991. It extends over 300 hectares and is made up of 2,700 plots. Seven hundred displaced families from villages close by Angkor Wat (Phum Veal, Phum Team Sen, Phum Prang Sen) have been resettled there. The second area is located along the Roluos Road and extends over 50 hectares. It is intended for 293 refugee families who have been resettled at Phum Chon Kasu in the north and at Phum Kna in the south.

The present population of Siem Reap District is 68,803, with 43,520 of this total living in the four urban sectors. Most are concentrated along the southern part of Road 6. Population growth is 5% per annum in the town.

The increase in population will be accompanied by worsening conditions of water shortage, inadequate sewage system and low agricultural production.

Added to this figure must be the tourists, who, if the estimated visitor statistics are correct, could swell the population of the town by several fold. At the time of writing the tourism infrastructure in Siem Reap consisted only of a few hotels with a room capacity of 639 and fourteen restaurants. This capacity is planned to be expanded dramatically in the near future.

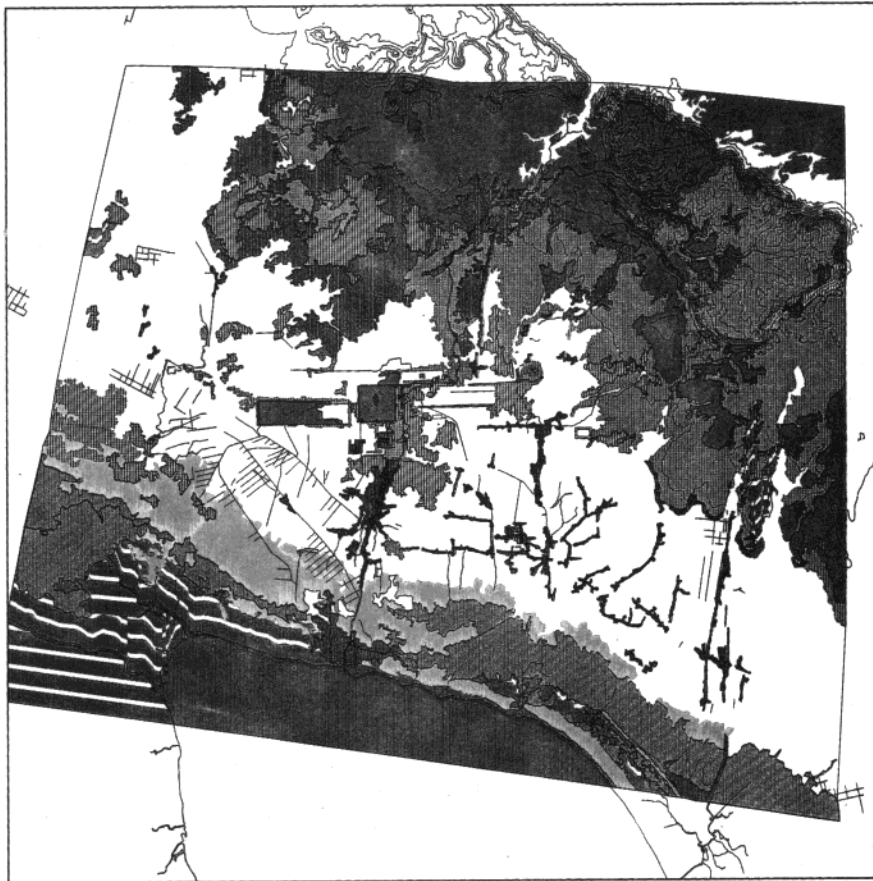
1. Proposal for a legal framework and a management plan: the ZEMP Project

The World Heritage Committee's acceptance of Angkor on the World Heritage List was conditional upon the preparation and implementation of (a) a legal framework, (b) a management plan and (c) an authority with resources to effectively manage the Angkor area. It is toward this goal that UNESCO, during 1992, initiated a project to elaborate a Zoning and Environmental Management Planning for the Angkor area (ZEMP). The aim of this project is (i) to delimit appropriate zones and boundaries of the Angkor World Heritage Site to protect the archaeological heritage and (ii) to formulate the institutional and legal frameworks as well as management and development guidelines necessary to balance the needs of conservation with economic and tourism development.

Twenty-five experts from 11 different countries together with their Cambodian technical counterparts participated in the ZEMP project, undertaking extensive studies of environmental and socio-economic conditions, as well as of archaeological data within a 5,000 sq km study area centered on the Angkor core monumental area. This data has been compiled into a computerized geographical information system (GIS) for retrieval and analysis.

From this data, it has been possible to define an "Angkor Protected Archaeological Reserve", corresponding to the catchment area of the ancient Khmer capital. A second Protected Archaeological Reserve has been defined at Roluos and a third, consisting of the forest sanctuary, Banteay Srei, to the north of Angkor. The environmentally important Kulen Mountain together with more than 100 significant monuments from the earliest period of the Khmer Empire has also been singled out for special protection status. Also defined are more than 500 sites of "Archaeological, Anthropological or Historical Interest" (many of which have been newly discovered by the ZEMP project). "Ecologically Sensitive Zones", "Urban Conservation Zones" and

Z
E
M
P



E. = 345.000
N. = 1.445.000

Scale 1 : 300 000

E. = 420.000
N. = 1.520.000

PLAN 5

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

UNESCO - ZEMP PROJECT

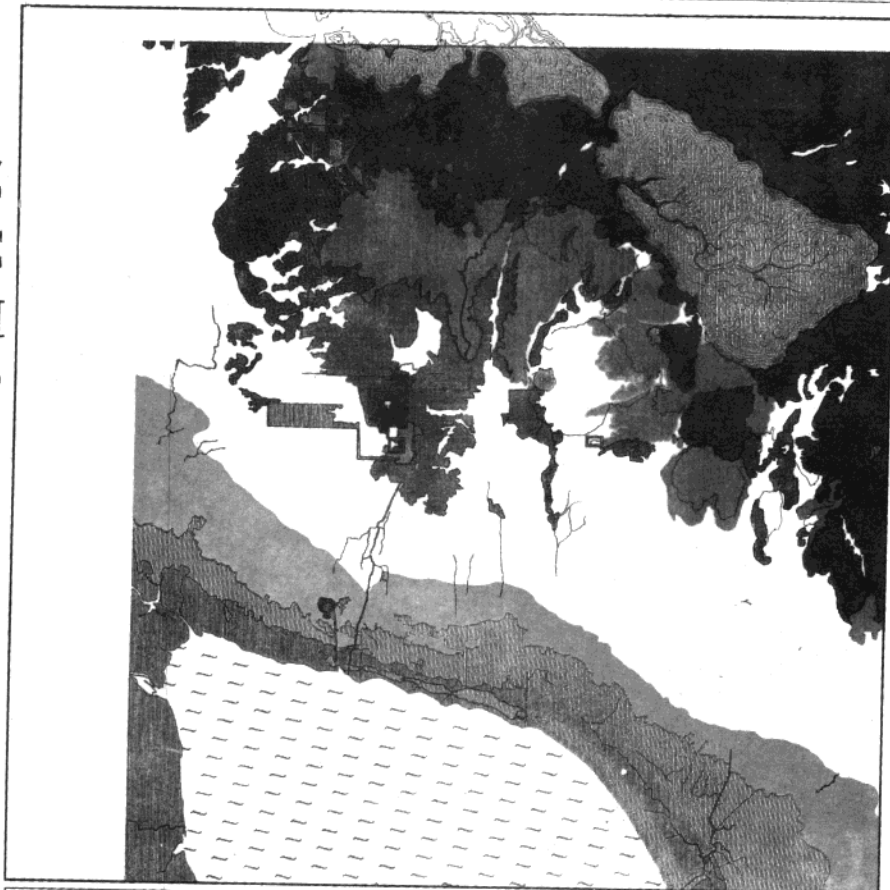
LAND USE
AND
POPULATION DENSITY

Legend

Population density
(People/km²)

- | | |
|------|--|
| 2.2 | Evergreen forests |
| | Deciduous forests |
| | Mixed forests |
| 4.6 | Flooded forests |
| | Flooded shrubs and grasslands |
| | Secondary forests |
| 10.7 | Natural and abandoned shrubs |
| | Abandoned grasslands |
| 28.0 | Upland crops |
| | Swidden agriculture |
| 55.6 | Rice flooded |
| | Paddy fields |
| | Settlements |
| | Water bodies |
| | Contours, 50 m |
| | Permanent streams,
barays, moats, irrigation canals |

Z
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E. = 345,000
N. = 1,445,000

Scale 1 : 300 000

E. = 420,000
N. = 1,520,000



























PLAN 6

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

UNESCO - ZEMP PROJECT

HABITATS

Legend

-  FFn flooded forests (natural)
 -  FFd flooded forests (disturbed)
 -  FFa flooded forests (agricultural)
 -  FM shrublands/grasslands/wetlands
 -  FR flooded ricelands
 -  FC canals
 -  W wetlands
 -  DR dryland rice, other crops
 -  OS open shrublands
 -  CS closed shrublands
 -  SD dense secondary forests
 -  SDs swidden secondary forests
 -  SDe enroacher secondary forests
 -  SSs sparse secondary forests
 -  TF temple forests
 -  LEu undisturbed evergreen forests
 -  LEus undisturbed evergreen forests - streams
 -  LEm modified disturbed evergreen forests
 -  LD deciduous forests
 -  LS semi-deciduous forests
 -  UR upland stream courses
 -  UU undisturbed upland forests
 -  UUj undisturbed upland forest plateaus
 -  UUa undisturbed upland forest slopes and ridges
 -  USs secondary upland forests - swidden
 -  USo secondary upland forests - other
- Contours, 50 m
— Permanent streams, barays, moats

Z
E
M
P

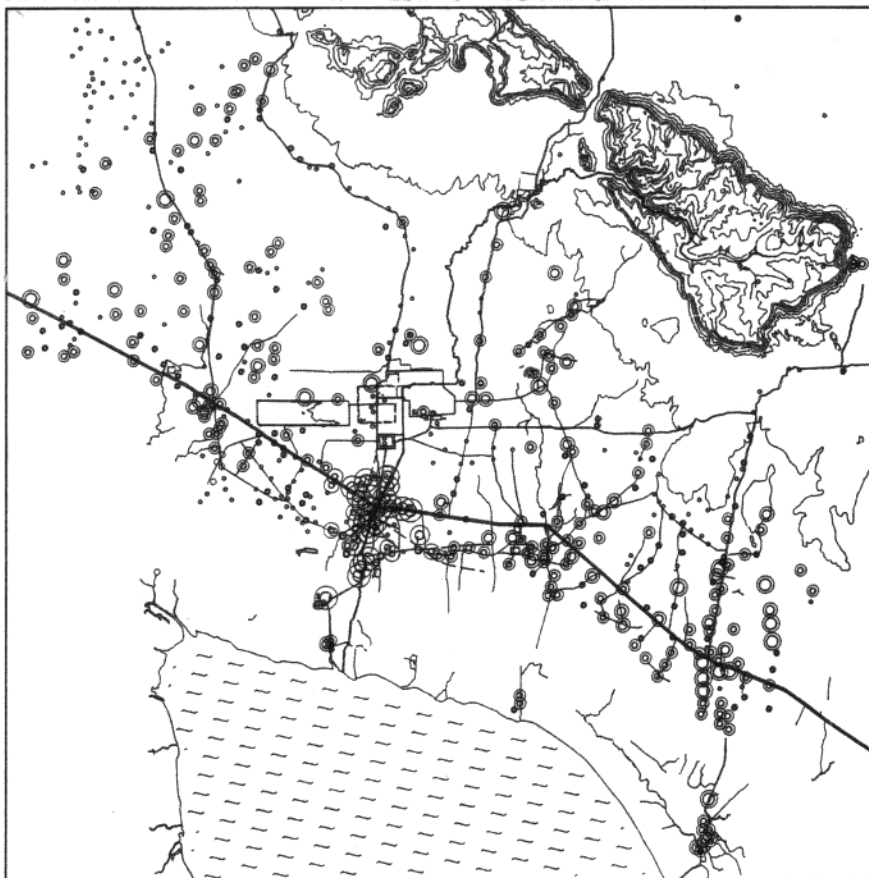
E. = 420.000
N. = 1.520.000

PLAN 9

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

UNESCO - ZEMP PROJECT

PRESENT AND
PROJECTED POPULATION
FOR 2005



E. = 345.000
N. = 1.445.000

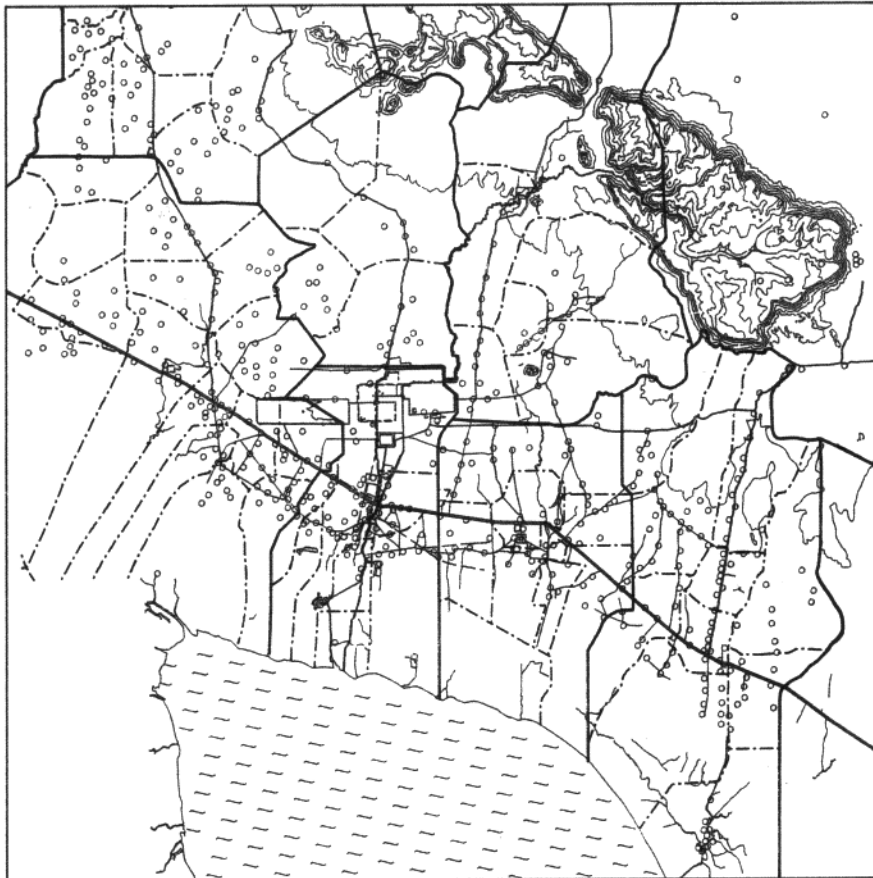
Scale 1 : 300 000

Legend

- Below 600
- ⊙ 600 - 900
- ⊗ 900 - 1200
- ⊕ Over 1200

- Contours, 50 m
- Permanent streams, barays, moats, canals
- National road
- Provincial roads
- Minor roads

Z
E
M
P



E. = 420.000
N. = 1.520.000

PLAN 8

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

UNESCO - ZEMP PROJECT

ADMINISTRATIVE AREAS

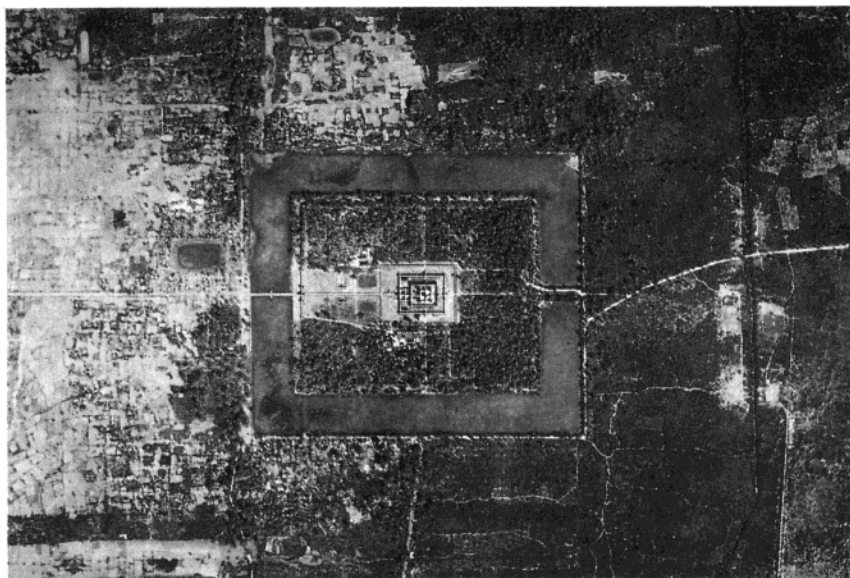
Legend

- District boundaries
- - - Commune boundaries
- o Settlements by size

- Contours, 50 m
- ~ Permanent streams, barays, moats, canals
- National road
- Provincial roads
- Minor roads

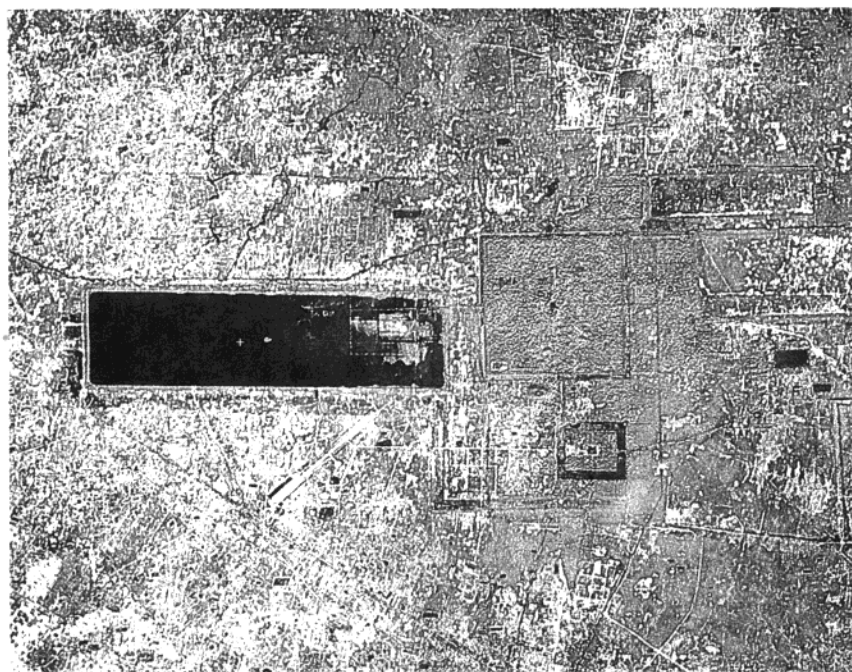
E. = 345.000
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Scale 1 : 300 000



Angkor Wat and surrounding moat, aerial view

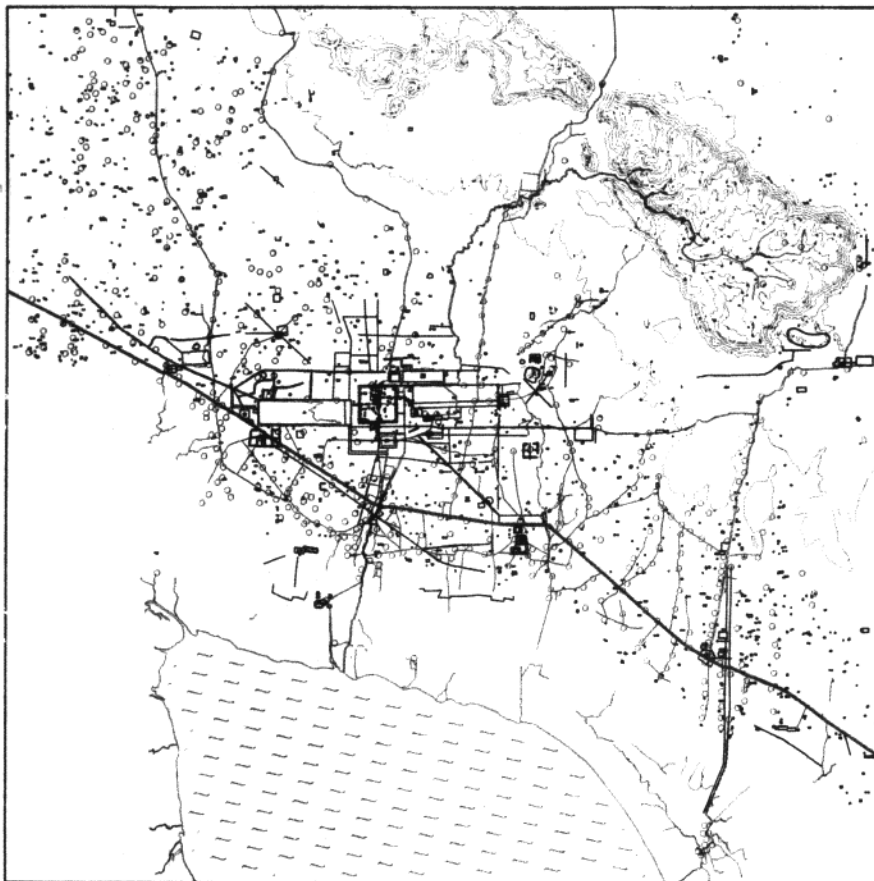
Source: Heng Thung



Satellite view of Angkor

Source: LANDSAT image courtesy of the Mekong Committee

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E. = 345.000
N. = 1.445.000

Scale 1:300 000

E. = 420.000
N. = 1.520.000

PLAN 1

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

UNESCO - ZEMP PROJECT

STUDY AREA

Legend

- Archaeological sites
- Contours, 50 m
- Permanent streams, barays, moats
- National road
- Provincial roads
- Minor roads
- Settlements

"Urban Development Zones" have also been defined. Another large area consists of the unique but endangered flooded forests of the Tonle Sap, the basis for the wealth of the Angkor area and the reason the founders of Angkor chose to locate their capital in this particular place.

In addition to defining protected/restricted areas and surrounding buffer zones, the ZEMP project has developed zoning for the area designated as the World Heritage site and also for the larger surrounding area wherein development activities may have adverse effects on conservation of the Angkor site itself.

The recommendations and policy options of the ZEMP study are currently under discussion at the highest policy levels.

2. Urban development plan

An urban development plan is required in order to accommodate the growth anticipated from tourism, in addition to the high rate of population growth and the migration of workers to the area that tourism can be expected to induce. The plan can be financed by the income generated by tourism with an aim to increase the general welfare of the local population as well as to support the growing tourism industry.

An urban plan linked with a transportation plan to move the airport and to modify roads requires the definition of different zones:

- An "urban conservation zone" will maintain the low density residential character which presently exists in central Siem Reap and revitalize the historic character of the old parts of the town.
- "Urban expansion zones" would accommodate new urban growth in properly planned locations - residential, commercial and community developments.
- A "tourism development zone" would provide a prime location for planned tourism developments. It could be the location of all major hotel and resort constructions.

Concerning this last point, 14 international companies have indicated an interest in building hotels in Siem Reap, some wanting to build within or on the boundary of the park itself.

As mentioned above, the number of hotel rooms should be calculated according to the maximum carrying capacity of the park. An estimate of 800/1200 hotel rooms are required for a carrying capacity of 100,000/150,000

tourists per year and about 3,200/5,600 hotel rooms for 400,000/700,000 tourists per year (the estimated maximum carrying capacity of the park).

To ensure proper management of urban development in Siem Reap, it is also necessary to elaborate a rural development plan for the towns located to the north of the park and to establish some "central villages" that will provide community facilities. The establishment of secondary centres could be foreseen for Roluos, Puok, Banteay Srei and Damdek. These would limit rural migration to the town of Siem Reap province.

This urban development plan has also to include:

- Alternative routing of Route 6 to the south of the town;
- Development of south-east and south-west commercial districts;
- Construction of a secondary infrastructure system to avoid overloading the town centre;
- Construction of new road connections.

a) Transport

Currently there are limited flight connections to Siem Reap from Phnom Penh and there are no international connections from other Asian countries. The Siem Reap airport was enlarged in 1962 by Chinese engineers, but as it is located within the Angkor Protected Archaeological Reserve, it will have to be moved if its capacity is to be further expanded.

Road connections from Phnom Penh and Thailand are also too impractical at present to be used by tourists. The provincial network has not been repaired since the 1970s and has deteriorated considerably as a result of the lack of maintenance.

In the future, the main axes of regional development will be:

- Route 5 from Phnom Penh to Sisophon via Battambang;
- Route 5 from Sisophon to the Thai border;
- Route 6 from Sisophon to Siem Reap, then to Kompong Thom and Phnom Penh.

Unfortunately, Route 6 which runs from Sisophon to Kompong Thom crosses through the Angkor Protected Archaeological Reserve from east to west. Although this road is the backbone of the traffic between Siem Reap province and the rest of the country, its present lay-out is impractical from

conservation and tourism development perspectives, since it imposes the following constraints:

- It crosses the major protected archaeological zone;
- It is too close to the Western Baray's south-west corner;
- It is the only road through the town;
- It narrows at the approaches to the town and circles around a one hundred year old tree sacred to the town spirit;
- It crosses the Stung Siem Reap via a protected old Angkorean bridge.
- It runs through the Roluos Park on the dike of the Roluos Baray

Clearly, by-pass roads around Angkor will have to be constructed as a matter of first priority.

b) The water supply system

The former water supply system of Siem Reap town is in a poor state of repair and is now largely non-functional. Furthermore, the town's water supply is not drinkable. A small pumping station is located in town on the river near the main bridge, but the purifying system is out of order. In any case, the number of connections is severely limited and the water supply is only on for four hours a day.

As there is no public water supply, the town water supply is provided through a system of individual wells. There are two water tables, but the shallower one is only six meters deep and is polluted. Furthermore, current drilling techniques risk contaminating the other one located 30 meters deep.

Siem Reap has the chance to tap an adequate supply from the good quality water in its soil and a reserve of water in the Kulen Mountains. However, this will require considerable long-term investment. UNESCO and UNDP are in the process of preparing a Water Management Master Plan.

Formerly, the town of Siem Reap had a sewage system which discharged into a pond south-west of the city. This system has been inoperable since the 1970s. The river is the town's only sewer, as it is the town's only source of drinking water. Clearly, emergency conservation measures are necessary.

Considering these facts, a water management plan is crucial for the future of tourism in Siem Reap/Angkor site including:

- Inventory of present and potential water resources;
- Technical, economically appraised options for water allocation among various water uses;
- Proposals for irrigation and fish farming development;
- Technical solutions for piped drinking water supply and for sewage canalization and sewage treatment for Siem Reap town.

In the rush to develop the area's infrastructure to accommodate the tourists, it must not be forgotten that tourism development is a tool -- a means to an end -- for improving the protection of the Angkor site and the welfare of the people of the area. It is essential, therefore, that tourism development be integrated into plans for conservation of the monuments as well as of the surrounding human and cultural environments.

c) Traditional economic activities: agriculture, forestry and fishing

Although Siem Reap is mainly a tourist area, agriculture, forestry and fishing are by no means negligible economic activities for the local population.

Well-planned tourism development is crucial to ensure that the competition over scarce water, agricultural and economic resources will not deprive the local population of the basic resources needed for their survival. This development means establishing a balance in socio-economic development which involves:

- better management of traditional resources such as farming and fishing;
- preservation of rice fields, improvement of the irrigation system and organization of a small-scale fishing business.

There is also a need for a careful forest management programme. The forest cover of the province varies from dense forest, to semi-dense forest, to bamboo forest and flooded forest. Commercial exploitation of forest resources is carried out at the foot of the Kulen mountains and on the shore of the Tonle Sap. Commercial forestry operations were carried out in the Varens district between 1987-1990; currently they are carried out in the areas of Phnom Hap and Phnom Llap. The flooded forest around the Tonle Sap is an essential component of the Tonle Sap ecosystem which supports much of the population of Cambodia. Areas of forest around major temple sites should be both preserved and improved in order to promote the spiritual, educational and touristic value of the site.

The concerns are regional, and the priority objective is undoubtedly to protect the historic and archaeological site. This is an exceptional example of world as well as national cultural heritage, calling for environmental conservation measures to be carried out.

d) Job opportunities

An educational and cultural plan has to be integrated with local educational programmes in order to provide for a future generation of hotel managers, guides, labourers, etc. and to integrate the population of Siem Reap into tourism development.

Several types of employment are to be expected when the tourism industry develops.

- Direct employment in site restoration and maintenance;
- Employment from expenditure on tourism facilities such as hotels, restaurants, souvenir industry, entertainment, guiding, etc.;
- Indirect employment in businesses affected by tourism such as agriculture, building trades, banks, etc.;
- Induced employment arising from the money spent by the local residents from their tourism income.

As a rough estimate, between three and four jobs can be calculated per bed or between six and eight jobs per hotel room. In addition to these direct and indirect jobs, the induced employment provided by the effects of tourism income should not be forgotten.

Monuments and artifacts should in turn be presented to visitors in a factual and coherent way, with a view to explaining their historical and cultural significance. This will involve extensive training of guides, the publication of high quality guidebooks and other related educational materials, (e.g. slides and postcards) which may be sold to tourists.

A cultural and educational development plan is also required to ensure that the local population benefits from the tourism industry.

e) Revival of performing arts and traditional crafts

Efforts should also be made to develop the traditional performing arts. The present lack of a theatre in Siem Reap should not be regarded as an insurmountable obstacle to the presentation of traditional Khmer performing

arts for overseas visitors, as traditionally these arts were performed in temples or outdoors. The main local theatrical traditions are the following:

- Traditional Khmer instrumental music (e.g. drums, percussion instruments of the gong-chime tradition, string instruments and wind instruments).
- The three main classical court theatrical styles: (i) the 'Apsara' heavenly female Khmer classical dance called 'Lakhon Kback Boran' which is featured on the bas reliefs of Angkor, (ii) the masked male dance-drama 'Lakhon Khol' drawn largely from the 'Ramayana', (iii) the shadow puppet theatre 'Nang Sbiak' which uses cut-and-jointed leather figures manipulated behind an illuminated cloth screen;
- The folkloric theatre which draws heavily on the court traditions derived from common sources such as the 'Ramayana' and other stories of great antiquity;
- The Khmer folk tradition with many popular dances such as the 'Trott', originating from Siem Reap; the 'Ram Vong', danced face to face to a slow rhythm and featuring delicate movements of the hands; and 'Neang Meo, a rain dance from Siem Reap which involves a cat.

At the historic temples of Angkor, outdoor performances could be organized during the dry season. Further opportunities to enhance the presentation of the Khmer cultural heritage could include the concept of *son et lumiere*, where traditional performing arts are incorporated into a live and vibrant presentation.

Establishing a traditional performing arts training school in Siem Reap, ideally as a campus of the University of Fine Arts in Phnom Penh, could be a valuable investment in the cultural life of the region. Charged also with the development of high-quality performances of classical theatre for visitors to the temples of Angkor, such a school could generate valuable additional revenue for its own teaching and research activities.

Cambodia has a long and rich history of craft-making and was renowned for a number of different crafts, such as silk and cotton textiles weaving, metal work and silversmithery, woodcarving, rattan furniture, bamboo maquettes and basket weaving. This craft-bound tradition is rooted in

a period when handicraft articles were created for practical purposes as well as for meeting aesthetic needs, and were thus produced by almost everyone in the society. In more recent times, there has been a shift in emphasis. While villagers still produce handicraft articles for their own use, for barter or for use in traditional ceremonies, they have started using them primarily as a means of generating additional income for the household, especially in rural areas where arable land is often in short supply.

Traditional craft production should be boosted with a view to enabling more craftsmen to make a living from their work. At the same time, it enhances overall standards of production, which include the revival of the traditional art of silk weaving, silversmithery and ethnic minority handicrafts.

The Siem Reap region was well known for its production of good quality silk in the past. Today, it is still possible to revive sericulture. The revival of silk production could provide home-produced thread for a revitalized silkweaving industry taking a full and active role in cultural tourism and providing additional income for rural areas.

The market for traditional crafts will increase with the development of cultural tourism. But where the overseas visitor market is concerned, it has already been shown that the efforts to revive Khmer craft-making involve two important elements:

- The craftsman rather than the middleman should be enabled to profit from the work produced;
- A strict system of quality control which allows tourists to purchase items with confidence should be provided.

The tasks which lie ahead have to include not only training and skills enhancement, but also the provision of regular supplies of raw material. Moreover, in order to break middleman dominance, more provisions for small business training and credit facilities should be established.

In many craft-producing villages, a presentation house built of local materials in the local style would allow craftsmen to set up demonstrations of craft processes. This would give tourists a better understanding and appreciation of the quality of the craftsmen's workmanship and would enable tourists to buy the crafts directly from the producers, thereby eliminating the middleman altogether. In Siem Reap, the abandoned old market square would be an ideal location for a craft presentation house.

IV. CONCLUSION

The Angkor monuments are one of the world's great tourist attractions. Tourism can generate unprecedented socio-economic opportunities for the Cambodian people. However, if unplanned, it could lead to uncontrolled development which would quickly degrade the archaeological monuments, the natural resources and the cultural fabric of the Cambodian Angkor heritage.

If not properly managed, tourism development will enrich only a small minority while excluding the majority of the population of Siem Reap and surrounding villages.

Therefore, even if the monuments are the focal point of interest in developing the Siem Reap region, development must be conducted from an approach encompassing strategic zoning and phasing that supports an equitable distribution of wealth and sustainable utilization of the cultural and natural resources.

To safeguard the sound future development of tourism in the Angkor/Siem Reap area, it is essential that the local residents be integrated into all programmes and that their social and economic welfare improve alongside increasing tourist activity.

Long-term effects on culture and the environment should always be a predominant consideration when making any decision on investment in tourism. To this effect, the UNESCO ZEMP report and recommendations may constitute an invaluable source of reference and guidance.